

Analysis of Social-Emotional Behavior in Students with Autism Spectrum Disorder, ADHD, and Anxiety in Inclusive Schools

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Abstract

This research aims to describe the characteristics of children with barriers to social-emotional behavioral in inclusive elementary school. This research uses a qualitative case study design which only examines the characteristics of three children with socio-emotional behavior disorders. The informants are class teachers, guardians of students (teacher Shadow) with Autism Spectrum Disorder (ASD), Attention Deficit and Hyperactivity Disorder (ADHD), and Withdrawal Anxiety Disorder, Parent and Student Regular. Data collection uses interviews, observations, and documentation studies. Data Validation uses Method triangulation and resource triangulation. Data analysis techniques use content analysis techniques or thematic analysis to identify patterns and themes in interpretive data with reduction, display, and conclusion stages. The results of the study showed that student with ASD and ADHD and Anxiety Disorders have various characteristics that lead to obstacles in social emotional behavior in the form of: stereotypical movements, difficulty focusing, difficulty interacting socially, often rushing, difficulty communicating with people, like to talk to themselves and repeat sentences spoken by the other person, laugh easily and get angry easily for no reason, and dislike crowds. This is based on the results of the identification and assessment carried out by the school inclusion team on children with special needs which include: inclusion coordinators, guardians of students with special needs (teacher shadows), psychologists, occupational therapists, speech therapists and physiotherapists. The implications of this article can be used as a reference and reference in detecting and assessing social emotional behavioral disorders in the development of elementary school-age students.

Keywords: autism spectrum disorder, emotional and behavioral disorders, moral and religious development, oppositional defiant disorder, physical-motor development, socio-emotional development

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1. Introduction

Development is a complex thing because many factors influence and intervene in the child's development process. Both innate elements and experiences gained through interaction with the environment contribute

to each other in certain ways to the direction and rate of children's development (Islam et al., 2022). Santrock said that each individual's development can be unique. Each individual develops in certain ways, the

same as all other individuals, the same as some other individuals, and not the same as other individuals. Children often experience obstacles to cognitive and social emotional development ([Rahmatika, 2019](#)).

This development is closely related to the child's personality as a whole because it forms an integrated whole. Several main aspects of individual personality in elementary school-aged children can be reviewed in general, namely aspects (1) cognitive, (2) physical-motor, (3) socio-emotional, (4) language, (5) moral, and (6) religious ([Khaulani, 2020](#)), based on this opinion it can be concluded that the problems found in elementary school children include; (1) cognitive problems, (2) physical problems, (3) language problems, (4) social problems, and (5) behavioral and emotional problems. the increase in social problems among teenagers suggests that there is a gap between the national philosophy and the way of life of some adolescents ([Zakaria et al., 2025](#)). Every elementary school-age child will be different in how and when they achieve cognitive, physical, language, social as well as behavioral, and emotional development. These developmental aspects will also influence the learning process and daily activities ([Rahmatika et al, 2019](#)). So, in dealing with problems that occur in aspects of child development, maximum effort is required. Socio-emotional learning in children's lives and the pressure of the role of parents and schools in their achievement ([Chaidi & Drigas, 2022](#)).

Behavioral problems in elementary school students are very diverse, this is based on school inclusion division data submitted by the inclusion coordinator, for example, children's behavior is difficult to control, their emotions are unstable, they are not yet able to control themselves, they are not yet

able to distinguish between good and bad, they are not yet independent, and impulsive actions. The statement of the inclusion coordinator teacher that this is common because in general children of this age experience emotional and behavioral disorders during their development. Based on the results of initial observations, this can be seen in lower grade students, namely grades 1 and 2. According in [Darmiah, \(2020\)](#), explains that emotion is a feeling that arises when someone faces a situation or interaction that is considered crucial, especially those related to their existence.

In a study, it was stated that children's emotional disorders are also influenced by the child's learning environment, for example, social behavior, self-disclosure behavior, and trusting behavior with friends before and after treatment with group guidance services ([Setiawati, 2023](#)).

The case of elementary school children with emotional and behavioral disorders, various disorders and diseases are often found such as Attention Deficit Hyperactivity Disorder (ADHD) Autistic Spectrum Disorder (ASD), Oppositional Defiant Disorder (ODD), Conduct Disorder (CD) ([Wakhaj & Rofiah, 2018](#)). According to [Paternotte \(2013\)](#), children with Attention Deficit Hyperactivity Disorder (ADHD) are children who experience disturbances or difficulties in concentrating attention on the tasks given to them. This disorder affects the development of increased motor activity in children so that it will have an impact on children's activities which tend to be excessive ([Adiputra, 2015](#)). Students with social emotional disabilities face various challenges in school, both in academic, social, and psychological aspects, this can have an impact on their learning achievement, social interaction, and emotional development ([Adhantoro et al., 2025](#); [Verisa et al,](#)

2024). Identifying the characteristics of students with social emotional disabilities is an important step in providing intervention, and they receive support that is appropriate to their needs.

In addition, in the context of inclusive education, teachers often have difficulty in recognizing the characteristics of students with social emotional disabilities due to a lack of understanding and adequate instruments. With research that identifies the characteristics of students with social emotional disabilities, more effective learning and intervention approaches can be developed, so that inclusive education that is more responsive to the needs of all students can be realized (Hafida et al., 2020). Although there have been many studies discussing children with social emotional disorders, most of them still focus on interventions or learning strategies without systematic mapping of characteristics. Some studies highlight clinical or psychological aspects without directly linking them to educational practices in elementary schools.

So, from the various behavioral and emotional problems, the purpose of this study focuses on the problems at SD Muhammadiyah Alam Surya Mentari, Surakarta City in identifying these behavioral and emotional problems and the technical efforts of teachers and schools in dealing with these problems by conducting observations and interviews.

2. Method

This research is classified as qualitative research with a case study design, which is considered suitable for exploring social and human phenomena in their natural context. Qualitative research, as emphasized by Fadli (2021), is essentially a process of understanding the complexity of human experiences and social interactions by

constructing a holistic and comprehensive picture. Unlike quantitative research, which often relies on numerical measurement and statistical analysis, qualitative research highlights the richness of meaning, perspectives, and experiences expressed in words. The purpose of such research is not only to measure but also to deeply interpret how individuals or groups behave, interact, and construct their reality. In this sense, the researcher acts as the primary instrument in collecting, analyzing, and interpreting the data.

The case study design is chosen because it allows the researcher to investigate a specific phenomenon in depth and detail within a bounded system, in this case the learning and social environment of SD Muhammadiyah Alam Surya Mentari. The stages of the case study approach generally include problem identification, research design and instrument development, data collection, data analysis, and report writing (Sonuga-Barke et al., 2023). Each of these stages is interconnected and iterative, meaning that the researcher may return to an earlier stage if new insights emerge during the process. The flexibility of the design is what makes the case study method valuable, particularly when dealing with sensitive issues such as behavioral and emotional problems in children.

The main objective of this study is to explore and obtain empirical data regarding behavioral and emotional issues faced by three students at SD Muhammadiyah Alam Surya Mentari. Such issues may manifest in various forms, including difficulties in social interaction, expressions of anger or sadness, or challenges in adapting to classroom routines. By employing a qualitative approach, the researcher seeks to uncover the underlying causes and contextual factors that contribute to these behaviors, as well as to

provide a rich description of the experiences of the children, teachers, peers, and parents involved. The natural setting of the school environment is maintained so that the data collected reflects genuine interactions without artificial manipulation (Anisah, 2015).

The data collection techniques employed in this study consist of interviews, observations, and documentation. Observations are directed toward the daily activities of the three children identified with behavioral and emotional problems (Gunawan, 2021). This method enables the researcher to capture real-time interactions, classroom dynamics, and responses of the children to different situations. Meanwhile, interviews are conducted with teachers, peers, and parents, providing multiple perspectives that enrich the analysis. Teachers can provide insights into classroom management and academic performance, peers can share experiences of social interaction, and parents can shed light on the children's behavior at home and in the family context (Rahayu, 2014).

In addition, documentation serves as a complementary data source to strengthen the validity of the research. Various forms of documents are collected, such as books, archival records, school reports,

photographs, and official written information. The documents include the school's profile, which covers teacher and student data, the institution's vision and mission, available facilities and infrastructure, and the organizational structure. Furthermore, photos of student achievements and school activities in the natural environment also provide supporting evidence for the analysis. Importantly, documents related specifically to the three children studied such as academic records, counseling notes, or participation reports in school activities are also reviewed to provide a comprehensive view of their behavioral and emotional development (Mirnawati, M., & Amka, 2019).

Through the triangulation of these three techniques observation, interview, and documentation the study aims to ensure the validity and reliability of the data obtained. Triangulation not only confirms findings from different sources but also offers a more nuanced understanding of the problem (Hartiningsih, 2013). In the final stage, the data are analyzed thematically, and the results are compiled into a research report that is expected to contribute to both academic discourse and practical solutions in addressing behavioral and emotional challenges in primary school settings.

Table. 1. Informant

No	Informant	Aspect Interview
1	Teacher	In teaching and learning Activities
2	Teacher Shadow	In activities Student Special need in school
3	Student Regular	In learning Activities
4	Student with Special Need	All in activities
5	Parent	Activities in home

The inclusion coordinator selects participants who are in accordance with the research study being discussed. Before carrying out data collection techniques.

Students are informed about the information to be explored in the study and are asked to provide consent. the research team follows ethical procedures to explore research data,

including the role of students as research participants. three selected students were included and interviewed as participants. researchers are committed to maintaining and respecting participant privacy. Therefore, the research team uses a separate code in informing the characteristics of the participants used in this research.

Validation of the data used is in the form of technical triangulation and source triangulation. Meanwhile, the data analysis technique uses interactive data analysis which uses reduction, display, and conclusion stages. This reduction stage shows that not all recorded activities are used as data to be displayed, but only centralized data can be used.

3. Result and Discussion

Based on the results of interviews and observations in Tables 1 and 2 below, it is known that at SD Muhammadiyah Alam Surya Mentari there are children with special needs who experience ASD (Autistic Spectrum Disorder) and Attention Deficit Hyperactivity Disorder (ADHD) as well as several ordinary children with behavioral and emotional problems. Some children usually show behavior and emotions that refer to children with special needs, but based on this table it cannot be confirmed because elementary school-age children are still at an

age who prefer to play, are hyperactive, and move a lot. Thus, elementary school-age children who are naughty, aggressive, and disobedient do not necessarily need special treatment like student with special need (ABK). However, a big role is needed for the environment. Teachers, parents, and people around them need to provide appropriate education and guidance so that in the future the disorder does not become worse.

Symptoms or characteristics seen in children with behavioral and emotional disorders include (1) ASD (Autistic Spectrum Disorder), namely having stereotyped movements, being busy with their world, and low communication skills; (2) Anxiety, namely lack of confidence, closed off, and rushing when doing something; (3) ADHD (Attention Deficit Hyperactivity Disorder), namely difficult to regulate, emotionally unstable and hyperactive. The factors that cause these disorders generally come from family, hereditary, and environmental factors. To handle the solution, the ABK children themselves have their own Special Guidance Teachers (GPK) and the school has provided the therapy needed by children who have special disorders as mentioned (Ratih et al., 2021). Meanwhile, regular children can get guidance services from their respective class teachers.

Table 2. Interview with behavioral and emotional disorders

Component	Results	Description
Student with disorders ASD	"...F has stereotypical movements, but academically is good, for crew members like F and A, each has their GPK..."	F has autism which causes him to be unfocused, perform repetitive movements, and have difficulty interacting socially. However, his academic abilities are good.
Student with disorders ASD	"...F has poor focus, has stereotypical movements, he is also lacking in aspects of communication and emotion. From a social aspect, he is also lacking sis, he prefers his world..."	F has autism which causes him difficulty in focusing and interacting socially. But on the other hand, his academic abilities are good.

Component	Results	Description
Student with Anxiety Withdrawal Disorder/Personality Problems	"T is always in a rush, so rushed, it sometimes gets annoying her friend. That's why kids don't want to be friends with T..."	T has difficulty managing his emotions. He has symptoms of an anxiety disorder that interfere with his interactions with his environment.
Student with ADHD disorders	"...A has difficulty communicating, he also has academic problems. The school itself has provided therapeutic services for ABK in the form of speech therapy and training children's focus..."	He has a brain disorder (ADHD) which causes him difficulty in behaving, thinking, and controlling emotions.

Based on Table 2, it can be concluded that children with Autism Spectrum Disorder (ASD), Anxiety, and Attention Deficit Hyperactivity Disorder (ADHD) tend to exhibit challenging behaviors, particularly in aspects related to verbal communication, social interaction, emotional regulation, and concentration. These difficulties often affect their ability to participate effectively in learning activities and interact positively

with peers and teachers. In response, the school implements various targeted interventions and therapies designed to minimize these deficiencies (Umi, 2017). Among the strategies applied are speech therapy, occupational therapy, and physiotherapy, each of which is carefully tailored to meet the specific developmental needs of every child.

Table 3. Observation of Behavioral and Emotional Disorders

No	Aspect	Description	Conclusion
<i>Autistic Spectrum disorder (ASD)</i>			
1	Verbal Communication	F talks to himself and repeats what the other person says.	F has autism which causes him to have difficulty behaving, communicating, and interacting socially.
2	Social interaction	F laughs easily and gets angry for no reason, prefers to play alone, and doesn't like it when it's noisy or crowded.	
3	Repetitive movements (Stereotypy)	F likes to pace aimlessly and often kisses or puts things in his mouth	
<i>Anxiety Withdrawal/Personality Problem</i>			
1	Behavior	Sometimes he moved in a hurry, moving his table forward until it fell on his friend, making his friend feel disturbed.	Experiencing anxious behavior disorder or excessive anxiety but this does not happen too often.
<i>Attention Deficit Hyperactivity Disorder (ADHD)</i>			
1	Inattention or difficulty concentrating	A doesn't want to listen, can't concentrate, and likes to daydream.	Having difficulty behaving, thinking, and controlling emotions.
2	Impulsiveness or difficulty resisting urges	Likes to rush when approaching or doing something, often causes injury, is impatient, and likes to interrupt.	
3.	Hyperactivity or difficulty controlling movement	When A is bored in class, he will run around or go to a room that makes him comfortable, so he doesn't follow the lesson.	

Based on Table, shows aspects of the difficulties of children with special needs at SD Muhammadiyah Surya Mentari Surakarta including verbal communication, social interaction, stereotypes, behavior that is sometimes destructive, and hyperactivity that is difficult to control. This observed behavior can of course be observed throughout the child's activity process at school.

One of the students at SD Muhammadiyah Alam Surya Mentari has ASD. F has autism which causes him difficulty in communicating and interacting socially. But on the other hand, his academic abilities are good. Based on the data collected, F was born as a crew member because his mother gave birth at an old age. Meanwhile, in observation activities, it was found that F had characteristics such as making stereotypical movements, being busy with his world, and lacking communication skills. In terms of behavioral and emotional problems, it shows that F finds it difficult to express his desires so he will cry when he wants something. As for F's behavior, it is still difficult to manage and difficult to direct him not to behave in a bad way.

The results of the study showed that student with ASD and ADHD and Anxiety Disorders have various characteristics that lead to obstacles in social emotional behavior in the form of: stereotypical movements, difficulty focusing, difficulty interacting socially, often rushing, difficulty communicating with people, like to talk to themselves and repeat sentences spoken by the other person, laugh easily and get angry easily for no reason, and dislike crowds. These results are in line with research proposed by Widiningtyas (2012) that Autism is a complex developmental disorder. Autism Spectrum Disorder (ASD) can be seen in a child's lack of ability in social interaction, communication, and repetitive

behavior (Ballerina, 2017). ASD is a neurodevelopmental disorder condition is characterized by difficulties in social interaction, and social communication, and restricted and repetitive behavioral patterns from a young age (Milner et al. 2019, Silvia et al, 2017).

ASD children are children with very complex developmental disorders, including behavioral disorders, interaction disorders, and developmental disorders that affect language and social interactions which can be seen clearly before the child is 3 years old so that the child's performance can be reduced influence (Irvan, 2016). ASD children are children who experience complex mental development disorders because there are three aspects of failure in social interaction skills, social communication, and behavior (limited and repetitive) (Rahmatika, 2019). This cannot be cured, but the behavior can be minimized with the existence of guidance services. optimal. Autism Spectrum Disorder (ASD) is a person who experiences a lifelong disability that affects communication and understanding of social cues to (De Leo, 2015). ASD is a neurodevelopmental disorder where the condition is characterized by difficulties in social interaction, social communication, and restricted and repetitive behavioral patterns from a young age (Milner et al. 2019). have the characteristics described by to Paternotte (2013) including difficulty in focusing attention on both what is interesting to the child and what is not interesting.

These results are in line with (Anisah, 2015) who states that this group of delinquent children is often referred to as children who are "too inhibited". With behavioral characteristics such as being shy, self-conscious, anxious, lonely, sensitive, having difficulty socializing with friends,

being very dependent, and suffering from depression. R comes from a rich family, where they are too protected and pampered, so they cannot adapt to an environment that demands something from them, such as social responsibility, religion, culture, etc. Conduct Disorder is the inability to control oneself, these types of behavior include destroying other people's things, fighting, being arrogant, cruel, speaking harshly, etc (Anisah, 2015). This is also in line with (Aprilia et al., 2020) that CD children are children who experience behavioral disorders where the child does things that are considered unnatural in society, such as fighting, bullying, hitting, and so on.

Anxiety or what is usually called anxiety is often interpreted as a mental illness or psychological disorder. Anxiety is a normal emotional symptom. (Saswono and Wu, 2021) state that anxiety is a combination of emotions such as fear, sadness, anger, shame, guilt, and joy that come together. These disorders are generally characterized by fear and worry about being rejected by the surrounding social environment (Sitompul et al., 2021). Individuals who experience anxiety are not only afraid but also embarrassed to do the things they want because of the fear of not being accepted by those around them. (Anisah, 2015; Travelancya et al., 2022) states that Anxiety Withdrawal/Personality Problem is a type of disorder in the form of unclear, unreasonable worries and anxieties or self-limiting personal characteristics that result in disrupted interactions with other people. Behaviors that stand out in this child include: shy, anxious, easily behaved, easily confused, closed, etc. In line with the research that has been described, this problem/symptom was found in one of the children in class 1 of Muhammadiyah Surya Mentari Elementary School, where the child

limited himself in social interactions, then lacked confidence and was closed, then showed a hasty attitude when doing something. T has difficulty managing his emotions. He has an anxiety disorder that interferes with his social interactions with the surrounding environment.

These results are in line with research conducted (Khotijah, 2014), children with "Attention Deficit Hyperactivity Disorder" (ADHD) are defined as children who have difficulty concentrating on receiving lessons from their teachers, especially the inability to focus and pay attention to one thing. Meanwhile (Putra & Putra, 2021; Minsih, 2023; Widiastuti, 2024) said that ADHD is a developmental disorder and motor improvement in children that can last until the child grows up. Thus, it is in line with the opinion of (Hartiningsih, 2013; Minsih et al, 2023) that ADHD is a syndrome that appears in children characterized by difficulty being quiet (hyperactivity), difficulty concentrating (inattention), being at will (impulsiveness), and other behaviors that can hinder their activities. which in general can interfere with the learning process and academic achievement (Latifa, 2017). Behaviors that are characteristic of ADHD that can be seen include acting carelessly or carelessly, easily obeying, not remembering school lessons and homework, having difficulty doing assignments at school and home, having difficulty listening, having difficulty carrying out commands, often daydreaming, often accidentally speaking frankly, children have low patience, like to make noise, are complicated when speaking, like to interfere and interrupt conversations (Khotijah, 2014). They also cannot remain silent and cannot remain calm (Hartiningsih, 2013).

Autism Spectrum Disorder (ASD) children are children with very complex developmental disorders, including

behavioral disorders, interaction disorders, and developmental disorders that affect language and social interactions which can be seen clearly before the child is 3 years old so that the child's performance can be reduced. Influence (Silvia et al, 2017; Lord et al, 2020). Physically, autistic children are no different from other children in general, the characteristics of disorders in autistic children can be seen from infancy.

The following are the characteristics of autistic children's disorders, including; (1) insensitive to other people, (2) stereotyped/repetitive movements such as twisting hands, swaying, and turning, (3) moving away from other people's sight, (4) consistency in habits, (5) abnormal and ritualistic behavior/attitudes (Smith, 2013). Other characteristics related to Autism Spectrum Disorder (ASD) are repetitive and stereotyped activities as well as resistance to the environment, daily activities, and unnatural responses to sensory sensitivity (Silvia et al, 2017). According to Jamila (2008) there are six characteristics of autistic children, including (1) sensory disorders, (2) communication, (3) behavioral behavior, (4) social interaction, (5) playing patterns, and (6) emotions.

In line with research put forward by Powers in Azzahid et al. (2022) that there are six characteristics of children with autism, namely; (1) social interaction, such as playing alone and lack of eye contact, (2) communication, slow speaking and likes to parrot, (3) sensory disturbances, lack of response to pain, (4) behavior, hyperactivity or hypoactivity, repetitive movements, (5) emotions, laughing alone, getting angry, (6) playing patterns, likes rotating objects such as fans.

Emotional disorders are described as a lack of coordination and behavior that does not conform to the environmental and social

norms of the relevant age group, causing harm to oneself and others (Mirnawati and Amka, 2019). Children with socio-emotional behavior disorders have characteristics of emotional and social dysfunction, namely: 1) Uncomfortable relationships between family members, playmates, and school children. 2) They don't want to communicate and become isolated. 3) Likes to avoid tasks. 4) Crying, disappointing, lying, cheating, stealing, hurting and vice versa, wanting praise, always independent 5) Timid, not confident 6) Lacking initiative and responsibility, lacking courage, very dependent on others 7) Aggressive, suspicious, daydreaming indifferent and egocentric 8) People who exhibit nervous behavior such as nail biting.

This is in line with the findings of to (Asizah, 2015). that inappropriate behavior that is commonly found in the daily lives of children and adolescents is behavior that is negative both verbally and non-verbally, such as throwing tantrums, demanding attention, disobeying, fighting back, carrying out aggressiveness which can be endangering yourself or others, stealing, lying, and other disruptive behavior. There are various forms of disruptive behavior and their meaning is broad (Lord et al, 2020).

Providing treatment or assistance that will be given to children is not only based on grouping and so on, (Sunardi & Sunaryo, 2007) state that there needs to be an initial understanding regarding the child's objective condition, through assessment activities in providing services. Without this, planning service programs so that they can be carried out systematically, concretely, and relevant to the child's objective conditions will be difficult. (Utami, 2014) defines assessment as a process of collecting data on individual students to see their level of ability, and the difficulties they experience so that they can determine what students need. This supports

the results of research at SD Muhammadiyah Alam Surya Mentari that in finding out behavioral and emotional problems in children, teachers first carry out observations and assessments of each child to find out the problems and what efforts are being made to overcome these problems.

4. Conclusion

Elementary school children tend to be hyperactive and impulsive, but these behaviors can still be tolerated as manifestations of their age. Some forms of behavior and emotions shown by children indicate disorders that require special services or guidance. The results of the study above show that students with ASD and ADHD and Anxiety Disorders have various characteristics that lead to obstacles in social emotional behavior in the form of: stereotyped movements, difficulty focusing, difficulty interacting socially, often rushing, difficulty communicating with others, like talking to themselves and repeating sentences spoken by the other person, laughing easily and getting angry easily for no reason, and not liking crowds. The implications of this study contribute to subsequent research, in providing appropriate services according to the types of obstacles experienced by students with limited social emotional behavior. The limitations of this study lie in the scope of the study which only focuses on the characteristics of students with social emotional behavior obstacles without any discussion of the appropriate form of service related to these problems.

5. References

- Adhantoro, M. S., Sudarmillah, E., Gunawan, D., Nurgiyatna, Riyanti, R. F., Purnomo, E., & Asmaroini, A. P. (2025, March). Preparing students and teachers for a digital future: A review of the integration of computational thinking in STEM education. In *AIP Conference Proceedings* (Vol. 3142, No. 1, p. 020113). AIP Publishing LLC.
- Adiputra, I. M. S., Sutarga, I. M., & Pinatih, G. N. I. (2015). Faktor Risiko Attention Deficit Hyperactivity Disorder (ADHD) pada Anak di Denpasar. *Public Health and Preventive Medicine Archive*, 3(1), 35.
<https://doi.org/10.15562/phpma.v3i1.84>
- Anisah, A. S. (2015). Gangguan Prilaku pada Anak dan Implikasinya terhadap Perkembangan Anak Usia Sekolah Dasar. *Jurnal Pendidikan Sekolah Dasar (JPSPD)*, 1(2), 5-20.
- Aprilia, Y., Nur, A., Usman, & Husin, N. (2020). Conduct Disorder Perspektif Al-Qur ' an dan Psikologi (Kajian Integrasi). *Jurnal An-Nida'*, 44(2), 173-188.
- Asizah, N. (2015). Faktor Individu Yang Berhubungan Dengan Tindakan Merokok Mahasiswa Di Universitas Hasanuddin. *Skripsi. Universitas Hasanuddin*.
- Azzahid, A., Muliadi, M., & Rismanto, F. (2022). Terapi Audio Murotal Al-Qur'an terhadap Emosi Anak Autis (Studi Kasus SD Plus Al-Ghifari). *Jurnal Riset Agama*, 2(1), 147-161.
<https://doi.org/10.15575/jra.v2i1.17121>
- Ballerina, T. (2017). Meningkatkan Rentang Perhatian Anak Autis dalam Pembelajaran Pengenalan Huruf. *Inklusi*, 3(2), 245.
<https://doi.org/10.14421/ijds.030205>
- Chaidi, I., & Drigas, A. (2023). Digital gaming and autistic spectrum disorder. *International Journal of Emerging Technologies in Learning (iJET)*, 18(22), 4-23.
- Darmiah. (2020). Perkembangan dan Faktor-Faktor yang Mempengaruhi Emosi Anak Usia MI. *Jurnal Pendidikan*, 8 (2).
<https://jurnal.ar-raniry.ac.id/index.php/Pionir/article/view/6230>
- De Leo, D. (2015). Università, istituzioni e

- territori: ripensamenti e opportunità tra opensource urbanism e prosumership. *Territorio*, 73, 2, 2015, 73-78.
- Fadli, M. R. (2021). Memahami Desain Metode Penelitian Kualitatif. *Humanika, Kajian Ilmiah Mata Kuliah Umum*, 21(1), 33-54.
- Gunawan, A. A. (2021). Forecasting social distancing impact on covid-19 in Jakarta using SIRD model. *Procedia Computer Science*, 179, 662-669.
- Hafida, S. H. N., Ibrahim, M. H., Susilawati, S. A., Suparno, R. R., Suharjo, S., & Widiyatmoko, W. (2020). The Effectiveness of Jigsaw Strategy in Geography Subject of Earth as Living Space Material. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 47-55.
- Hartiningsih, N. (2013). Play Therapy Untuk Meningkatkan Konsentrasi Pada Anak Attention Deficit Hyperactive Disorder (ADHD). *Jurnal Ilmiah Psikologi Terapan*, 1 (2), 2301-8267.
- Irvan, M. (2016). Pengetahuan Orang Tua, Guru, dan Terapis Tentang Anak Autism Spectrum Disorder. *HELPER: Jurnal Bimbingan Dan Konseling*, 32(2).
<https://doi.org/10.36456/helper.vol32.no2.a466>
- Islam, M. R., Ahmed, M. U., Barua, S., & Begum, S. (2022). A systematic review of explainable artificial intelligence in terms of different application domains and tasks. *Applied Sciences*, 12(3), 1353.
- Jamila, M. K. A. (2008). *Special Education for Special Children Panduan Pendidikan Khusus Anak-anak dengan ketunaan dan Learning Disabilities*. Hikmah (PT Mizan Publika).
- Khaulani, F. (2023). Pengaruh Bahan Ajar Tematik Terpadu Terhadap Identitas Bangsa Siswa Sekolah Dasar. *Jurnal Pelita Ilmu Pendidikan*, 1(1), 29-33.
- Khotijah, L. (2014). Konseling Integratif dalam Menangani Gangguan Konsentrasi Belajar Anak ADHD (Attention Deficit Hyperactivity Disorder) Studi kasus Kumbang di SLB Yapenas Pringwulung Yogyakarta. *SKRIPSI UNY*.
- Latifa, B. R. A., Verawati, N. N. S. P., & Harjono, A. (2017). Pengaruh model learning cycle 5E (engage, explore, explain, elaboration, & evaluate) terhadap kemampuan berpikir kritis peserta didik kelas X man 1 mataram. *Jurnal Pendidikan Fisika dan Teknologi*, 3(1), 61-67.
- Lord, C., Brugha, T. S., Charman, T., Cusack, J., Dumas, G., Frazier, T., Jones, E. J. H., Jones, R. M., Pickles, A., State, M. W., Veenstra-VanderWeele, Taylor, J. L., & Jeremy. (2020). Autism spectrum disorder. *Nat Rev Dis Primers*.
<https://doi.org/https://doi.org/10.1038/s41572-019-0138-4>
- Milner, V., McIntosh, H., Colvert, E., & Happé, F. (2019). A Qualitative Exploration of the Female Experience of Autism Spectrum Disorder (ASD). *Journal of Autism and Developmental Disorders*, 49(6), 2389-2402.
<https://doi.org/10.1007/s10803-019-03906-4>
- Minsih, M., Utami, R. D., Rahayu, D., Nurlaila, M., Tadzkiroh, U., & Raisia, A. (2024, May). Ecoliteracy as Deep Learning Innovation Realizing the Primary School Literacy Movement in the Freedom of Learning Era. In *Proceedings of the 3rd International Conference on Education for All (ICEDUALL 2023)* (Vol. 822, p. 55). Springer Nature.
- Mirawati, M., & Amka, A. (2019). *Pendidikan Anak ADHD (Attention Deficit Hyperactivity Disorder)*.
- Paternotte, A. & J. B. (2013). *Attention Deficit Hyperactivity Disorder*. Prenada.
- Putra, D. A. P. dan R. W. (2021). Perancangan Buku Ilustrasi mengenai penyakit ADHD: Gejala, Penanganan, dan perbedaan dengan Autisme kepada orang tua yang memiliki anak Usia 3 - 6 Tahun. *Jurnal Pantarei*, 5 (2).

- Rahmatika, A. et al. (2019). Psikologi Perkembangan Masa Usia Sekolah Dasar. *Jurnal Psikologi Perkembangan*.
- Rahayu, A., & Khairiyati, L. (2014). Risiko pendidikan ibu terhadap kejadian stunting pada anak 6-23 bulan. *Penelitian Gizi dan Makanan (The Journal of Nutrition and Food Research)*, 37(2), 129-136.
- Ratih, K., Syah, M. F. J., Nurhidayat, N., Jarin, S., & Buckworth, J. (2021). Learning patterns during the disruptive situation in informal education: Parents' efforts and challenges in the adjustment of progressive learning. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 180-193.
- Saswono, R. P., & Wu, B. (2021). Perancangan Buku Cerita Billie ' S New Friend Sebagai Media Untuk Mengatasi Anxiety Bagi Anak SD. *JESKOVSIA : Jurnal Desain Komunikasi Visual Asia*, 05(02), 114–120.
- Setiawati, S. (2023). Deixis in Folklore Collections and Implications for Learning Indonesian Language and Literature in Senior High School. *East Asian Journal of Multidisciplinary Research*, 2, 1105-1118.
- Silvia, D. A., Juhainini, & Gustina, A. D. (2017). Implementasi Pembelajaran Toilet Training pada Anak Autism Spectrum Disorder. *Edukids: Jurnal Pertumbuhan, Perkembangan, Dan Pendidikan Anak Usia Dini*, 14(2), 109–119.
- Sitompul, L. K., Stevani, L. D., Fauziah, R., & Putri, V. T. (2021). Implementasi Teknik Bimbingan Konseling Dalam Mengatasi Gangguan Kecemasan Sosial Anak Usia Dini. *Jurnal Golden Age, Universitas Hamzanwadi*, 5(2), 501–512.
- Smith, J. D. (2013). *Sekolah Inklusif: Konsep dan Penerapan Pembelajaran* (5th ed.). Nuansa.
- Sonuga-Barke, E. J., Becker, S. P., Bölte, S., Castellanos, F. X., Franke, B., Newcorn, J. H., ... & Simonoff, E. (2023). Annual Research Review: Perspectives on progress in ADHD science—from characterization to cause. *Journal of child psychology and psychiatry*, 64(4), 506-532.
- Sunardi, & Sunaryo. (2007). *Intervensi Dini Anak Berkebutuhan Khusus*. Departemen Pendidikan Nasional.
- Travelancya, T., & Sa'adatul Ula, I. (2022). Pendidikan Inklusif Untuk Anak Dengan Gangguan Emosi Dan Perilaku (Tunalaras) Inclusive Education for Children with Emotional and Behavioral Disorders (Tunalaras). *Absorbent Mind: Journal of Psychology and Child Development Absorbent Mind*, 2(1), 23–28.
- Umi, L. (2017). Aspek Perkembangan pada Anak Sekolah Dasar: Masalah dan Perkembangannya. *Journal of Multidisciplinary Studies*, 1(2), 185–196.
- Utami, O. B. (2014). Layanan Bimbingan Belajar Bagi Anak Autistik di SDN Inklusif Ngleri Playen Gunungkidul Yogyakarta. *Basic Education*, 12(2007), 703–712.
- Verisa, G. S., Mutmainah, N., Fidyastuti, N., & Minsih, M. (2024). Improving the Creativity of Children with Disabilities Based on Local Culture: An Exploration of the “Karya. Ku” Program. *IAS Journal of Localities*, 2(2), 172-183.
- Wakhaj, N. I. U., & Rofiah, N. H. (2018). Perilaku Attention Deficit Hyperactivity Disorder (ADHD) dalam Proses Pembelajaran (Studi Kasus Peserta Didik) di Kelas IV SD Negeri Gejayan. *Jurnal Fundadikdas (Fundamental Pendidikan Dasar)*, 1(1), 64. <https://doi.org/10.12928/fundadikdas.v1i1.71>
- Widiastuti, I. A. M. S. (2024). Employing Cooperative Learning to Enhance the University Students' Reading Comprehension. *Jurnal Ilmiah Global Education*, 5(1), 516-524.
- Widiningtyas, Y. (2012). Peranan Guru dalam Menangani Siswa dengan Gangguan Autisme di Sekolah Inklusif

(Studi Deskriptif di sekolah Dasar Islam Terpadu Ruhama). *Jurnal Pendidikan Khusus*, 1(01), 57–64.

Zakaria, G. A. N., Yusmaliana, D., Abdullah, Z. H., Abubakari, M. S., Narongrakshakhet, I., & Amonov, B. (2025). Gender-Neutral Pathways to Positive Behavior: Investigating the Role of Self-Actualisation and

Academic Achievement in Secondary Education. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 7(1), 1–17. <https://doi.org/10.23917/ijolae.v7i1.23679>