

NEUROPSYCHOLINGUISTICS OF CHILDREN WITH AUTISM SPECTRUM DISORDER (ASD): UNDERSTANDING COMMUNICATION IN DAILY LIFE AND TREATMENT MEDIA

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Abstract

Autism spectrum disorder (ASD) is a type of developmental disorder that is influenced by biological factors and affects children's social interactions and communication skills. For children with ASD, communication challenges are often one of the main aspects faced. Therefore, communication skills are considered an important indicator in assessing their developmental progress. The purpose of this study was to understand how children with autism spectrum disorder communicate in their daily lives and to find out how treatment media can be used to help them. The method used is a literature review that analyzes various journals, articles, and books from Google Scholar, Academia.edu, and ResearchGet. Research has found that the impact of autism on communication skills is often significant, making it difficult for individuals to form meaningful interactions and relationships with others. Treatment media can be done by using speech therapy, occupational therapy, and using visual media to help children with autism communicate well in their daily lives.

Keywords: Autism, ASD, Communication, Treatment, Media, Daily Life

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INTRODUCTION

Social interaction is an important skill that needs to be taught to children from an early age. Social interaction occurs when an individual performs an action that triggers a response from another individual. This process indirectly helps children understand that humans are social beings who are always in contact with their surroundings, including facing various activities and challenges. One of the most common forms of interaction carried out by humans is communication, namely the process of conveying and exchanging messages. This communication begins when humans are born and continues to develop throughout their lives (Mirza Maulana, 2007: 182). Every individual uses communication as the main tool in interacting with others. However, there are some individuals who experience obstacles in their ability to communicate, which are caused by various factors. One group that experiences this challenge is children with autism. Autism is a condition experienced by someone from birth or early life,

which results in difficulty in establishing social relationships and communicating normally. Children with autism often withdraw from social interactions, get caught up in repetitive or obsessive patterns of activities and interests (Baron-Cohen, 1993).

Children with autism spectrum disorders (ASD) generally face difficulties in the development of behavior, communication, and social interaction. Many of them need support to be able to live independently. These challenges include understanding the surrounding environment, communication skills, and interacting with others. Compared to children in general, children with autism show significant differences in communication and interaction. They often show three main obstacles, namely in communication, social interaction, and behavior. These children tend to be engrossed in their own world, so that people around them often have difficulty understanding the needs and challenges faced by children with autism. Limitations in communication are a significant challenge for individuals with autism in interacting with their environment. According to Garfin and Lord (in Paul and Sutherland, 2005), communication skills are the main factor that determines the extent to which individuals with autism can build social relationships and participate in various daily activities, both in school, home, and community environments. In addition, Carr and Durrant (in Paul and Sutherland, 2005) emphasized that improving communication skills in individuals with autism has a direct relationship with efforts to prevent and reduce behavioral problems. This shows that developing communication skills not only helps individuals to be more connected to their environment but also supports their emotional and behavioral stability.

According to data from the International Society for Autism Research, the global prevalence of autism is estimated to reach 62 per 10,000 population (Elsabbagh et al., 2012). In Indonesia itself, exact figures regarding the number of people with autism are still not available. However, the only study conducted by Wignyosumarto, Mukhlas, and Shirataki (1992) showed that the prevalence of autism in Yogyakarta at that time reached 11.7 per 10,000. Until now, the exact cause of autism is still unknown. The American Psychiatric Association (2013), through the "Diagnostic and Statistical Manual of Mental Disorders Fifth Edition" (DSM-5), does not specifically mention the cause of autism. However, it is stated that several risk factors that have the potential to cause autism include environmental factors, such as maternal age during pregnancy, low birth weight, and exposure to valproic acid in the fetus. In addition, genetic factors also play a role, with around 15% of autism cases related to certain genetic mutations. From a neurological perspective, research by Hass and Courchesne (in Ginanjar, 2007) found a decrease in the number of Purkinje cells in the cerebellar hemispheres and vermis in individuals with autism. Further research by Courchesne et al. (in Ginanjar, 2007) showed that newborn autistic babies have normal brain sizes, but at the age of two to three years, their brain size increases significantly, especially in the frontal lobe and cerebellum areas. This excess growth in white matter and gray matter is thought to contribute to impaired cognitive development, language, emotions, and social interaction.

METHODOLOGY

This research uses literature review. The contents of this literature review are explanations or discussions about the theories of a finding or research topic. From the explanation of these theories, it can be used as a theoretical basis in creating scientific works or in conducting research

activities. This study analyzes various journals, articles, and books from Google Scholar, Academia.edu, and ResearchGet using the keywords "Autism Sufferers", "Children with Autism Spectrum Disorder", "Difficulty communicating with autistic children", "treatment for children with autism", media selected based on the years 2005-2024. In collecting data, researchers have searched for, read and understood relevant written works, selected clear data sources and carried out in-depth identification. literature review is the first step that must be taken to build a theoretical framework that underlies the research. Creswell emphasizes that literature review helps researchers understand the latest developments in the field being studied and identify research gaps that need to be filled (Creswell 2014).

RESULT AND DISCUSSION

1. ASD Affect Communication

Autism spectrum disorder (ASD) is a neurological disorder that causes children diagnosed with it to face challenges in social communication, as well as exhibit repetitive or restricted patterns of behavior (Fajrin & Leonardi, 2019; Razmkon et al., 2022). The term "autism" comes from the Greek "autos," meaning "self," reflecting the tendency of children with ASD to focus on their own private world. According to the (NIDCD Fact Sheet, 2020), children with ASD often appear self-respecting, self-absorbed, and have limited ability to communicate and interact effectively with others. They may have difficulty developing language skills and understanding what others are saying. In addition, they often have difficulty using nonverbal communication, such as hand gestures, eye contact, and facial expressions, which are important for social interaction.

According to (AutismWise, 2023) Communication is a key aspect of human interaction, allowing us to convey our thoughts, feelings, and needs to others. For individuals with autism, however, communication can present significant challenges. Autism affects both verbal and nonverbal communication, leading to difficulties in expressing oneself and understanding others.

Verbal Communication Difficulties	Nonverbal Communication Challenges
Delay in speech development	Limited eye contact
Echolalia	Difficulty understanding gestures
Literal interpretation of language	Challenges in reading facial expressions
Difficulty in initiating and maintaining conversations	Issues with body language
Repetitive language	Struggles with tone of voice

The communication skills of children with ASD depend largely on their level of intellectual and social development. Some children may not be able to use speech or language to communicate, while others may have limited speech abilities. On the other hand, there are also children with ASD who have a broad understanding and are able to speak in great detail about certain topics. However, many of them face challenges in understanding the rhythm, intonation, or meaning of words and, as well as different body language and tone of voice. These difficulties overall affect the ability of children with ASD to interact with others, especially peers, which often becomes a barrier to building effective social relationships.

Below are some patterns of language use and behaviors that are often found in children with ASD (NIDCD Fact Sheet, 2020):

- Children with autism spectrum disorder (ASD) often display distinctive patterns of language use and behavior. One of the main characteristics is repetitive or stilted language. They may say things that are irrelevant to the conversation, such as counting numbers over and over without any clear context. In addition, many of them experience “Echolalia”, which is repeating words that are heard. “Echolalia” can be immediate, when the child immediately repeats what someone else says, or delayed, repeating words that they have heard before.
- Another characteristic that is often seen is a very specific and deep interest in a topic. Children with ASD may not be able to talk at length about the things they like, but often have difficulty engaging others in two-way conversation about the same topic.
- Language development in children with ASD tends to be uneven. Some may show certain speaking skills, but their development is often uneven or not appropriate for their age. In addition, their ability to use nonverbal communication, such as pointing or making eye contact, is often hampered.
- Poor nonverbal conversation skills. Children with ASD tend to have difficulty using nonverbal gestures, such as pointing, to add meaning to what they say. They also often avoid eye contact, which can make them appear uncaring, rude, or inattentive.

Based on his study, Paul (2008) identified at least 6 types of communication disorders that are typical of autistic children, namely:

- a) Minimal response in communication, for example not responding if someone else calls his name.
- b) Difficulty concentrating.
- c) Low frequency of communication.
- d) Limited communication function, usually communication only functions to request or reject (protest).
- e) Echolalia, a condition in which autistic people repeatedly imitate words that are heard or remembered even though they do not know their meaning.
- f) Use of unusual words (idiosyncratic words).

Autism spectrum disorder (ASD) is a lifelong condition that includes a range of symptoms from mild to severe. These symptoms include difficulties with communication skills, challenges with social interactions, and unusual behaviors that can interfere with the ability to function independently and interact with others. Language in individuals with ASD is almost always affected, both in formal aspects such as grammar and comprehension, and in its use in social contexts. Research suggests that there are different profiles of linguistic and communication functioning in groups of children with ASD compared to children with specific language disorders. Children with ASD often exhibit a combination of skills, including intact language skills, delayed skills, and unusual language patterns (Amela Ibrahimagic, 2021).

2. Treatment Media for ASD

Improving the communication skills of children with autism spectrum disorder (ASD) is an important step in helping them reach their full potential. A variety of approaches can be used, but the most effective treatment programs usually begin early, during the prenatal years, and are designed to be appropriate to the child's age and interests. These programs should address the child's behavior and communication skills, provide regular positive reinforcement, and offer a high level of structure and specialization. The involvement of parents, primary caregivers, and other family members is essential in this process, so that the treatment program becomes part of the child's daily life. According to the NIDCD Fact Sheet (2020), for some young children with ASD, improving speech and language skills is a realistic goal. Parents and caregivers can support this achievement by paying attention to their child's early language development. Just as toddlers learn to prepare for walking, children with ASD need to develop pre-language skills first. These skills include using eyes, body movements, gestures, babbling, and other vocalizations to communicate.

If these pre-language skills are not yet developed, the child may be evaluated and given therapy by a speech-language pathologist to prevent further delays. For older children, communication training typically begins with teaching basic speech and language skills, such as using simple words and phrases. Advanced training then focuses on how to use language in social contexts, including learning to have a conversation, stay on topic, and take turns speaking. This gradual approach helps children with ASD build a stronger communication foundation and function better in everyday life. Many individuals with autism spectrum disorder (ASD) can improve their social communication skills by learning rules and techniques that support better social interactions. Treatment programs that combine speech-language therapy and social skills therapy are often the primary choice for helping children and even adults with ASD improve their communication skills.

Effective communication plays a vital role in helping individuals with ASD communicate their thoughts, feelings, and needs. A variety of strategies can be used to develop these skills, while also supporting smoother social interactions. According to (AutismWise, 2023), communication therapy is one of the most common approaches used to help individuals with autism. Two forms of therapy that are often used are speech therapy and occupational therapy. Speech therapy focuses on developing language skills, nonverbal communication, and social interactions. Speech therapists use a variety of methods, including visual aids, social stories, and role-play, to help individuals with ASD better understand and express themselves. Through an approach that is tailored to each individual's needs, this therapy can improve communication skills and support them to interact more effectively in everyday life.

Most children with autism spectrum disorder (ASD) have much better visual memory compared to their auditory memory (Hogdon, 1995). Therefore, visual strategies are one of the effective approaches in supporting the educational process of children with ASD. This strategy utilizes the use of visual aids, such as pictures, symbols, graphs, or real objects, which can be used to convey information or instructions. This visual-based approach is considered very appropriate for the cognitive strengths possessed by children with ASD, namely their ability to process visual information. By utilizing visual strategies, the learning process is

expected to be easier for children with ASD to understand, so that they can be more active in educational activities. In addition, this strategy can also help parents, teachers, or therapists in assisting children with ASD in a more effective and focused manner (Ahmad Nawawi, 2009). Visual strategies are a very useful approach in supporting the education of children with autism spectrum disorders (ASD), especially to overcome the obstacles they often face. Some important aspects that can be helped through this strategy are:

1. Understanding

Children with ASD often feel stressed when facing uncertain or unpredictable situations. The inability to understand what will happen and when it will happen can be a major source of stress. Behavioral problems in children with ASD often arise due to lack of information or sudden changes, especially during transitions. Visual strategies, such as illustrated schedules or concept maps, help convey information clearly, so that children can understand the sequence of activities or situations they will face.

2. Communication

Communication limitations often hinder children with ASD from expressing their needs, desires, or feelings. This can trigger disappointment, both for the child and those around them. By using visual aids such as communication cards, symbols, or image-based applications, children can learn to communicate their ideas more effectively. This visual strategy allows children to master basic communication skills, which are an important foundation for their social interactions.

3. Independence

The main goal in educating children with ASD is to help them become more independent. Visual strategies can be used to teach children how to think according to the situation, understand the steps in solving problems, and carry out daily activities without assistance. An example is the use of visual guides for routine activities such as dressing, eating, or cleaning themselves, which helps children practice their ability to act independently according to their needs.

Through the application of visual strategies, children with ASD can adapt, learn, and develop more easily, thus supporting them to achieve their best potential in life

CONCLUSION

Difficulty in communication is one of the main characteristics experienced by individuals with autism spectrum disorder (ASD), although the severity and form of the disorder varies greatly between individuals. Some individuals with autism may not be able to speak at all, while others have limited speech, and still others are able to speak fluently. However, challenges in understanding and using language, as well as communicating effectively, remain a key characteristic of the condition. The impact of autism on communication skills is often significant, making it difficult for individuals to form meaningful interactions and relationships with others. Therefore, understanding the unique communication patterns and challenges faced by individuals with autism is an important step in providing appropriate support. The media chosen, such as the use of visual aids, speech therapy, and occupational therapy, can help individuals with autism to overcome the complexities of their communication. These strategies

not only facilitate the learning process, but also help create an inclusive environment, allowing them to communicate better and build more meaningful relationships with those around them.

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