

Analysis of the Development of Social Interaction and Independence of Children with Autism at Permata Diakoni Pematangsiantar

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Abstract

This study aims to analyze the development of social interaction and independence in children with autism at Permata Diakoni. The focus of the study was on one subject, identified as MS, who experienced difficulties in communication, social interaction, and self-development skills. The study used a qualitative approach with a case study approach. Data were collected through observation, interviews, and documentation, then analyzed using the interactive model of Miles, Huberman, and Saldaña using NVivo version 15. Data validity was tested through source triangulation and time triangulation. The results showed that the development of the subject's social interaction began to be evident through increased responsiveness to calls, eye contact, and the ability to follow simple instructions. In terms of independence, the subject showed progress in self-feeding, following daily routines, and completing simple tasks with minimal direction. However, the subject still experienced difficulties in spontaneous social initiative, emotional regulation, and several self-development skills that required assistance. Supporting factors for development included a structured learning environment, consistent teacher guidance, and repeated positive reinforcement. It was concluded that a supportive and structured educational environment plays a crucial role in gradually improving the social interaction and independence of children with autism.

Keywords: autism, social interaction, independence, case study, special education

INTRODUCTION

Education is a conscious effort to realize the cultural heritage from one generation to the next. Education makes this generation a role model for the teachings of previous generations.

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To this day, education has no limits to fully explain the meaning of education due to its complex nature, such as its target audience: humans (Rahman et al., 2022). This complexity is often referred to as educational science. Educational science is a continuation of education. Educational science is more closely related to educational theory, which prioritizes scientific thinking. Education and educational science are related in both practical and theoretical terms. Therefore, in the process of human life, both collaborate. Every parent desires the presence of a child. The child they hope for is a perfect child without any shortcomings. In reality, no human being is without shortcomings, as is the case with children with special needs. Children with special needs have the right to grow and develop within their families, communities, and nations. Children have the right to go to school just like other siblings who are without disabilities or normal. The growth and development of children with special needs requires a great deal of patience and diligence from parents. Children with special needs require attention and support from their parents (Akibat & Orang, 2024).

Parents play a crucial role in addressing autism and helping stabilize the focus of autistic children. Children with special needs, such as autism, are often isolated and treated less appropriately by society at large. This is due to a lack of education about the condition of children with special needs. If left untreated, this worrying condition can impact the growth and development of autistic children, leading to ostracism from society and their families (Syaputri & Afriza, 2022). Autism comes from the word "autos," meaning "I." Autism itself is a developmental disorder caused by persistent deficits that include an inability to interact, a gradual decline in cognition, a lack of social reciprocity, a reduced sharing of interests, and a failure to respond to or initiate social interactions (Fatmah, 2024).

Data from the Basic Health Research (in Kelana, 2022) shows that there are four types of children who can be categorized as having difficulties in social interaction and independence, including: (1) children with disabilities, who have difficulties in motor function, such as paralysis and physical disabilities; (2) children with intellectual disabilities, who have difficulties with intelligence and cognitive abilities, such as mental retardation, slow learners, and Down syndrome; (3) children with sensory mental disabilities, who have difficulties with emotional and behavioral functions, such as autism; (4) children with sensory disabilities, who have difficulties with one of the five senses, such as deafness, speech impairment, and physical disability. Children with these difficulties are usually referred to as children with special needs, but terms used as variations for children with special needs include disability, impairment, and handicap.

Autism is a pervasive developmental disorder in children characterized by disturbances and delays in cognitive, language, behavior, and social interaction (Suteja, 2014). Autism





Spectrum Disorder (ASD) is a complex neurodevelopmental disorder that affects communication skills, social interactions, and repetitive behavior patterns that appear from early childhood (Kirani, 2025). The World Health Organization (2023) emphasizes that these disorders significantly impact educational performance and daily functioning. In social contexts, children with autism often experience failure to build reciprocal relationships. This is in line with the view (Westermann, et al., 2021) that social interaction is a real difficulty for autistic children in establishing social relationships with their environment. Disturbances in social interactions in autistic children can affect aspects of learning and behavior. Autistic children are often characterized by isolating behavior, even in a room full of peers.

The challenges faced by children with autism extend beyond the social sphere. Independence or self-development is a crucial pillar that determines their future quality of life. Independence is the behavior of an individual who is able to do everything according to their own wishes, make their own decisions, and have the courage to take responsibility for their own actions. Children with autism develop and achieve independence differently from typical children (Fatmah, 2024). In fact, research by Memisevic and Hadzic (in Purba, 2021) shows that children with developmental disabilities are at high risk of experiencing more severe functional deficits if they do not receive appropriate intervention. Without independence in basic activities (self-development), children will continue to rely on caregivers, which in the long term can hinder their potential for self-actualization.

Permata Diakoni Pematangsiantar, a service institution under the auspices of the Batak Protestant Christian Church (HKBP), exists to address these challenges. Through a holistic approach to compassionate service (Diakonia), this institution provides a structured environment and behavioral modification for children with special needs (ABK). Permata Diakoni's uniqueness lies in its combination of strict daily routines with character values, which are theoretically effective catalysts for the development of children with autism. Based on initial observations conducted by researchers on an 11-year-old child, identified as MS, with autism spectrum disorder at Permata Diakoni, he was found to have significant concentration difficulties and a tendency to be passive (often daydreaming) during social interactions. In terms of self-development and independence, MS still experiences significant difficulties with basic tasks such as buttoning clothes, brushing his teeth, and eating independently without full assistance. Interestingly, MS responds positively to reinforcement (rewards) and physical affection, indicating potential for development if interaction patterns and independence training are implemented intensively and consistently.

Although numerous studies have been conducted on autism, research specifically





analyzing the synergy between social interaction and independence within the local value-based service ecosystem of "Diakoni" in North Sumatra remains very limited. Researchers believe it is necessary to explore how the supportive and inclusive environment at Permata Diakoni can facilitate MS's progress.

RESEARCH METHODS

A. Type of Research

This research uses a qualitative approach with an intrinsic case study method. The qualitative approach was chosen because it aligns with the research objective, namely to deeply and holistically understand the phenomenon of social interaction development and independence in children with Autism Spectrum Disorder in a natural context at Permata Diakoni (Hasanah & Purnama, 2024). This approach allows researchers to gain insight into the meaning, experiences, and dynamics of processes that cannot be measured solely through numbers or quantitative data. More specifically, the method used is a case study according to Yin (2018). According to Yin (2018), a case study is a research strategy used to deeply investigate a contemporary phenomenon within a real-life context, especially when the boundaries between the phenomenon and its context are not clearly evident. In this research, the phenomenon being studied is the development of social interactions and independence in children with autism, while the actual context is the learning and therapy environment at Permata Diakoni.

The type of case study used is an intrinsic case study, namely research conducted because the researcher has a particular interest in a particular case. The case focus of this research is a child with autism with the initials MS. The research is directed at understanding in-depth the characteristics of the development of social interactions and independence of the subject based on the real-life circumstances he experienced.

The use of the case study method in this research is considered appropriate for several reasons:

- a. The case study allows the researcher to explore the relationship between the learning and therapy environment at Permata Diakoni and the development of social behavior and independence in children with autism.
- b. The case study provides the researcher with space to answer the questions "how" and "why" a structured environment can support the development of the research subject.
- c. This method produces detailed and in-depth findings regarding obstacles, supporting factors, and the dynamics of the development of social interactions and independence in autistic children with the initials MS.





B. Research Location, Timeline, and Subjects

The research location was Permata Diakoni HKBP in Pematangsiantar, located at Jalan Danau Kerinci No. 19, Siopat Suhu, East Siantar District. This institution was chosen because it is a concrete example of a special education institution that integrates a structured approach with the values of compassion-based service (diakoni) in caring for children with special needs, including those with Autism Spectrum Disorder (ASD). The research period took place during the even semester of the 2025/2026 academic year. This timeframe was deemed sufficient to conduct repeated observations, build familiarity with the subjects and informants, and achieve data saturation.

The research subjects and informants consisted of:

- a. Main Subject (Focus): One child with Autism Spectrum Disorder (ASD), identified as MS (male, 10 years old), who had participated in the program at Permata Diakoni.
- b. Key Informant: Teacher/Guardian (1 person): Who directly handles and understands MS's development.
- c. MS's Parent/Guardian (1 person): To obtain data on MS's development and behavior at home, as well as his developmental history.

C. Data Collection Methods

Data collection is a crucial step in qualitative research. A researcher must gather data to obtain valid data. Data collection techniques can include observation, interviews, and documentation. Data collection is conducted through triangulation, where the results are obtained from observations, interviews, and documentation. All findings obtained from what is heard, seen, experienced, and thought are recorded in field notes as reflection material.

a. Observation

Observation is a method of data collection through direct observation of situations or events in the field, accompanied by recording the condition or behavior of the target subjects. According to Madrasah & Mahrusiyah (2023), the observations were conducted in October. The researchers used non-participatory observation, namely observing what they said and listening to what they experienced in all forms of activities carried out by the subjects, but without participating in the activities.

b. Interviews

Interviews are a data collection technique aimed at gaining a deeper understanding of





an individual's life experiences, involving direct conversations with informants (Rivaldi et al., 2023). Interviewers ask pre-designed questions to gain in-depth information about the research object. The interview method used is a structured interview. Structured interviews allow multiple interviewers to collect data efficiently using pre-designed question guidelines, thus accelerating the data collection process.

c. Documentation

Documentation techniques complement the use of observation and interview methods in qualitative research. Documentation is a technique for gathering information through the search for accurate evidence relevant to the research problem and analyzing documents, whether written, pictorial, or electronic. Compared to other methods, this method is less difficult (Sidiq & Choiri, 2019).

D. Data Analysis Techniques

This research used a qualitative approach with a descriptive case study design. This approach was chosen to gain an in-depth understanding of the development of social interactions and independence of autistic children in a real-life context, namely at Permata Diakoni. According to Robert K. Yin, case study research emphasizes the importance of understanding phenomena in depth through various data sources in real-life settings. Data analysis was conducted by combining Robert K. Yin's case study model and the interactive analysis model of Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña.

According to Yin, case study data analysis is conducted through the following stages:

a. Compiling the Database

All data from interviews, observations, and documentation are collected and systematically organized into a research database.

b. Disassembling the Data

The collected data is sorted, broken down, and classified into meaningful units. At this stage, the data is entered into NVivo 15 software for coding.

c. Data Reassembling

The codes that had been formed were then regrouped into specific categories and themes according to the research focus, such as social interaction and independence.

d. Data Interpreting

The researcher interpreted the meaning of the emerging themes by connecting them to theory and the actual conditions of the research subjects.





e. Concluding

The final stage involved drawing conclusions regarding the development of social interaction and independence in children with autism based on the overall research findings.

In data processing using NVivo 15, the researcher performed the following coding stages:

a. Open Coding

Identifying initial concepts emerging from the field data.

b. Axial Coding

Connecting similar codes into categories or subthemes, for example, barriers to self-development, verbal communication, or emotional responses.

c. Selective Coding

Determining the most relevant core categories as the main answers to the research problem formulation.

The analyzed data was then presented in the form of descriptive narratives, tables, matrices, and visual models in NVivo 15. Afterward, the data was continuously verified until valid and consistent conclusions were obtained.

RESULTS AND DISCUSSION

Based on observations, interviews, and documentation, it was discovered that MS's social interaction development showed gradual progress, although there were still quite clear obstacles, as is typical of children with Autism Spectrum Disorder (ASD). Social interactions in children with autism generally experience impairments in aspects of reciprocal communication, eye contact, social responsiveness, and the ability to establish relationships with their surroundings. This was also evident in MS's condition throughout the study. Observations indicated that MS was unable to initiate communication spontaneously and spoke more often when given directions or questions first. This condition aligns with research from the American Psychiatric Association (2022), which explains that children with autism generally experience difficulties in social communication, particularly in the ability to initiate and maintain two-way interactions. These barriers to social initiation cause children to often wait for stimuli from others before responding.

Furthermore, MS's response to name calls still required one to three repetitions before turning. This finding indicates that MS's social attention is still developing. According to Nadig et al. (2017), delays in responding to name calls are a common indicator in children with ASD due to difficulty focusing attention on social stimuli. However, MS's development, which began to





turn her head after being called repeatedly, indicates an increase in social responsiveness compared to children who do not respond at all. Regarding eye contact, MS was only able to maintain eye contact for a short period of time, around one to five seconds, and this was highly influenced by mood. This finding aligns with research by Senju and Johnson (2015), which stated that autistic children tend to avoid or have shorter durations of eye contact than typical children. Nevertheless, MS's ability to maintain eye contact for several seconds indicates that the child still has the potential for social development if provided with consistent stimulation.

In emotional relationships with those closest to her, MS demonstrated quite positive interactions through hugs, holding hands, asking for high fives, or approaching teachers or parents. These forms of nonverbal communication demonstrate that MS still has a need for social closeness, even though she is not yet able to express it verbally. According to Kanner et al. (2018), some children with autism show affection through physical contact as an alternative form of communication when expressive language skills are still limited. In peer environments, MS tends to approach when seeing an interesting object or game, rather than because she wants to interact with friends. This indicates that MS's attention is still more focused on objects than on other individuals. This finding aligns with research by Kasari et al. (2016), which explains that autistic children often have difficulty playing cooperatively and are more interested in objects than social relationships. Despite this, MS does not exhibit aggressive behavior toward peers and tends to accept the presence of others around him.

MS also exhibits behaviors such as preferring solitude or seeking quiet places when the environment is too noisy. This condition may be linked to heightened sensory sensitivity, especially to loud noises. According to Robertson and Baron-Cohen (2017), many children with autism experience sensory hypersensitivity, so crowded or noisy situations can cause discomfort and lead them to withdraw from social environments. Therefore, solitary behavior in MS is not merely a sign of social rejection, but also a form of self-regulation in response to excessive stimulation. In terms of social emotions, MS is able to express joy through clapping, laughing, smiling, and seeking social contact when successfully completing a task. Even when seeing others sad, MS sometimes approaches or holds their hand. This indicates that simple empathy skills are beginning to develop. These findings are supported by research by Uljarevic and Hamilton (2019), which states that children with autism are not devoid of empathy but rather express it in different, often nonverbal, ways.

Repetitive behaviors such as hand flapping exhibited by MS are also common characteristics of Autism Spectrum Disorder (ASD). According to Leekam et al. (2011), stereotypical movements such as hand flapping, body rocking, or spinning objects are common





forms of self-stimulation and sensory regulation in children with autism. In MS, these behaviors appear primarily when happy, excited, or distracted by the environment. On the other hand, interview results indicate that MS is quite sensitive to the tone of voice and facial expressions of others. When teachers or parents speak firmly, MS tends to be more attentive and compliant. This finding aligns with research by Grossman et al. (2020), which explains that some children with autism are still able to recognize basic emotions through vocal intonation despite experiencing difficulties in complex verbal interactions.

Overall, the results of the study indicate that MS's social interactions are developing. The main obstacles lie in spontaneous communication, social initiative, playing with friends, and consistent social attention. However, MS already has a foundation of important skills such as responding to calls, emotional closeness, imitation skills, acceptance of others, and sensitivity to social expressions around them.

Therefore, the development of social interaction in children with MS requires ongoing intervention through two-way communication exercises, structured social play, increasing natural eye contact, practicing waiting one's turn, and actively involving family and teachers. If stimulation is provided consistently, the social interaction skills of children with MS have the potential to improve significantly with age.

CONCLUSION

Based on the results of this study on the development of social interaction and independence in children with autism at Permata Diakoni Pematangsiantar, it can be concluded that both aspects show positive progress, although the changes occur gradually and require consistent support. This development is influenced by structured learning processes, therapy, the school environment, and strong family involvement in daily activities. The findings indicate that children experienced improvement in social interaction skills. Initially, they tended to be solitary, showed limited eye contact, and had minimal response to communication. However, through repeated stimulation and guidance from teachers, children began to demonstrate better social engagement, such as making brief eye contact, responding to their names, following simple instructions, and expressing needs through verbal and nonverbal communication. They also showed increasing interest in interacting with others and participating in simple play activities, indicating that appropriate and consistent stimulation in a supportive environment can enhance social development.

In terms of independence, children showed gradual progress in performing daily activities such as eating, wearing footwear, organizing learning materials, and following routines,



although some assistance was still needed in new or more complex situations. This development is supported by several key factors, including intensive teacher guidance, consistent family support, a structured and comfortable learning environment, appropriate teaching methods using visual and repetitive strategies, and continuous practice. Overall, children with autism have strong potential to develop social interaction and independence when provided with sustained support and appropriate interventions.

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