THERAPY WITH ABA METHOD IN DECREASING AUTISM BEHAVIOR

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ABSTRACT

Autism or ASD (Autism Spectrum Disorder) is a disorder with the amount of patient in society growing considerably rapid day by day, in the world and as well as in Indonesia specifically. Even though autism cannot be healed in a full-scale, children with autism could be given therapies to help increase the quality of their activities and the utilization of their daily time, also to decrease these children’s level of autism in general. There are 14 aspects that are observed on examining children’s level of autism. One of the commonly given therapies is behavior therapy with ABA method. This study will review whether behavior therapy with ABA method can lower autism level which is seen from CARS’ score level. The research method used is quantitative research. Documentation is used to collect data, with observation and interview as the complement. Participant of the study were 4 children with autism and had been receiving therapy with ABA method for at least a year period. Supporting participants are therapist in the therapy center. From the study, it was found that each score level of CARS’ aspects by every subjects is decreased after a year of therapy with ABA method, with the total average score is lowered by 8 points. It can be concluded that therapy with ABA method for children with autism will help the children to lower their autism behavior, thus increasing the quality of their activities and the utilization of their daily time.

Keywords: ABA (Applied Behaviour Analysis); Autism; Behavior Therapy; Cars; Pusat Layanan Autis Of Surakarta City.

INTRODUCTION

Autism is one of global development disorders which affect is the emergence of hindrance in socializing, communicating, and behavior ability. Those hindrance goes from the extent of mild to severe. Autism symptoms usually appear before children reach the age of 3 years. Children with autism disorder generally ignore voices, sights, or occurrence involving themselves, and they avoid or don’t respond social contact, as in eye contact, touch of affection, and playing with children. The cause of autism is not yet known but some studies show that autism is caused by disruption of central nervous system function which is the result of brain structure abnormalities. There is also other opinion that conclude the cause of autism is because the combination of erroneous food or environment which is contaminated by toxic substances which causes problems in behavior and physical, including autism. Autism symptoms that can be observed and should be watch according to age 0-6 months are babies seem too serene, too sensitive (quick to get annoyed or disturbed), there are excessive amount of hands and feet.
movement especially when bathing, no occurrence of eye contact or socially smiling, or making fist tensing feet excessively when being picked up. In the age of 6-12 are babies rigid or tense when being picked up, not interested in toys, not reacting to voices or words, or always staring at something even their own hands for a long period of time (as the result of delayed development in fine and rough motoric). In the age of 2-3 years, babies are not interested or socializing with other children, there are no eye contact, almost never focus, stiff to stranger, or prefer to being picked up and inert to move their bodies. In the age of 4-5 years, children likes to scream, repeat or imitate other people’s voice or making strange voices, children are quick to get angered or emotional when their routines are disturbed and when their wishes are not obeyed, or agressive and tend to hurt themselves (Rahayu, 2014).

Data from online autism clinic shows that in recent years, it is estimated there is an increase of autism sufferer in the world, including in Indonesia. In Indonesia, it is estimated one of 250 children suffered from autism spectrum disorder. In the year of 2015 in Indonesia, it is estimated there are at least 12.800 children suffer from autism and 134.000 people suffer from autism spectrum disorder (Judarwanto in Ardina, 2018).

Handling cases of autism, especially in children, begins with early detection of children who allegedly have characteristics of autism. Early detection can be done by parents, family, child teachers, or pediatricians. If the child shows some characteristics of autism, then assessment must be done immediately so that the right follow-up treatment can be immediately given. The results of the study then become the basis for determining the diagnosis and plan for handling children with autism, including also determining the type of therapy and the model of education services. Autistic children need to get therapy to get better conditions. With regular and integrated therapy, the shortage of children is expected to be gradually achieved. Therapy for children with autism aims to reduce behavioral problems, improve the ability and development of children's learning in terms of mastery of language, and also help autistic children to be able to socialize in adapting to their social environment. Therapy is teaching and training to ‘cure’ children with autism with a variety of therapies provided in an integrated and comprehensive manner. Its success is influenced by many factors, such as: the age of the child when he is educated and treated, the methods chosen, and the clear and concrete goals of the education and therapy process. Therapy will help ‘cure’ children with autism by suppressing the symptoms experienced so that it does not stand out, so that children can live and blend normally in society. The types of therapy that can be given to children with autism include medical therapy, speech therapy, behavioral therapy, self-care therapy, and occupational therapy (Bektiningsih, 2009).

In the Pusat Layanan Autis of Surakarta, there are four types of therapy that can be given to children with special needs, which according to their level, are behavioral therapy, occupational therapy, physiotherapy (including hydrotherapy), speech therapy, and transition classes. Depending on the abilities and the needs of the child, the child can be given part or all of the therapy, and generally according to the order of the level of therapy.
Behavioral therapy is the most basic therapy given to children with special needs with abilities that still do not have basic asset to adjust to daily activities, even therapeutic activities. These assets include but are not limited to concentration-attention, eye contact, ability to sit quietly, the ability to imitate behavior; all of them are including doing it independently, with stimulus, and assisted by the therapist concerned.

Occupational therapy is a therapy that aims to direct children with special needs to have productivity activities, leisure (preferred activities or activities to do in their spare time), and self-development to train children's independence. These goals are not merely done directly by doing things that are to be achieved, but also include training to familiarize children to do things that are related to things they want to achieve. For example, including training children to rub, press, hold; which children can apply in training to wipe or wash their hands and dishes.

Physiotherapy can be said as an advanced therapy that is very much related to occupational therapy. If occupational therapy teaches children to act as well as introduce children to new activities, physiotherapy establishes aspects of the child's ability to do so. These aspects include but are not limited to body posture, muscle tone strength, and attention-concentration range. In physiotherapy in the Pusat Layanan Autis of Surakarta there is also therapy using infrared light, which is administered by a therapist who is authorized and adjusts to the child's needs, with that being said, that not all children with special needs receive infra-red light therapy. In physiotherapy there is also hydrotherapy, which basically trains the posture and strength of children by practicing movements while in a swimming pool with varying depths where the placement of use adjust to the child's ability condition.

The whole therapy at the Surakarta City Autism Service Center basically uses the applied behavior analysis (ABA) method, which is a behavior management method using non-violent teaching methods. The ABA method, especially in social skills, can help autistic children learn basic social skills such as paying attention, maintaining eye contact, and can help control problems in behavior (Handojo, 2009). But the ABA method is most prominently applied in behavioral therapy in Pusat Layanan Autis of Surakarta.

Studies result showed that therapy using the ABA method succeeded in improving the socializing abilities of children with autism (Rahmawati & Hardiani, 2012), increasing changes in imitation behavior especially imitation of action on objects (Ardina, 2018), and also increasing attention span (Ballerina, 2016).

Based on the results of previous preliminary studies, the researchers were encouraged to examine the decline in autism behavior in general in children with special needs who received therapy at Pusat Layanan Autis of Surakarta, which in the therapy used the ABA method. In this case study, researchers will generally look at the level of autism of the child under study, then compare it between the level of autism behavior of the child when they just entered Pusat Layanan Autis of Surakarta and with the latest level of autism behavior.

When the research was conducted, there were 64 children with special needs who were clients at Pusat Layanan Autis of Surakarta. From a variety of specificities, the number of
children with autism spectrum disorders is 33 children. Of the 33 children with autism spectrum disorders, the researchers used 4 children in preparing this case study.

METHODS

The research method used is a qualitative research method and uses a case study approach. This research was conducted by processing existing data with the results of interviews and observations of the circumstances when the research was conducted. The initial data collected is from archives, such as a history of diagnosis, history of therapy activities, results of the initial assessment and observing the client when the client is doing therapy and interviewing the therapist and parents of the client.

The study was conducted at the Surakarta City Autism Service Center. There were 64 children in the Autism Service Center, with 33 children with ASD (Autism Spectrum Disorder), for this study a sample of 4 children with ASD were taken by purposive sampling with an age range of ± 5-14 years of male sex. The researcher is the main instrument of the research and participates in the activities studied, namely behavioral therapy interventions with the ABA method.

The data sources for this study were therapists, parents of clients, and clients, namely autistic patients at Pusat Layanan Autis of Surakarta. The data used is collected through looking at the history of the archives, observations, interviews, and documentation. Data analysis techniques used are data collection and processing, then drawing conclusions.

RESULTS AND DISCUSSIONS

Data obtained from the initial assessment results indicate that the symptoms of autism spectrum disorder experienced by the four clients meet the DSM V criteria. In the case of the four clients, the criteria met include:
1. Lack of persistent communication and social interaction in various contexts.
2. Limited behavior, repetitive behavior patterns, interests, or manifested activities, at least two of the four detailed criteria.
3. Symptoms must appear in the period of initial development (although not manifested manifestly until the capacity of a limited child can no longer meet social demands or may be covered by learning strategies in his life).
4. Symptoms cause clinically significant disorders in daily functioning or in social life, work, or other important settings in life.
5. Disorders cannot be explained by intellectual disability or general developmental delays.

The four clients who are the subject of research are men. The age range of subjects varied with details of RSL subjects aged ±14 years, subjects CKY aged ±11 years, subjects AB ±7 years old, and EAW subjects aged ±6 years. All four subjects met the DSM V criteria in categorizing ASD symptoms.
This is also supported by the results of interviews of clients' parents stating that each client has different symptoms, as explained by the client's parents that the RSL does not show the ability to speak and children often do not respond when called and often run around with hands flapping, then to the CKY client that the child is too active and unable to be quiet and has a disruption in communication, to the AB client that the child has a disruption in communication and attention, and the EAW client that the child has a disruption in communication and attention. This is in accordance with what is stated in PPDGJ III that the developmental disorder of autism is characterized by a characteristic dysfunction in three areas: social interaction, communication, and limited and repetitive behavior. In addition, symptoms in all four subjects were also found when the subject was less than ±2 years old.

Table 1. Research Informant

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<td>EAW</td>
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<td>Sex</td>
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Every child who registers at the Surakarta City Autism Service Center will be given assessment and interviews with parents who are equipped with observations. From the results of the assessment, an appropriate diagnosis is made. In 4 children who became the study sample, after the child was diagnosed with ASD, the child was then tested using CARS (Childhood Autism Rating Scale) to see the child's autism level, and its development in aspects related to the symptoms of autism were detected in detail in the testing. These aspects consist of 14, namely:

1. **Relating to people**, which is seen based on the child's relationship or the child's ability to interact with others.
2. **Imitation**, which is seen based on the child's ability to imitate.
3. **Emotional response**, which is seen based on the child's emotional response abilities.
4. **Body use**, which is seen from the child's ability to coordinate and also harmonize his body.
5. **Object use**, which is seen from the child's attention ability in objects and also their use.
6. **Adaptation to change**, which is seen from the child's ability to adapt to the changes.
7. **Visual response**, which is seen from the child's visual response ability.
8. **Listening response**, which is seen from the child's auditory ability.
9. **Taste, smell, and touch response and use**, which is seen from the child's ability to respond in the use of sensual senses, sense of smell, and sense of taste.
10. **Fear of nervousness**, which is seen from the fear and anxiety of the child.
11. **Verbal communication**, which is seen from the child's ability to communicate verbally.
12. **Non-verbal communication**, which is seen from the child's ability to communicate non-verbally.
13. **Activity level**, which is seen from the level of child activity.
14. **Level and consistency of intellectual functioning**, which is seen from the level and consistency of children's intellectual functions.
Based on CARS testing at the beginning when the child had just entered Pusat Layanan Autis of Surakarta, data were obtained that RSL children had a total CARS score of 38, CKY children had a total CARS score of 46, AB children had a total CARS score of 48, and children EAW has a total CARS score of 52. So the average CARS score was obtained when the four subjects just entered were 46, which belong to the severe autism category.

From the results of the assessment and diagnosis, the subjects then received a number of therapies whose proportions were periodically adjusted for the development of the child’s ability. When the study was conducted, RSL children received behavioral therapy, occupational therapy, and physiotherapy including hydrotherapy; CKY children receive behavioral therapy, physiotherapy which includes hydrotherapy, and speech therapy; AB children receive behavioral therapy, occupational therapy, physiotherapy which includes hydrotherapy, and speech therapy; EAW children receive behavioral therapy, occupational therapy, and speech therapy.

Thus, each client gets a behavioral therapy schedule with the ABA method 1 time a week when the study is conducted.

The concrete application of the ABA method that is used specifically in behavioral therapy is to not give punishment nor negative reinforcement when children with autism do not do things that should be done, and provide positive reinforcements when the child is successful in doing things that are in accordance with the instructions given to them.

The simplest and most often given reinforcement is by high-five. At the Pusat Layanan Autis of Surakarta, therapists have a series of high-fives that are constantly known and used between one therapist and another. High-fives begins with high-five of right hand, then high-five of left hand, then high-five of both hands, then high-five from above with the therapist's hand below, then high-five from above with the child's hand below, then catch the two thumbs offered by the therapist. This is the most basic reinforcement given and taught to children with special needs who are clients of the Pusat Layanan Autis of Surakarta.

The ability of these children with special needs to receive and carry out these high-fives varies. Starting from those who still have difficulty following so that hand movements still have to be helped to move by the therapist, then some are already capable but need repeated instructions and continuous stimulus as the name is called or the steps of their high-fives are counted, and some are smooth without needing help at all both help with verbal instructions and movement stimulus. In the four clients who were the subjects of the study, basically all four clients were able to perform a series of high-fives used as reinforcement. Only based on the situation and conditions, sometimes it is necessary to give a more intensive verbal stimulus if the child is being less cooperative.

In the absence of the use of punishment or negative reinforcement in the ABA method, the therapist only gives a stable pause and gives instructions when the child does not follow the instructions given. Initially, the child will be called by his name first so that the child's attention has been on the origin of the sound or on the therapist. If the child still does not give attention, after a pause of approximately 3 beats, the child's name is called again. If the child still does not
give attention, then there will be another pause of approximately 3 beats, then the child's name will be called again. If after being called 3 times still not paying attention, the child is given help to pay attention. The assistance can be in the form of a palm which is cupped around the child's eyes to help direct and focus the view, it can also be in the form of directing the child's head by directing the chin, the therapist can also shift to a direction closer to the child's visibility.

If the child has noticed the therapist, the therapist should have prepared further instructions for the child to do, which are usually more or less in the form of a game. The child's attention is then transferred to the game by giving ‘look’ instructions while showing the game. The rules provide pauses and repeat instructions also apply to this step. If the child is unable to carry out the expected activities, the child will be given assistance. And so on, including the other simple instructions.

When a child commits an unexpected or undesirable behavior, the child is not given a punishment but is still given a warning. The warning is in the form of ‘no’ instructions to the child, especially exactly when the child is doing this. The regulation gives a pause and repeats instructions then gives assistance to the child also applies to this instruction.

These steps are in accordance with the tips in dealing with children with autism delivered by Rahmatiah (2017), namely using simple words, always mentioning the name of the child when inviting him to talk, using body language to clarify intentions, talking slowly and clear, give the children time to process the words conveyed to the child, and do not talk while around the child is noisy.

Along with the development of the child after at least one year of therapy, then the child is again given a CARS test to measure the latest autism level that is still shown by the child. The results showed that RSL children had a total CARS score of 31, CKY children had a total CARS score of 41, AB children had a total CARS score of 37, and EAW children had a total CARS score of 42.

Based on the results of the latest tests, it can be seen that after giving behavior therapy using the ABA method, all four children who were the subjects of the study experienced a decrease in the total CARS score. RSL children experienced a decrease in total score of 7 points, CKY children experienced a decrease in total score of 5 points, SB children experienced a decrease in total score of 11 points, and EAW children experienced a decrease in total score of 10 points. From the total obtained the average number of decreases in the total CARS score experienced by the four children is approximately 8 points.

The decrease can be seen more clearly as a whole or per child by looking at the table below.

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2nd International Seminar on Psychology 2019, April 27th 2019
Empowerment of Human Resources Local Wisdom in A Psychological Perspective Towards Industrial Revolution 4.0
One of the aspects contained in the CARS testing is one of them is social interaction. So, this is in accordance with the results of the research of Saifudin and Syadzwina (2017) which shows that there is an increase in social interaction in children with autism between before and after being given therapy with the ABA method.

From the results of the comparison of the results of CARS children with autism when they recently entered Pusat Layanan Autis of Surakarta and with at least a year of receiving behavioral therapy with the ABA method, it can be seen that there was a decrease in CARS scores in each aspect, even though each child experienced decrease in different aspects.

### CONCLUSION

Many aspects can be seen in assessing the level of autism in children. The CARS (Childhood Autism Spectrum Test) itself divides these aspects into 14 aspects and has summarized the overall symptoms and behaviors shown by children with autism.

At Pusat Layanan Autis of Surakarta, CARS tests are conducted on children who have just entered, then re-done after the child has received therapy for at least a year. The four children who were the subjects of the study showed an average decrease in the total CARS score of 8 points and there was a decrease in CARS scores in each aspect, even though each child had decreases on different aspects.

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Thus, behavioral therapy in the ABA method is effective in reducing autism behaviors that generally appear in children with autism.

Recommendation
Further research is expected to further enrich the data in order to be more supportive in research. Also, it would be better if future research will take consideration of the amount of therapies being given, not only the time-span of the therapies.

REFERENCES


