

Implementation of ABA (Applied Behaviour Analysis) Therapy for Children with Autism Spectrum Disorders at the Therapy Center in the Yogyakarta Special Area

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Abstract: This study aims to determine: (1) To explore what techniques in ABA (applied behavior analysis) therapy given by therapists to children with spectrum disorders at the therapy center of the Special Region of Yogyakarta, (2) To implement the implementation of the ABA (applied behavior analysis) therapy process given by the therapist to spectrum disorder children at the Yogyakarta Special Region therapy center, and (3) To reveal whether or not the ABA (applied behavior analysis) therapy given by the therapist to spectrum disorder children in a therapy center for the Special Region of Yogyakarta. The research method in this article uses qualitative research methods. This type of research uses descriptive analysis. Data collection techniques in this study using observation, interviews, and documentation. Data analysis techniques use data reduction, data presentation, and conclusion. Sources of data in this study using primary data and secondary data. The research subjects consisted of therapists, parents, and children with autism spectrum disorders. The results of this study indicate that: (1) ABA (applied behavior analysis) therapy techniques given by therapists to children with spectrum disorders include: instructions, prompts, and rewards, (2) The implementation of ABA (applied behavior analysis) therapy by the therapist is quite good because in this therapy center there is already an adequate program to support the success of children in their development, (3) ABA (applied behavior analysis) therapy given by therapists to children with autism spectrum disorders is very effective because from this therapy the therapists teach children to follow instructions, respond to the words of others, and imitate.

Keywords: Applied Behavior Analysis, Children, Spectrum Disorder.

INTRODUCTION

Every living thing that exists on this earth will experience growth and development, although each individual is not always the same in the growth process. Development is a pattern of movement and change that starts from fertilization and continues growth throughout the human life cycle. Likewise, in a child, every child will grow and develop according to his developmental tasks. Therefore, children need special attention to be able to optimize in order to grow and develop. However, there are some among other individuals that there seems to be a problem in the growth or development process. These children can also be called children with special needs (ABK).

Children with special needs are included in the group of children who experience obstacles in developing their behavior. For example, children who have autism are unable to communicate in two directions. It is because autistic children experience disturbances in aspects of communication, language, and social interactions, resulting in these children not being able to blend in with the surrounding environment (Qing et al., 2019). There are various types of extraordinary children, one of which is autism.

Autism itself can be interpreted as a collection of syndromes that interfere with nerves. This disease interferes with the development of children. The diagnosis can be known from the visible symptoms

and indicated by developmental deviations (Pratiwi, Mardiana, & Yusriana, 2019). Conditions in children with autism experience disturbances in social relationships that occur from birth or during development so that the child is isolated from human life

From the experts, the experts have not been able to determine what causes the autistic disorder. However, several factors include (1) genetic factors, impaired brain cell growth while in the womb or still in the form of a fetus, digestive disorders, heavy metal poisoning, and auto-immune disorders. (2) Children who have pre-net, such as children born prematurely, antenatal bleeding in the first-second trimester, these children born to mothers who are more than 35 years old are called postmature. (3) Children with a history of non-spontaneous delivery. According to Twistiandayani & Umah (2017), other causes in children with autism are caused by disturbances in the function of the brain structure.

Usually, the behavior that often appears in autistic children is emotional disturbances such as crying or laughing for no apparent reason, unable to empathize, excessive fear. Not only that, but autistic children also have disturbances in social interaction, which are not interested in playing with their friends, prefer to be alone, avoid looking at each other, enjoy pulling other people's hands (Hardiani & Rahmawati, 2011).

Table 1. the research subject in the current study

No	Name	Age	Description
1	SI	Three years	Children with autism spectrum disorders
2	RA	Five years	Children with autism spectrum disorders
3	MA	Ten years	Children with autism spectrum disorders

The research results from Tripathi (2015) reveal that autistic children can be characterized by disturbances in communication and social interaction, with 85% of autistic individuals who have cognitive or adaptive limitations that limit individual abilities. Autistic children are seen before the child reaches the age of 3 years, which is seen from the time of its appearance and events that can occur from birth which is often referred to as classic autism, and after birth, where children aged 1-2 years show normal development. Meanwhile, according to Widuri (2013), autistic children have three essential characteristics, which are commonly called the autistic triad, namely: (1) communication (speaking and speaking), (2) social interaction (not interested in interacting), (3) behavior in living in the community own world.

Children who experience spectrum disorders affect aspects of learning or behavior. It is because the growth or development of this child is strongly influenced by the stimulus provided by the surrounding environment. If this stimulus runs or runs well, the child can have cognitive, motoric, and language abilities. Furthermore, the role of parents is also very decisive in the process of growth and development for children with autism (Handoyo, 2009).

With the phenomenon in today's society, children with spectrum disorders do not get severe treatment. Autistic children have just been left alone without getting special attention, even some people in the community who isolate children with an autistic disease they suffer from. For example, children who have a terrible temper in childhood will be carried over to adulthood by showing or showing behavior that is difficult to interact with the environment. Therefore, this autistic child must receive full attention or appropriate handling so that this child has the opportunity to develop into a successful individual in the future.

From the results of a research report by the Princeton Child Development Institute in 1985 quoted by Mourice (1996), it was revealed that to carry out early treatment before the age of 5 years and 40%-60% of autistic children can be enrolled in regular schools (Hardiani & Rahmawati, 2011). Thus, one of the therapies that can intervene early on children with spectrum disorders is ABA (applied behavior analysis) therapy.

ABA therapy (applied behavior analysis) is an applied science that uses behavior change procedures to master various abilities with standard sizes in the community (Ardina, 2018). This therapy uses a behavioral theory approach, with the early stages emphasizing obedience, children's skills in imitation, and building eye contact. Children practice communication, speaking, language, and social interaction. (Adjeng & Hatta, 2015). ABA therapy (applied behavior analysis) aims to teach how children can communicate actively in two directions, socialize in a general environment, eliminate or minimize inappropriate behavior, teach academic behavior and independence (Widodo, 2004). Achieve healing can be accompanied by an awareness of the importance of an active role that encourages parents to be actively involved in this therapy process.

Therapy Center Special Region of Yogyakarta is one of the government agencies that provide intervention services in therapy for autistic children to provide exceptional services that are useful for minimizing obstacles or disturbances in repetitive, aggressive behavior.

Therefore, the researchers formulated the following problems from the above problems: (1) What are the techniques for ABA (applied behavior analysis) therapy given by the therapist to children with autism spectrum disorders at the therapy center in the Special Region Yogyakarta? (2) How is the implementation of the ABA (applied behavior analysis) therapy process given by the therapist to autism spectrum disorder children at the Yogyakarta Special Region therapy center (3) Effective or not ABA (applied behavior analysis) therapy given by the therapist to autism spectrum disorder children at the regional therapy center Special Yogyakarta?.

This study provides an overview of ABA (applied behavior analysis) therapy carried out by therapists at the therapy center, which functions to help children with spectrum disorders in child growth and development by using programs that the therapy center has determined.

METHOD

The method in this study uses qualitative. The approach used in this study uses ABA (applied behavior analysis) therapy in children with spectrum disorders. The type of research used in this research is descriptive analysis research. The information obtained in qualitative research is in words or text as data, which is then analyzed. The analysis results can be in the form of a description or a description of the results of qualitative research (Raco, 2008), table 1.

Data analysis techniques use data reduction, data presentation, and conclusion. The research subjects consisted of therapists, parents, and children

with autism. Data collection techniques in this study used observation, interviews, and documentation (Sugiyono, 2009). The data source in this article uses primary data and secondary data (Hardani et al., 2020). The primary data as the main data in this study is therapy center Yogyakarta Special Region. At the same time, secondary data is in the form of data sourced from literature, journal articles related to the object of research to be carried out—the object of research at the Yogyakarta Special Region therapy center.

FINDINGS AND DISCUSSIONS

Findings

Based on the research results at the therapy center, the implementation of ABA (applied behavior analysis) therapy is entirely running smoothly and effectively. The therapy center has provided ABA (applied behavior analysis) therapy programs for autistic children according to the level of problems experienced by the autistic child.

The implementation of ABA (applied behavior analysis) therapy given by the therapist to children with spectrum disorders is carried out individually or individually. Based on observations at the therapy center, there are eight therapists in total. The process of implementing ABA therapy (applied behavior analysis) is carried out four times a week with a time of about 90 minutes for each meeting. The number of service therapists at the therapy center can support the therapy process; namely, with an adequate number, it will make therapists who are not available to attend the therapy schedule replace therapists who cannot attend. It is so that the therapeutic activity process goes well and according to the schedule that has been provided. The collaboration between therapists with one another will facilitate the therapy process. Cooperation between parents and therapists will also be very good for success in the therapy process. The collaboration is done by consulting about the development of the child's therapy and providing home programs that can make parents aware of the child's development and teach or train children's abilities at home. So the child can practice at home with parental guidance if the therapist has left.

The program for implementing ABA therapy (applied behavior analysis) uses a quarterly curriculum. This program is made every three months, in which every child's development will be recorded in detail. Programs include (1) learning readiness, (2) receptive programs, (3) imitation programs, (4) expressive language programs, (5) equalizing tasks, (5) self-help programs. In addition, this curriculum is also adjusted to the level or level of children's abilities in their development, such as consisting of basic level, intermediate level, and advanced or advanced level. At this Therapy Center, ABA (applied behavior analysis)

therapy is used according to specific instructions that are brief, clear, and consistent. It requires prompt direction or early guidance in therapy. Good responses with or without prompts will be rewarded.

Thus, the implementation of ABA (applied behavior analysis) therapy in the therapy center can be said to be effective in helping to deal with problems faced by children with autism spectrum disorders.

Discussions

ABA (Applied Behavior Analysis) Therapy Techniques for Autism Spectrum Disorder Children

Dr. Lovas first introduced ABA therapy as “applied behavior analysis,” where ABA therapy focuses more or emphasizes dealing with autism-specific symptoms such as communication deficits, no self-care skills, and self-stimulating or self-destructive behavior (Oltmanns & Emery, 2013).

The research results from Rizky, Noor, & Fadhila (2021) revealed several levels of autistic disorders, including mild, moderate, and severe. Children who have a mild level of autistic disorder will find it easier to carry out therapeutic activities. If the level of interference is moderate in autistic children, it makes the therapist do more instructions than mild autistic disorders. Meanwhile, children who have a severe level will need real help from a therapist. The success of therapy for children who have mild levels of autism will make more progress than children who have moderate levels of disorder. In contrast, children with moderate levels of autistic disorders will have more development than children with more severe levels of autistic disorders.

Therefore, to achieve success from ABA (applied behavior analysis) therapy, it needs to use the discrete trial training technique, a division ability to take small steps and teach one step at a time to the teacher to become proficient. From the teaching system in the form of repetition by providing reinforcement, assisted in prompt procedures. Discrete trial training is a teaching technique under the auspices of ABA (Handoyo, 2009). According to Soeriawinata (2018), the discrete trial training technique is a specific or actual trial exercise consisting of a cycle starting with instructions, prompts, and rewards.

Instructions

ABA (applied behavior analysis) therapy instructions are clear, concise, consistent, and only executed once. The short-expression means that this instruction consists of one word: imitate, see, enter, match, open, point, prompt. The therapist says the keywords and says in a neutral tone of voice, loud enough and firm, but not yelling. These instructions must be clear, following what is being taught to a

therapist and only teach it in one activity. For example, the therapist teaches imitation of wearing clothes, from the command to “copy,” but must be at the same time to give a prompt to wear clothes. If the therapist wants to teach the child to follow simple commands at one stage, such as “get on the clothes” instructions.

Response

Response instructions to therapists with autistic children may be given correctly, half-true, incorrectly, or not responding at all, which is judged to be only wrong. If this autistic child responds incorrectly, then allow about 2-3 seconds for the child to start responding again. Then give feedback with a light “no” verbal, then give instructions once again. If the child is still wrong or does not respond, give mild verbal feedback “no,” then give instructions a third time and must be accompanied by a prompt, such as a touch on the arm or hand or full hand assistance (hand over hand), then give a reward. After that, the grace period (intertribal interval), then the test is repeated with the number one instruction count.

Prompt

Prompt is a help to the child to produce the correct response. Prompts are an addition. They are not continuously used. However, it could be during the first practice. For example: if the “hold the nose” instruction is given and the child does not respond, the therapist can physically use the prompt by moving the child’s hand if giving the “hold hand” instruction. Prompts are abbreviated as P. Prompts given in full are hand on hand. The therapy hand holds the child’s hand and directs to use the behavior instructed by the therapist. This prompt can be done in various ways, such as by pointing, gestures, in the eye, or in the way of verbs.

Rewards

Rewards are a “reward” for a child’s behavior so that this child is willing to continue and understand the concept. This reward has the most crucial concept, namely the type and how to give it. Reward Type: Positive objects or activities, such as food, hugs, kisses, and compliments. Rewards to the recipient can serve to improve behavior. Before the therapist gives an appropriate reward, it would be nice to check the child’s preferences by offering some menus, putting down some objects, and watching what he takes. How to give a reward: This reward must follow the behavior performed and be given as soon as possible after certain behaviors. Just as the ice cream is given as a reward if the child expresses something according to the therapist’s instructions, the reward in the form of ice cream must be given as soon as possible to a child.

The therapist also applies instructions, prompts, and rewards to support the program’s success in the therapy center. Children who carry out therapeutic activities also need support from the therapist, which will affect the smoothness of therapy. The therapist provides support such as how to give firmness to children so that children can obey, cry, hug children, which can make children calm, and provide a reward and punishment. If the intention is to treat it seriously, It will be able to control the mood and choose a program that suits the child’s needs.

Implementation of ABA (Applied Behavior Analysis) Therapy for Autism Spectrum Disorder Children

ABA therapy (applied behavior analysis) is the way an individual reacts to a stimulus, the consequences that occur, the specific reaction, and how the consequences can affect future events. In this case, the implementation of ABA (applied behavior analysis) therapy can train every skill that is not possessed by children, ranging from simple responses, such as looking at other people or, you could say eye contact, to complex skills, such as spontaneous communication and social interaction. In this case, the method is taught in a systematic, structured, and measurable way. It was starting with a one on one system by providing specific instructions that are short, clear, and consistent. It requires prompts (guidance, assistance, and direction) that begin with therapy. A good response, or no prompt, will be rewarded.

There are initial programs implemented at the therapy center of the Special Region of Yogyakarta, including: (1) learning readiness program, (2) repetitive learning program, (3) imitation program, (4) expressive language program, (5) equalizing task. If the child can achieve progress, then a new program is added. Gradually teach skills such as imitating gross motor movements. From this stage, it is not only teaching children to be able to imitate various kinds of movements, but children also understand the concept of “copying.” Then the child begins to understand the concept of imitation, then to other aspects, such as instructions to imitate vowels (a, i, u, e, and o), syllables (ba, bi, bu, pa, pi, and pu), then the words (mother, father, and sister) and other sentences that are appropriate in the development process

Not only that, but the therapy center also provides a compliance program. The meanings are (eye contact and sitting while studying), receptive language, expressive language, pre-academic, and self-help. From the implementation of this program, it must be adapted to the condition of the child. Therefore, for children who will follow this therapy, it must be observed first, then from the results of this observation, it will be determined what program will be used in children.

The factors that influence the therapeutic process for autistic children are prayer rituals. With three subjects besides SI, RA, and MA, they performed the prayer verbally. Meanwhile, children who cannot do it verbally do it non-verbally. A therapist will guide the prayer at the beginning or end. SI did a silent prayer. In the prayer, the child hopes that the therapy activities can run smoothly and produce good development. After praying, the child feels calmer and more comfortable, more focused, and ready for therapy. Not only that, from this joint prayer, the child can get closer to the therapist, with the presence of chemistry in a child, they can practice the program given by the therapist, for example, eye contact that is carried out on children when instructed to pray with their hands up, this will certainly facilitate and facilitate the therapeutic process.

The program created by the therapy center can be used within three months and ends with a final evaluation. Furthermore, if it is successful in the initial program, it will be continued with the following program. In this way, it can be ensured that all the programs needed for children with autism will run well. Furthermore, from the programs that have been made, there are also levels of children's success seen from the point of view of age differences, including large and small. Therefore, for children who are around ten years old, when therapy is carried out, it will facilitate the achievement of the targets or goals of the given therapy program.

Meanwhile, if the child is around three years old, it will be more challenging to follow the therapeutic activities provided by the therapist. So to achieve the target is not as easy as a ten-year-old child. It will complicate the therapeutic process. The therapy results prove that if children are older than their years old, they will experience a lot of improvement, which is better than children who are still small.

Handoyo (2009) stated that several things need to be considered in making programs, including 1) The program or activity being taught must begin with obedience and eye contact. Of the two, the child must be able to master it well; 2) Teach children to have the ability to imitate and continue to receptive or cognitive language skills. Furthermore, if the child is deemed capable, then proceed to expressive language skills; and 3) The ability in the new academic field is taught if the child has mastered the receptive language.

From implementing ABA (applied behavior analysis) therapy, there are obstacles felt by the therapist, including: (1) Located within the child. Children who find it difficult to understand what the therapist is saying will make it difficult during the learning process, significantly affecting the child's focus. (2) The therapist, which is where during the learning process the child is difficult to understand the orders (instructions) given by the therapist, in the end, the therapist must do it repeatedly when communicating

with autistic children, with the aim that this child understands what is being conveyed by the therapist. Therefore, this ABA (applied behavior analysis) therapy is very boring because it must be repeated until the child can understand what the therapist is saying (Communication et al., 2017).

The Effectiveness of ABA (Applied Behavior Analysis) Therapy in Autism Spectrum Disorder Children

From the implementation and technique of ABA (applied behavior analysis) therapy at the Yogyakarta Special Region therapy center, it is very effective to give autistic children. The reason is that there are adequate programs in the therapy center. Therefore, the therapist's job is to provide the therapy center's programs according to the child's needs.

The results of Resmisari's research (2016) reveal that the selection of ABA (applied behavior analysis) therapy in the case of children with autism is indeed effective in changing children's behavior, and this therapy has also been structured neatly. From the ABA (applied behavior analysis) therapy given by the therapist to this autistic child, there has been a gradual change because, during the therapy process, the therapist continues to observe the child's development. In implementing ABA (applied behavior analysis) therapy, the therapist evaluates after the therapy is carried out to see the developments that occur from the child. If the child has progressed on the program provided by therapy, a new program will be given. In contrast, if the child does not have changes to the program provided by therapy, it will be given continuously until the child can develop according to the program that has been provided. Therefore, in this therapy center, therapists collaborate to see differences in the process of implementing therapy.

ABA (applied behavior analysis) therapy has been proven to help autistic children overcome the problems they face. ABA therapy (applied behavior analysis) has been developed in many studies over a century to date. In addition, ABA therapy (applied behavior analysis) has been tested in various studies and the advantages of the ABA method compared to other methods in dealing with autism, including 1) Structured, in teaching using precise methods and techniques; 2) Targeted, there is an explicit curriculum so that it can help parents in directing therapy; and 3) Measurable, success or failure in children can produce the expected behavior. Besides that, it can be measured in several ways, and this is because behavior can be seen clearly, and measurement systems are also available with various variations.

CONCLUSION

Based on the explanation results above, the authors conclude that in the therapy center of the Special Region of Yogyakarta, ABA (applied behavior analysis) therapy is very effective for children with

spectrum disorders. Implementing ABA (applied behavior analysis) therapy is carried out four times a week for about 90 minutes. Several ABA (applied behavior analysis) therapy techniques, including instructions, responses, prompts, and rewards. The therapy center already has programs that have been provided from the therapy. These programs include learning readiness, repetition, imitation, expressive language programs with equalizing tasks, and compliance programs. Programs that already exist in the therapy center are given according to the level of problems for children with autism spectrum disorders.

REFERENCES

- Adjeng, J., & Hatta, I. (2019). Pengaruh Terapi ABA terhadap Interaksi Sosial Anak Autis di SLB Autis Prananda Bandung. SP – Psikologi: Koleksi skripsi ringkas dalam format artikel Fakultas Psikologi.
- Ardina, R. (2018). Terapi ABA (Applied Behavior Analysis) Tingkat Dasar Efektif Terhadap Perilaku Imitasi Aksi Anak Autis Di Pusat Terapi Lpsdm Graha Jiwa Indonesia Kab. Pringsewu. *The Indonesian Journal of Health Science*, 10(1), 89-94. <https://doi.org/10.32528/the.v10i1.1459>
- Handoyo, Y. (2009). Autisme pada anak: Menyiapkan anak autis untuk mandiri dan masuk sekolah reguler dengan Metode ABA Basic. Jakarta: Bhuana Ilmu Populer.
- Hardani, Andriani, H., Ustiawaty, J., Istiqomah, R. R., Fardani, R. A., Sykmana, D. J., & Auliya, N. H. (2020). Metode Penelitian Kualitatif & Kuantitatif. Yogyakarta: CV Pustaka Ilmu Group.
- Hardiani, R. S., & Rahmawati, S. (2011). Metode ABA (Applied Behaviour Analysis): Kemampuan Bersosialisasi Terhadap Kemampuan Interaksi Sosial Anak Autis. *Jurnal Keperawatan Soedirman*, 7(1), 1-9.
- Oltmanns, T. F., & Emery, R. E. (2013). Psikologi abnormal. Yogyakarta: Pustaka Pelajar.
- Pratiwi, M. R., Mardiana, L., & Yusriana, A. (2019). Komunikasi Non Verbal Anak Autis pada Masa Adaptasi Pra Sekolah. *KOMUNIDA: Media Komunikasi dan Dakwah*, 9(1), 37-52.
- Qing, B., Canovic, E. P., Mijailovic, A. S., Jagielska, A., Whitfield, M. J., Lowe, A. L., ... & Van Vliet, K. J. (2019). Probing mechanical properties of brain in a tuberous sclerosis model of autism. *Journal of biomechanical engineering*, 141(3), 031001.
- Raco, J. (2018). Metode penelitian kualitatif: jenis, karakteristik dan keunggulannya. PT Grasindo.
- Resmisari, R. (2016). Penerapan metode ABA (Applied Behavior Analysis) untuk meningkatkan kontak mata pada anak dengan gangguan autis: Sebuah laporan kasus. In *Psychology Forum UMM*, 374-378.
- Rizky, E., Noor, I., & Fadhila, M. (2021). Faktor Psikologis Yang Mempengaruhi Proses Terapi Anak Dengan Autisme. *Jurnal Al-Husna*, 1(1), 1. <https://doi.org/10.18592/jah.v1i1.3513>
- Soeriawinata, R. (2018). Verbal Behavior dan Applied Behavior Analysis Membantu Anak Autisme dan ABK Menemukan Fungsi Bahasa.
- Sugiyono. (2009). Metode Penelitian Kuantitatif Kualitatif Dan R&D. Bandung: Alfabeta.
- Tripathi, N. (2015). Parenting Style and Parent's Level of Stress Having Children with Autistic Spectrum Disorder (CWASD): Study Based on Northern India. *Journal Of Neuropsychiatry*, 1(1), 1-7.
- Twistiandayani, R., & Umah, K. (2017). Faktor-Faktor Yang Mempengaruhi Interaksi Sosial Pada Anak Autis. *Prosiding SNaPP: Kesehatan (Kedokteran, Kebidanan, Keperawatan, Farmasi, Psikologi)*, 3(1), 23-30.
- Widodo, J. (2004). Penatalaksanaan Attention Deficit Hyperactive. Malang: UMM Press.
- Widuri, R. W. (2013). Penanganan kemampuan interaksi sosial anak autis. *Jurnal Pendidikan Khusus*, 3(3), 1-11.