The Usage of Extinction And Positive Reinforcement Procedures To Reduce The Tantrums Behavior on Early Age Children With Autism

Author

Ni Luh Putri
Faculty of Education Manado State University. Indonesia
E-mail: niluhputrimdo@gmail.com

ABSTRACT
The usage of extinction and positive reinforcement procedures to reduce the tantrums behavior on early age children with autism. This research aims to describe the usage of extinction and positive reinforcement procedures to reduce the tantrum behaviors on early age children with autism. This study uses single subject research, A-B-A-B design. The used data collecting techniques are observation, teacher interview, and documentation. The data is analyzed qualitatively, in inter-condition and intra-condition analysis. The subject is three autistic children. The research results show that: (1) there is reduction of tantrum behavior in autistic children although the intervention has been completed; (2) the application of extinction and positive reinforcement procedure can reduce tantrum behavior on three early age children with autism.

Keywords: extinction procedure, tantrums behavior, early age children with autism.

INTRODUCTION
Kindergarten Education has responsibility to provide educational services for children in an effort to develop the physical, social, emotional, cognitive, and language aspects [1]. In this case, it includes the education for children who are classified as autistic. Provided services for young children with autism is certainly adjusted to the needs and problems of each child. The services need to refer to uniqueness. The uniqueness is the existence of children and the learning program. The uniqueness of children is seen by age, physical, children begin to learn social, emotional, cognitive, and children learn language. Learning program emphasizes individual learning and handling which is appropriate with any problems of the children.

In the learning implementation for children with autism, operationally, it is necessary that professional teachers understand the learning needs and the learning problems of children with autism. The understanding about the learning needs of the children, and the learning problem of each child are further elaborated into learning programs. It needs teachers who have the ability to accurately assess so that the designed and implemented learning programs are able to optimize the learning outcomes of children.
Careful assessment needs to be done so that interventions or treatments for the children with autism are appropriate with the existence of each child.

In fact, it is found that the implementation of interventions that should be experienced by the child is not in accordance with the presence of children with autism in terms of handling provided by the teacher. Teachers tend to do intervention or handling by using the same method for all the children in the class who has so different problems for each individual child with autism. There are children who often shout, there are children who often perform movements such as clapping hands repeatedly, biting, hitting and scratching, kicking, and hitting themselves as well as head-banging. Tantrum behavior on children with autism is such as kicking, scratching, and hitting\cite{2}. Tantrum behavior which is experienced by autistic children is very disturbing for other children. As a result, the other children are very disturbed in learning and the learning process is also disturbed. Since the very diversity of behaviors exhibited by each child as has been mentioned, the researchers limit the study on the 5-6 years old autistic children who are relatively mild, with the characteristics performed by a child which are often scratching and pinching friend.

Autistic children are impaired in its development process that spanned from a very severe disorder called autistic disorder to mild stage called Asperger syndrome\cite{3}. Asperger syndrome is a mild form of autism where the children have normal language skills, and have an average or above average level of intelligence\cite{4}. This kind of children often scratches and pinches friend without cause. This cause the other children are very disturbed in learning. Unfortunately, the teachers use the same method to help dealing with all autistic children, not in accordance with the condition or problem of the child. This is understandable considering there is only one teacher who handles all children in the classroom. The characteristic heterogeneity of each child leads the teacher experience difficulties to handle.

The research is important because the early age children with autism, who are classified in Asperger syndrome, have not received treatment yet. The autistic children with Tantrum behavior, who is often scratching and pinching their friend, needs to have early treatment so that the tantrum behavior which arises suddenly can be reduced and even does not appear anymore because it may cause the other children who are nearby cannot learn. This kind of children often scratches and pinches their friends repeatedly. That behavior experienced by autistic children is very disturbing in the learning process. One of the ways to reduce tantrums behavior, that is scratching and pinching friends or nearby children, is the use of positive reinforcement and extinction procedures to reduce tantrum behavior\cite{2}.

Extinction is an effective procedure in the various classes of deviant behavior, e.g. disruptive behavior and aggressive behavior in the classroom. It needs to do treatment by the method which is appropriate to the condition of the early age children with autism. As suggested by Seefeldt and Barbour\cite{5}, one of the goals of kindergarten education is to help developing children's emotions by express them and the children learn how to direct their emotions into constructive things, and build empathy on the feelings of others. To help developing the emotion quotient, this aspect gives references to the characteristics that need to be developed,
and in its application, it needs to be adapted to the learning objectives that have been set, in order to achieve optimal development of the children. The research results are expected to be input for teachers to be able to understand the problems and needs of every child who has autism disorder and how to deal with tantrums behavior.

Based on the research problem, the research question is: Can the extinction and positive reinforcement procedure reduce tantrum behaviors on the early age children with autism? This study aims to describe the use of extinction and positive reinforcement procedures to reduce tantrum behaviors on early age children with autism.

METHODS

The design used in this study is Single Subject Research (SSR). SSR is the experiment design that involves intensive investigation on one or several individuals, where the behaviors of each individual on one condition are compared to the other conditions \(^6\). This research uses A-B-A-B.A1 design which is the first baseline condition to collect data about scratching behavior. B1 is the implementation of the first intervention in the use of extinction technique. A2 is the second baseline condition, and B2 is the second intervention. This means that conditions A1 and B1 is repeated on condition A2 and B2.

The subjects of this study are three children who meet criteria for autism according to the Diagnostic and Statistical Manual (DSM) Revision IV in 1984, in the category of Pervasive Developmental Disorder (PDD) where there are 6 or more than 12 symptoms that refers to the three main areas of disorder, i.e. social interaction, communication and behavior \(^7\). Tantrum behavior, which is indicated by an autistic child, is the scratching behavior of others or friends repeatedly. Data are collected through observation, interviews and recording of the behavior frequency and duration. The data are quantitatively analyzed, that are inter-condition data analysis and intra-condition data analysis. The used criterion is the trend stability of 0.15. The stability criteria of 75% -100% stable: <75% various \(^8\). The study was conducted on July to October 2014 in SLB Agca Autism Center, Manado.

RESULTS AND DISCUSSION

The effect of the use of extinction and positive reinforcement procedures to reduce tantrum behavior of children with autism. The data of tantrum behavior on the first baseline condition (A1), the first intervention (B1), the second baseline (A2), and the second intervention (B2) are described in the following graph.
Figure 1 indicates that the measurement result of tantrum frequency on the three children with autism which is performed for twenty-five days. These data are analyzed using intra-condition analysis. The results show that the subjects A, the first baseline condition (A1), which is performed for the three sessions, occurs 22 times, the subject B is 24 times, and the subject C is 23 times of tantrum behavior. In the first intervention condition (B1) that are performed for eight sessions, at the beginning, there are quite high tantrum behavior, i.e. subjects A occurs 18 times, subject B occurs 17 times, and the subject C occurs 18 times. The results of the behavior shown by the three subjects at the end of the first intervention (B1) show a decrease in behavior, i.e. the subject A occurs 6 times, the subject B occurs 6 times, and subject C occurs 5 times.

In the second baseline condition (A2), which the removal intervention is performed, the results show that there is an increase in the frequency of tantrums on the three subjects during the three sessions. The data show an increase in tantrum behavior up to 13 times of incident. The data increase (-5) for subject A. Subject B reaches 14 times with the increase of data (-4). Subjects C reaches 11 times of tantrum behavior with the increase of data (-2).

In the second intervention condition (B2) that are performed for nine sessions, the results show a significant decline in the frequency of tantrum behavior in all three subjects, but the occurrence decrease step by step[2]. After the intervention is stopped, the initial response of the undesirable behavior may be increased and more intensive. In the first session, the tantrum behavior frequency for subject A reaches 8 times, but strengthens in the last session, only happens twice. This means that there is an improvement in the level of data which reaches (+5). The subject B reaches 7 times, and rises in the last session which is only twice. This means there is improvement in the level of data which reaches (+6). The subject C reaches 8 times, and rises in the session last only once. It means there is improvement in the level of data which reaches (+7). This suggests
that the use of extinction and positive reinforcement procedures are effective to reduce tantrums behavior on autistic children.

The measurement results of the tantrum behavior average (mean) on the three autistic children are described in the following graph.

![The Graph of Measurement Result of Tantrum Behavior Average (Mean) on Autistic Children](image)

**Figure 2** The Graph of Measurement Result of Tantrum Behavior Average (Mean) on Autistic Children

Based on the inter-condition data analysis, the results show the decrease of tantrum behavior, that is the average of the first baseline condition (A1) and the first intervention (B1), the mean value of the first baseline condition (A1) is 20.66 times and it decreases to 12.0. Thus at the first baseline condition (A1) and the first intervention (B1) shows the strengthening of intervention implementation with the change of (+12) on the subject A. As for subject B, the mean value is 22 times of tantrum behavior and decreases to 11.7. The first baseline conditions (A1) and the first intervention (B1) shows the strengthening of the intervention implementation with the change of (+11). The mean value of the Subjects C at the first baseline condition (A1) is 21 times of tantrum behavior and it decreases to 11.7. The first baseline conditions (A1) and the first intervention (B1) shows the strengthening of the intervention implementation with the change of (+13). This proves that there is a reversal of data trend after the first intervention is applied, because the intervention of extinction and positive reinforcement to reduce tantrum behavior give positive effect. The data stability change of the variable to variable and the overlap data by 20%.

Runtukahu and Tombokan suggests that if there is a decrease in the response frequency, it means the extinction is successful, and the total number of responses that occur is stopped or reduced[^2].

In the second baseline condition (A2) for subject A, there are increase of 13 times in the tantrum behavior frequency, then in the second intervention (B2) there is a decrease in the mean data compared to the baseline
condition (A2) that is 11.3 to 4.75. On the subject B, there is an increase of 14 times of the tantrum behavior, after the second intervention (B2), i.e. the mean of the data from 12.16 to 4.25. While on the subject C, there is an increase to 11 times of the tantrum behavior in the second baseline condition (A2). After the second intervention (B2), there is a decrease of tantrum behavior and the mean of the second baseline data is 10.3 to 4.62. Therefore, it is necessary to implement the second intervention (B2) to determine the effect of interventions on the tantrum behavior of the three subjects. This is conducted during the nine sessions to decline by twice of tantrum behavior that occur on the subject A and subject B, whereas on the subjects C the behavior occurs only once on the last day. Thus, there is reinforcement (+6) to the subject A, and (+6) to the subject B, and to the C subjects (+7). The data stability change from the variable to the stable and the data overlap is 50%. The results show that there is a reversal of data trend after the second intervention, because the intervention of extinction and positive reinforcement to reduce tantrum behavior give positive impact.

CONCLUSION

Based on the research results and analysis of the data, it can be concluded that (1) there is a continuous reduction of tantrum behavior on the three children with autism even though the intervention has been completed; (2) the implementation of extinction and positive reinforcement procedure has reduced tantrum behavior on the three early aged children with autism.

REFERENCES
