

## Optimization of Articulation in Childern with ADHD

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### ABSTRAK

Attention Deficit Hyperactivity Disorder (ADHD) is a developmental disorder that often causes difficulties in articulation in children. This study aims to examine effective strategies and methods in optimizing articulation skills in children with ADHD. The method used is a literature study by collecting, reviewing, and synthesizing various relevant literature sources. The results showed that various strategies have been explored, such as speech therapy, use of technology, physical activity and movement methods, and environmental support. Although these strategies have proven to be effective, articulation optimization in ADHD children still faces challenges such as difficulty maintaining attention, impulsivity, comorbidity, lack of motivation, and environmental support. A holistic and collaborative approach is recommended, involving a combination of strategies, customization to individual needs, and engagement of the child's interests. Environmental support from parents and teachers is also very important. In conclusion, optimizing articulation in ADHD children requires consistent efforts, collaboration between various parties, and an approach tailored to the individual needs of the child.

**Keywords:** *ADHD; Articulation; Speech Therapy.*

### INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is a developmental disorder characterized by primary symptoms of inattention, hyperactivity, and impulsivity. Children with ADHD often experience difficulties in various aspects of life, including language and communication development (Korrel et al., 2017). One area that is often impaired in children with ADHD is articulation, which is the ability to produce language sounds clearly and accurately (Damar & Akcan, 2018).

Previous research has shown that children with ADHD tend to have difficulties in articulation compared to children without the disorder (Mohammadhasani et al., 2020). Difficulties in articulation in ADHD children can be caused by several factors, including problems in fine motor coordination, difficulties in processing auditory information, and inattention to auditory feedback (Redmond, 2016). As a result, children with ADHD often have difficulty pronouncing words correctly, especially complex words or words that have sounds that are difficult to pronounce.

These articulation difficulties can impact a child's communication skills and social interactions, and can affect their academic performance and emotional development (Marcotte & Crête, 2021). Children with articulation disorders often experience frustration and low self-esteem due to difficulties in expressing themselves verbally. In addition, they may also experience difficulties in keeping up with classroom learning, especially in subjects that involve a lot of verbal material, such as reading and writing. This can certainly hinder their academic development. Articulation disorders can also cause children to have difficulty interacting with peers, which can affect their social and emotional development.

Therefore, optimizing articulation in ADHD children is essential to support their language and communication development and to help them interact effectively with their social environment. Early intervention and appropriate treatment can help reduce the negative impact of articulation disorders in ADHD children.

Several studies have been conducted to explore strategies that are effective in improving articulation skills in ADHD children. One widely used strategy is speech therapy conducted by a speech-language pathologist (Kutscher, 2020). Speech therapy involves exercises that aim to improve

fine motor coordination, assist children in processing auditory information, and improve attention to auditory feedback.

In speech therapy, children are taught how to move their tongue, lips and jaw correctly to produce the right language sounds. They are also trained to pay attention and listen carefully to the sounds they produce, so that they can correct articulation errors independently. In addition, speech therapy may also involve the use of visual and tactile aids to help the child understand the position and movement of the speech organs better.

In addition to speech therapy, another strategy that is often used is the use of technology in the learning process. One technology that has been proven effective is the use of digital apps and games specifically designed to improve articulation skills in children (Raskind et al., 2019). These digital apps and games present learning materials in an interesting and interactive form, so as to increase children's motivation and attention in the learning process.

Digital apps and games to improve articulation usually use a fun and educational approach. For example, children can play games that require them to pronounce words correctly in order to proceed to the next level. Or they can practice pronouncing certain language sounds by following instructions given by attractive animated characters. In this way, the learning process becomes more enjoyable and children do not feel burdened or pressured.

Some studies have also shown that using learning methods that involve physical activity and movement can help improve articulation skills in ADHD children (Goh et al., 2019). This method is based on the theory that physical activity can help improve children's attention and concentration, as well as improve fine motor coordination necessary for good articulation.

In this method, children are taught to say certain language sounds or words while performing associated physical movements. For example, they can jump while saying words containing the consonant "l" or swing their arms while saying words containing the vowel "a". These physical activities not only help improve children's attention and motor coordination, but also make the learning process more fun and meaningful.

In addition to the strategies above, environmental factors are also very important in optimizing articulation in ADHD children. Supportive environments, such as families and schools that understand the special needs of children with ADHD, can help create an atmosphere conducive to the development of their articulation skills (Barkley, 2020).

Parents and teachers can play an important role in supporting the articulation development of children with ADHD. Parents can assist children in articulation practice at home, and provide positive reinforcement when children succeed in pronouncing sounds or words correctly. Meanwhile, teachers can adjust learning methods in the classroom to be more accommodating for children with ADHD, for example by giving clearer instructions and using visual media to help children understand the material.

In addition, collaboration between parents, teachers and speech therapists is also very important to ensure consistency and continuity in handling articulation disorders in ADHD children. With good support and cooperation from various parties, children with ADHD will have a greater chance of optimizing their articulation skills.

However, it needs to be recognized that optimizing articulation in ADHD children is not easy and requires consistent efforts and a holistic approach. The challenges often faced in dealing with articulation disorders in ADHD children include difficulties in maintaining attention and concentration during therapy or learning sessions. Inattention symptoms that characterize ADHD can make it difficult for children to focus and get bored quickly during the intervention process. impulsivity and hyperactivity that can interfere with the learning process. Children with ADHD often struggle to sit still and follow instructions quietly, comorbidity with other disorders such as language disorders, learning disorders, or hearing problems that can exacerbate difficulties in articulation, lack of motivation and willingness to practice consistently, especially if the learning method is less interesting or too boring for the child, lack of parental support and involvement in the intervention process, which can hinder progress and consistency of practice at home.

To overcome these challenges, a holistic and collaborative approach is needed. A combination of different strategies and methods, such as speech therapy, use of technology, physical activity, and parent and teacher involvement, can help improve the effectiveness of the intervention.

In addition, tailoring to the child's individual needs and learning style is also very important. Methods that are multimodal and involve various senses (visual, auditory, kinesthetic) can help increase children's attention and motivation in the learning process.

For example, therapists can use visual media such as pictures or videos to help children better understand the position and movement of the speech organs. Or, they can combine articulation exercises with physical activities such as playing games or doing hand gestures to help children stay focused and motivated.

In addition, approaches that involve children's interests and passions can also help increase their participation and motivation in the intervention process. For example, if the child enjoys a particular sport, the therapist can integrate elements of that sport into the articulation exercises.

The effectiveness and most suitable approaches for children with ADHD still need to be explored further. This study aims to examine strategies and methods that are effective in optimizing articulation skills in children with ADHD, and provide recommendations for practitioners and parents in addressing this issue. With consistent efforts and collaboration from various parties, children with ADHD can optimize their articulation skills and overcome barriers in communication and social interaction.

## RESEARCH METHODS

This research uses a literature study approach with the aim of collecting, reviewing, and synthesizing various sources of literature relevant to the topic of optimizing articulation in children with Attention Deficit Hyperactivity Disorder (ADHD). The literature study approach was chosen because it allows researchers to obtain a comprehensive overview of the topic discussed through a systematic review of the existing literature.

The research process began with an extensive literature search using a combination of relevant keywords such as "ADHD", "articulation", "speech disorder", "intervention", "speech therapy", and other related keywords. Searches were conducted on online databases such as PubMed, Google Scholar, ScienceDirect, EBSCO, and other reliable databases. In addition, searches were also conducted in digital libraries, institutional repositories, and other relevant sources, such as books, research reports, and sources from related organizations or institutions.

The inclusion criteria in the literature selection were:

1. Literature that discusses ADHD, articulation disorders, and/or interventions for articulation optimization in ADHD children.
2. Literature written in English or Indonesian.
3. Literature sourced from scientific journals, books, research reports, or other credible sources that have gone through a peer-review or editorial process.

Exclusion criteria in the selection of literature were:

1. Literature that only discussed ADHD or articulation disorders in general, without focusing on the relationship between the two or interventions for articulation optimization in ADHD children.
2. Literature that did not meet quality standards such as opinion or editorial articles.
3. Literature that was not available in full-text.

The selected literature was then critically analyzed to identify important information related to the optimization of articulation in ADHD children. The analysis included aspects such as the characteristics of articulation disorders in ADHD children, influencing factors, effective intervention strategies and methods, and relevant previous research results. In addition, the researcher also explored potential limitations or gaps in the existing literature, as well as areas that require further research.

In the analysis process, we used techniques such as content analysis, narrative synthesis and other appropriate methods to systematically integrate and interpret information from multiple sources.

This was done to ensure comprehensive research results and to provide new insights in the field of articulation optimization in ADHD children.

## RESULTS AND DISCUSSION

### Result

An extensive literature review of various literature sources shows that children with Attention Deficit Hyperactivity Disorder (ADHD) tend to have difficulties in articulation compared to children without the disorder (Mohammadhasani et al., 2020; Redmond, 2016). Articulation difficulties in ADHD children can be caused by several factors, such as problems in fine motor coordination, difficulties in processing auditory information, and inattention to auditory feedback.

Various strategies and methods have been explored to optimize articulation skills in ADHD children, including:

#### 1. Speech Therapy

Speech therapy conducted by a speech-language pathologist is one of the main strategies in treating articulation disorders in ADHD children (Kutscher, 2020). Through speech therapy, children are trained to move their speech organs correctly, process auditory information, and pay attention to auditory feedback.

#### 2. Use of Technology

Digital apps and games specifically designed to improve articulation have been shown to be effective in helping children with ADHD (Raskind et al., 2019). The interactive and fun approach offered by these technologies can increase children's motivation and attention in the learning process.

#### 3. Physical Activity and Movement Methods

Research shows that learning methods involving physical activity and movement can help improve articulation skills in ADHD children (Goh et al., 2019). Physical activity can improve attention, concentration, and fine motor coordination needed for good articulation.

#### 4. Environmental Support

Supportive environments, such as parental involvement and adjustments to learning methods at school, are essential in optimizing articulation in ADHD children (Barkley, 2020). Collaboration between parents, teachers and speech therapists is also necessary to ensure consistency and continuity in treatment.

Although these strategies have shown effectiveness in several studies, articulation optimization in ADHD children still faces challenges such as difficulties in maintaining attention and concentration, impulsivity and hyperactivity, comorbidity with other disorders, lack of motivation, and lack of support from the environment.

To overcome these challenges, a holistic and collaborative approach is needed. A combination of different strategies and methods, as well as customization to the child's individual needs and learning style, can help improve the effectiveness of interventions. Approaches that involve children's interests and passions can also help increase their participation and motivation in the intervention process.

Further research is still needed to explore the effectiveness and most suitable approaches for children with ADHD in optimizing their articulation skills. However, with consistent efforts and collaboration from various parties, children with ADHD can overcome barriers in communication and social interaction caused by articulation disorders.

### Discussion

Based on the literature review that has been presented, it can be seen that there is a strong connection between the results obtained and the basic concepts related to Attention Deficit Hyperactivity Disorder (ADHD) and difficulties in articulation in children who experience it. This finding is in line with previous studies which show that children with ADHD tend to face significant challenges in their ability to speak and pronounce words clearly.

The underlying concept behind these findings is the link between ADHD and problems in fine motor coordination, difficulties in processing auditory information, and inattention to auditory feedback. These three factors play an important role in the articulation process which involves the regulation of fine movements of the speech organs, the ability to receive and process sound information, and the ability to pay sufficient attention to the resulting sound feedback.

The findings in this literature review are in line with previous research conducted by Mohammadhasani et al. (2020) and Redmond (2016), which clearly state that children with ADHD tend to have difficulties in articulation compared to children without the disorder. These studies reinforce

the link between ADHD and articulation disorders, and suggest that this is a fairly common problem in the population of children with the condition. This result is also supported by the findings of several other studies showing a higher prevalence of articulation disorders in children with ADHD compared to children without the disorder.

However, this finding also contradicts some previous studies that suggest that ADHD does not necessarily lead to significantly impaired articulation. For example, a study conducted by Goh et al. (2019) found that only a small proportion of children with ADHD had severe articulation difficulties. Similar findings were also obtained in a study conducted by Frazier et al. (2018), which states that not all children with ADHD experience problems in articulation or sound production.

The existence of this contradiction can be explained through linkages with theories that explain heterogeneity in the symptoms and impact of ADHD on each individual. According to neurobiological theories, ADHD is caused by complexities in brain development and function, which can affect various aspects of cognition, behavior and development in different ways in each individual (Barkley, 2015). Therefore, not all children with ADHD will experience articulation disorders of the same severity. Some children may have severe articulation impairment, while others may have little or no difficulty in this regard.

In addition, the findings in this literature review are also in line with the multifactor theory which states that ADHD is the result of an interaction between genetic, neurobiological, and environmental factors (Nigg et al, 2020). The presence of other factors such as comorbidity with other disorders, environmental support, and interventions provided may affect the severity of articulation disorders in children with ADHD. For example, children with ADHD who have comorbidities with language development disorders or other sensory disorders may be more prone to more severe articulation disorders compared to children with ADHD without such comorbidities.

A critical comparison with other relevant studies shows that the findings in this literature review are consistent with the results of studies conducted by Kutscher (2020) and Raskind et al. (2019). Kutscher (2020) found that speech therapy conducted by a speech-language pathologist is one of the main strategies in treating articulation disorders in ADHD children. In her research, Kutscher highlighted the importance of interventions that focus on training speech organ movements, improving auditory comprehension, and providing appropriate feedback to children with ADHD in an effort to improve their articulation skills.

Meanwhile, Raskind et al. (2019) highlighted the effectiveness of using technology, such as apps and digital games, in improving articulation skills in children with ADHD. In their study, children with ADHD who used apps and digital games specifically designed to train articulation showed significant improvements in the ability to pronounce words clearly compared to the control group. The interactive and fun approach offered by this technology is believed to increase children's motivation and attention in the learning process, which is a major challenge for children with ADHD.

The findings in this literature review are also consistent with other studies showing the effectiveness of physical activity and movement methods in improving articulation skills in children with ADHD. Research conducted by Goh et al. (2019) found that interventions involving physical activity and movement, such as movement games and music, can help improve articulation skills in children with ADHD. Physical activity is believed to improve attention, concentration and fine motor coordination required for good articulation.

A constructive argument that can be put forward based on the findings in this literature review is the need for a holistic and collaborative approach in addressing articulation disorders in children with ADHD. Although strategies such as speech therapy, use of technology, physical activity and movement methods, and environmental support have been shown to be effective, there are still challenges such as difficulties in maintaining attention and concentration, impulsivity and hyperactivity, comorbidity with other disorders, lack of motivation, and lack of support from the environment.

Overcoming these challenges requires close collaboration between parents, teachers, speech therapists and other professionals involved in the treatment of children with ADHD. Approaches that involve children's interests and passions can also help increase their participation and motivation in the intervention process. In addition, adjusting to the child's individual needs and learning style is also very important to increase the effectiveness of the intervention.

Collaboration between various parties can ensure consistency and continuity in efforts to improve the articulation skills of children with ADHD. For example, parents can play a role in providing support and continuing the exercises provided by the speech therapist at home, while teachers can adjust learning methods in the classroom to facilitate the development of children's articulation skills. With good collaboration, interventions can be integrated and comprehensive, increasing the chances of success.

In addition, an approach that involves the child's interests and passions can be a very useful strategy in addressing articulation disorders in children with ADHD. Children with ADHD often have strong interests in certain activities or topics, such as sports, games or hobbies. By integrating the child's interests and passions into the intervention process, their motivation and participation can increase significantly. For example, if a child with ADHD has an interest in soccer, the intervention may use soccer-related themes or contexts in articulation exercises. This can make the learning process more fun and meaningful for the child, thus increasing their engagement and motivation.

Adjustment to children's individual needs and learning styles is also an important aspect in optimizing articulation in ADHD children. Each child has unique characteristics, strengths and needs, so a "one size fits all" approach may not be entirely effective. Speech therapists and other professionals need to be able to assess and understand the specific needs of each child and tailor intervention strategies accordingly. For example, some children may respond better to visual approaches, while others may respond better to auditory or kinesthetic approaches. By tailoring intervention methods according to the child's learning style, there is a greater chance of success in improving articulation skills.

The findings in this literature review also confirm the results of previous research highlighting the importance of environmental support in the optimization of articulation in ADHD children. Barkley (2020) emphasized that a supportive environment, such as parental involvement and adjustments to learning methods at school, is crucial in the intervention process for articulation disorders in children with ADHD.

Parental involvement can include active participation in speech therapy sessions, continuing practice at home, and providing positive support and encouragement to the child. Meanwhile, adjustments to learning methods at school can be made by providing appropriate accommodations, such as using more visual or auditory teaching methods, providing short breaks, or providing a quieter and more controlled learning environment. Good environmental support can help children with ADHD to stay motivated, focused and engaged in the intervention process, thus increasing the chances of success in optimizing their articulation skills.

However, this literature review also corrects previous findings that may have focused too much on one particular strategy or method in addressing articulation disorders in ADHD children. This review highlights the importance of a combination of different strategies and methods, such as speech therapy, use of technology, physical activity and movement methods, and environmental support, to achieve optimal outcomes. Each child with ADHD has unique characteristics, strengths and needs, so a single approach may not be fully effective for all children. By combining different strategies and methods, interventions can be more comprehensive and tailored to each child's specific needs.

For example, for a child who has difficulty maintaining attention and concentration, a combination of speech therapy, the use of interactive digital apps, and physical activities involving movement may be more effective than using just one method alone. This combination can help improve the child's attention, motivation and engagement in the intervention process.

In addition, this literature review also highlights the importance of considering other factors that may contribute to articulation disorders in children with ADHD, such as comorbidity with other disorders, environmental conditions, and socio-economic factors. By understanding and addressing these factors, interventions will be more effective and comprehensive.

Overall, the findings in this literature review make an important contribution to understanding the relationship between ADHD and articulation disorders in children, as well as strategies that can be used to optimize their articulation skills. While more research is needed to explore the most effective approaches, this review highlights the importance of collaboration, a holistic approach and customization to the child's individual needs in addressing these issues.

With consistent efforts, close collaboration between various parties, and an approach tailored to the child's individual needs, children with ADHD can overcome the barriers in communication and

social interaction caused by articulation disorders. This will help them to develop optimally and reach their full potential.

One important aspect to consider in optimizing articulation in ADHD children is the timing and sustainability of the intervention. Several studies have shown that improvement in articulation skills in children with ADHD often takes longer than in children without the disorder (Eichorn et al., 2019). This is due to the challenges inherent in ADHD conditions, such as difficulties in maintaining attention and concentration, as well as comorbidity with other disorders that can hinder the learning process.

Therefore, interventions to optimize articulation in ADHD children must be carried out continuously and consistently over a long period of time. Speech therapy sessions or other learning activities should be conducted regularly, both in the professional environment and at home. Parents and teachers play an important role in ensuring the continuity of interventions in the home and school environment.

Periodic evaluation and adjustment of intervention strategies are also necessary to ensure maximum effectiveness. Speech therapists or other professionals should regularly evaluate the child's progress and identify areas that still need improvement. Based on these evaluations, intervention strategies can be adjusted or modified to better suit the needs of the child at a particular developmental stage.

This literature review also emphasizes the importance of considering social-emotional factors in the optimization of articulation in ADHD children. Articulation disorders can have a significant impact on children's self-esteem and emotional well-being, especially when they have difficulty expressing themselves verbally or interacting with peers (Marcotte & Crête, 2021).

Therefore, a holistic intervention not only focuses on the technical aspects of articulation, but also considers the socio-emotional impact that children with ADHD may experience. Psychological support and emotional guidance can be provided to help children overcome frustration, low self-esteem or other emotional issues associated with their articulation disorder.

In addition, peer involvement and group activities can also be useful strategies in addressing the social-emotional aspects of articulation disorders in ADHD children. By participating in group activities involving peers, children with ADHD can increase their confidence in communicating and interacting with others. They can also learn from their peers and gain social support that is important for their development.

In this context, the role of parents and teachers is crucial to create an inclusive and supportive environment where children with ADHD can feel safe and accepted without discrimination or stigma. With adequate social-emotional support, children with ADHD will be more motivated and confident in optimizing their articulation skills.

This literature review also highlights the importance of further research in the area of articulation optimization in ADHD children. Although some strategies have been shown to be effective, there are still many areas that require further exploration. For example, further research could focus on identifying specific factors that influence the severity of articulation disorders in ADHD children and how these factors can be effectively intervened.

In addition, further research could also be conducted to explore the effectiveness of different strategy combinations in addressing articulation disorders in ADHD children. By understanding the most optimal combination of strategies, interventions can be more targeted and efficient.

Longitudinal research can also provide a more comprehensive insight into the long-term development of articulation skills in children with ADHD. By monitoring children's progress over time, researchers can identify factors that influence the success or failure of interventions over the long term, as well as develop more adaptive and sustainable strategies.

In addition, research involving the active participation of parents, teachers and other professionals involved in the treatment of ADHD children can also provide valuable insights. By understanding their perspectives and experiences, researchers can develop strategies that are more effective and easier to implement in real-life settings.

Overall, this literature review highlights the importance of comprehensive and collaborative efforts in articulation optimization in children with ADHD. By involving various strategies, individualized approaches, strong environmental support, and ongoing research, children with ADHD

can overcome the barriers in communication and social interaction caused by articulation disorders. This will help them to develop optimally, reach their full potential, and participate actively in society.

Another important aspect to consider in optimizing articulation in ADHD children is the importance of a child-centered approach. This approach emphasizes the active involvement of the child in the intervention process, and takes into account their individual interests, preferences and needs.

By actively involving children in the decision-making and intervention planning process, their motivation and engagement can be significantly increased. Children will feel more valued and involved in their own learning process, which can increase their sense of ownership and responsibility for their progress.

The child-centered approach also emphasizes the importance of creating a learning environment that is enjoyable and meaningful to the child. By integrating children's interests, hobbies and preferences into learning activities, the intervention process becomes more interesting and relevant to them. For example, if a child with ADHD loves a particular storybook, the therapist can use characters or themes from the book in their articulation exercises.

In addition, a child-centered approach also considers the child's individual learning style and adjusts intervention strategies accordingly. Some children may respond better to visual methods, while others may respond better to auditory or kinesthetic methods. By adjusting intervention methods according to the child's learning style, there is a greater chance of success in improving articulation skills.

However, implementing a child-centered approach to articulation optimization in ADHD children is not always easy. Children with ADHD often have difficulty in expressing their preferences and needs clearly, and tend to have limited and easily distracted attention. Therefore, it requires specialized skills and experience from therapists and other professionals involved to be able to implement this approach effectively.

One strategy that can be used is to involve parents or caregivers in the decision-making process and intervention planning. Parents or caregivers who know the child well can provide valuable input on the child's interests, preferences and learning style, thus helping the therapist to better tailor the intervention.

In addition, the use of visual aids, games and interactive activities can also help in implementing a child-centered approach. These tools can help accommodate children's visual and kinesthetic learning styles and increase their engagement and motivation in the intervention process.

This literature review also highlights the importance of considering cultural factors and socio-economic background in the optimization of articulation in ADHD children. Research shows that there are differences in language and articulation development patterns in children from different cultural backgrounds.

Therefore, intervention strategies that are effective for one cultural group may not be entirely appropriate for another. For example, some cultures may place more emphasis on visual or auditory learning, while other cultures may place more emphasis on kinesthetic or experiential learning.

In addition, socio-economic factors can also affect access to resources and support for articulation disorder intervention in ADHD children. Families from economically disadvantaged backgrounds may face challenges in accessing professional services such as speech therapy or technology needed to support the intervention process.

Overcoming these challenges requires a culturally sensitive approach that considers the socio-economic context of the child and family. Therapists and other professionals should seek to understand the child's cultural background and socio-economic situation and adapt intervention strategies in a way that is relevant and affordable.

For example, therapists may work with community or cultural leaders to develop intervention methods that are appropriate to local cultural values and practices. Alternatively, they can explore utilizing more affordable local resources, such as using simple technology or utilizing community activities as a means to train children's articulation skills.

In addition, collaboration with organizations or institutions that focus on socio-economic issues can also help in bridging the gap in access to intervention services for children from disadvantaged backgrounds.



Overall, optimizing articulation in ADHD children requires an approach that is holistic, collaborative and tailored to the individual needs of the child. By considering factors such as a child-centered approach, cultural background, and socio-economic context, interventions can be more effective, relevant, and inclusive for all children with ADHD, regardless of their background.

## CONCLUSIONS

Attention Deficit Hyperactivity Disorder (ADHD) is a developmental disorder that often causes difficulties in articulation or the ability to produce language sounds clearly and accurately in children. This study aims to examine effective strategies and methods in optimizing articulation skills in children with ADHD.

The method used is a literature study by collecting, reviewing, and synthesizing various relevant literature sources. Inclusion and exclusion criteria were used in the selection of literature, and analysis was conducted using techniques such as content analysis and narrative synthesis.

The results showed that various strategies have been explored, such as speech therapy, use of technology, physical activity and movement methods, and environmental support. Although these strategies have proven to be effective, articulation optimization in ADHD children still faces challenges such as difficulty maintaining attention, impulsivity, comorbidity, lack of motivation, and environmental support.

In the discussion, it was found that there is a connection between the results of the study and the basic concepts of ADHD and articulation disorders, as well as congruence and contradiction with previous studies. A holistic and collaborative approach is recommended, involving a combination of strategies, adaptation to individual needs, and engagement of the child's interests. Environmental support from parents and teachers is also crucial.

In conclusion, optimizing articulation in ADHD children requires consistent efforts, collaboration between various parties, and an approach tailored to the individual needs of the child. Thus, children with ADHD can overcome barriers in communication and social interaction caused by articulation disorders.

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