The Effectiveness of Program Based on Reinforcement, Modeling, and Exclusion to Reduce Hand Flapping and Head Banging Behavior Among Autism Spectrum Disorder (ASD) Children

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Abstract

 This study aims to investigate the outcome of the Effectiveness of program based on Reinforcement, Modeling, and Exclusion to Reduce hand flapping and head banging Behavior Among Autism Spectrum Disorder (ASD) Children, the sample of the study consisted of (ASD) Children in Mafraq province and it has been selected intentionality and distributed randomly into two groups, the controlled group and the experimental group. Each of them consisted of 8 children aged between 9 to 10 years old. By using the statistical analysis Mann Whitney u and Chi-square tests, The results of the study showed the effectiveness of (reinforcement, modeling, and exclusion) to reduce of hand flapping and head banging behavior with ASD children .The comparison between the procedures of behavior modification to reduce hand flapping and head banging behavior showed, the effectiveness of reinforcement compared to modeling and exclusion .There is no difference between modeling and exclusion in the reduction of hand flapping and head banging behavior in ASD children . The study recommended of possibility to implement the program to reduce the other behaviors in autism spectrum disorder (ASD) children.

Keywords: Reinforcement, Modeling, and Exclusion, hand flapping and head banging behavior, autism spectrum disorder (ASD)

1. Introduction

 The fifth edition of the Hand book of Statistical Guilds is using now under new name for autism which is Autism Spectrum Disorder (ASD), and it combines what was formerly known as autism disorder (AD), Asperger's syndrome, Childhood Disintegrative Disorder (CDD) and Pervasive Developmental Disorder-Not Otherwise Specified (PDD NOS) within a single name on the form related category which is verity in components depending on the number and severity of symptoms (www.autismspeaks.org). The repeated stereotyped behaviors(such as hand flapping and head banging) are considered of the characteristics of autism , and it is considered as a one aspect of prominent drawbacks for people who deal with those children to observe this easily, and that those repetitive behaviors , activities and interests which are shown by those children are often characterized as restricted with a tight range and they usually suffer from repetitive movements of the body or abnormal movements either with their fingers or hand s , which may lead to provoke people around them, and sometimes they reach to abuse of themselves physically. (Saad, 1998; Al-Shami, 2004). (Al Shakhs, 2006) refers to the most important symptoms that fall into the Stereotypic behaviors, and it is the involvement in one unusual behavior specified for a long time (repetition), and adherence to the rigid important habits or rituals, stereotypes and repetitive kinetic movements, and the preoccupation with parts of objects not the whole thing. (Khafsh, 2007) defined the typical behavior as a stereotyped or inverted behavior and it is a rigid and inflexible behavior that happens regardless of the change in context or results that should lead to changes in the behavior of the individual and that the behavior follows a one recurring pattern. (Trenpaypier, 1996) attributed such repeated stereotyped behavior to: the high level of tension among autistic child, the child follow such behaviors to attract attention, to reject for changed program or a daily routine for him, an inability on the appropriateness of behavior with the situation, an imbalance in the number and size of nerve cells in the brain, and the effect of leakage of toxic substances into the brain.

Children could be trained through reinforcement (may be some fetus in the mother's womb to be trained on music), doing the required signs by promoting it or pronouncing it properly with a suitable language for children and adults, as well as training children on daily acts like tuning urine, defecation and do hygienic physical and environmental activities at home, school, and the neighborhood. Reinforcement training programs are prepared by adults for children or through children themselves within playing computer programs. Reinforcement Training is strengthened in kindergarten and primary education to control reading behavior , writing, conservation, reading, discussion, brain storming, creativity, as well as learning the languages , humanity, mathematics , natural sciences, social, and information technology for all children, especially the disabled and unsociable children. it is preferred during training children to use boosters immediately after work at the beginning of training, then postponed it to organize reinforcing schedules to hold the behavior by boosters or alienation aftershocks, that means to reduce or to stop the unwanted behavior by positive reinforcements for a specified period of time immediately after occurring the behavior, and it has several types: isolation, it means to

isolate the child in a private room where reinforcement is not available ; the aim of this is to stop the child from unwanted behavior or remove him about the others with no interaction with them, and make him look and watch them while they do what they want   and to ignore   behaviors that he does, and focus on other activities , or to prevent the child from continuing to perform a certain activity when he makes undesirable behavior like let him stand for a period of time or raising his hand s .

Modeling, it is one of the important processes in modifying and evaluating of human behavior, it is process of changing the behavior as a result of noticing the behavior of someone else, and this process is essential in most human learning stages, because we learn most of our behaviors by observing other people behavior and imitating them, child's behavior is often influenced by observing the behavior of other individuals (Al-Khatib, Al Hadidi, 2005). A study by (Charania, et al, 2010) aimed to study the effectiveness of cooperative education for children infected with autism within the skill of raising hand s, the study sample consisted of (3) children infected with autism, the study used methods of modifying behavior through modeling, indoctrination, and reinforcement; to teach them the skill of raising hand s when asked them for a specific word or upon children's' request to get something. as a result of the study , children acquire the skill to raise the hands accurately, even in missions where the difficulty in recognition through collaborative learning and the use of previous modifying   behavior methods .(Lang, 2009) used playing intervention to cancel the value of reinforcement of a stereotyped behavior (such as hand flapping and head banging) , as he used the mutual processors design to compare instrumental conditioning : the first one allowed the autistic child to participate freely and typically   prior the intervention of instrumental conditioning, and the second aimed to reduce the stereotyped behavior by abolishing the enhancement value ; results have shown that stereotyped behavior levels and behavior problems were lower, and the level of functional playing was higher as a result of intervention by canceling the value of enhancement. (Bursa, Richman, 2008) studied the effect of the stimulant development on the occurrence of stereotyped behavior, the study sample consisted of an autistic child in the third grade, and the researchers have maintained the immediate reinforcement with the occurrence of stereotyped behavior. The intervention was designed to link between the two types of discriminatory stimulus, as green cards are given when the stereotyped behavior   occurs and red cards are given when the stereotyped behavior absence with a focus on verbal directives. The results showed that the child was able to conduct a stereotyped behavior when he sees the red cards and this behavior often continues when the boy sees the green cards. (MacDonald, et al, 2009) used video modeling to teach the structural games through switching to children with autism, this study aimed to teach autistic children to play structural games by using tools with ordinary counterparts by using videos. the study sample consisted of two autistic and two ordinary children, the results showed that both groups have acquired the skills to express themselves through playing and they also acquired the skill of role-playing very fast, and through the tracing tests, researchers found that children have kept what they have learned, and they noticed an increased interaction between autistic children and ordinary ones. the case study made by (Wu,Ya-ping, 2010) that aimed to assess and cure typical speech of a Taiwanese teenage infected with autism, the operations functional analysis was described in an intervention program to reach for a cure of repeated obscene words throughout the school day. The results showed that the training program on communicative missions was helpful in reducing repetitive obscene vocalizations; it also worked on increasing the required independence of the teenager in the school and the community. (Hetzron,Tannousheld ,2004) made a study titled "Evaluation of the impact of using a pilot program that relies on computer as well as on functional and communication skills in children with autism," This study aimed to assess the effects which are left by a mentoring program depends on the computer in promoting children's jobs and skills who suffer from autism, the study sample consisted of (5) children with autism, the study included speech variables that aren't associated with the subject of the debate, and speech related to the topic of talking ,debate or communication , the results of this study indicated that children were able after applying the program on the composition of a few sentences not associated with the subject of talking or discussion, and the application of the program helped children to make progress in the initiatives which they express as aim of communication as well as the limited number of sentences which isn't linked to the issue of dialogue or debate. The researchers concluded that the study sample were able to interact, play, do some healthy activities, to communicate with their colleagues within the classroom, and transferring what they have of knowledge after making structural environment that provides them with the communicate opportunities. (Lorimer, Simpson, Myles, &Ganz ,2002) conducted a study titled "Evaluation of the effectiveness of social stories program as a platform demonstration aimed to modify the behavior of children with autism in houses", this study aimed to assess the effectiveness of social storytelling in reducing emotional behavior in children who suffer from autism, the study sample consisted of a child at the age of 5 years who suffers from autism, researchers told two social stories and then they studied the changes that took place on the child's actions, the impact of these stories on reducing the level of anger was noticeable, then they stopped telling the stories, and they have studied the impact on the behaviors of the child, the results of this study showed a decrease in the level of interrupting other people while they were talking from the child during the narration of these stories , and a decrease level of anger   when researchers stopped telling the stories, this indicates the

effectiveness of the program in the treatment of negative behaviors in children with autism.

2. Study Problem:

Students with special needs are an integral part of the educational system ; therefore educational centers and institutes strive to provide all their needs and requirements, starting from admission and ending with the periods of training which they spend in it, it is hoped that their lives will be improved by providing educational and therapeutic useful programs that contribute to equip them with basic skills in order to live safely in their communities; which in turn will reduce the burden on parents and the community together, and thus reduce the social and psychological effects of the disability, and they - the disabled - would be an effective weapon in the wheel of development in various forms. Autism, in particulular, hampers natural growth of the brain, in areas of reasoning, social interaction, emotional, and communication skills with others, and have infected usually a lack in verbal and non-verbal communication, social interaction, emotional, playing activities, and even leisure. The turmoil affects in their abilities to communicate with others, interacting with their social environment, they show repeated physical movements (such as fluttering hand s and rocking), unusual responses to others, or attached to things around them with resistance of any change in things (routine work). In some cases, autistic children may demonstrate an aggressive behavior or self-injury responses , so researchers, experts and others who are interested in autism care provide educational and training services programs that will reduce the various disturbances in all the different aspects of the growth of the autistic children, and some researchers see that the stereotyped (such as hand flapping and head banging) behavior is caused by significant environmental excitation , and they argue that the typical child's behavior is an attempt to escape from the enormous environmental that cannot be handled, and others believe that the stereotyped behavior lowers the level of excitement, anxiety and frustration. As the stereotyped behavior is a procedural behavior and controlled by its results, the meaning of that we can treat it (stopped or reduced) by adjusting the results of it, most of the studies have attempted to treat behavior by controlling the events that came out of the action , this view represents the position of behavioral psychologists. However the stereotyped behavior (such as Hand flapping and head banging) is influenced by factors related to the same person; where there is an inverse relationship between the intelligent degree and the stereotyped behavior, as well as the physically and visually disabled people exhibit this behavior more than sighted ones, the purpose of this study is to answer the following questions:

- What is The Effectiveness of program based on Reinforcement, Modeling, Exclusion to reduce hand flapping and head banging Behavior among (ASD) Children?
- Are (reinforcing, exclusion, and modeling) similar in reducing the hand flapping and head banging behavior in (ASD) Children?

2.1 Study Hypotheses
- There are no differences due to (reinforcing, exclusion, and modeling) in reducing the hand flapping and head banging behavior in the prior and post measurement on the controlled and experimental groups.
- There are no differences between reinforcing, exclusion, and modeling to reduce the hand flapping and head banging behavior.

2.2 Objectives of the study
This study aims to demonstrate the impact of the effectiveness of program based on Reinforcement, Modeling, and Exclusion to reduce the hand flapping and head banging behavior of (ASD) Children. More specifically, the present study aims to:
1- Identify effectiveness the Reinforcement, Modeling, and Exclusion to reduce hand flapping and head banging Behavior among (ASD) Children?
2- Identify which more effective of Reinforcement, Modeling, and Exclusion in reducing the hand flapping and head banging behavior on the experimental group?

2.3 The importance of the study
This study takes its importance from the subject which is showed, since preparing therapeutic programs for (ASD) Children in the centers and institutes organizations lead to alleviate the burden on parents of unacceptable behavior, and therefore the need is necessary, urgent and clear to make treatment programs to reduce unacceptable behaviors , so this study attempts to use Reinforcement, Modeling, Exclusion to reduce the hand flapping and head banging behavior; because autism affects on the whole family pattern; and the child and leads to weaken social networking. Thus the study gains its applied importance through the following:
1- The study provides a tool for measuring hand flapping and head banging behavior in (ASD) Children.
2- This study provides a program to reduce the hand flapping and head banging behavior.
3- Provide those who are responsible for the preparation of training programs for this category with

programs that may contribute to reduce hand flapping and head banging behavior in (ASD) Children.

3. Operational definitions:

(ASD) Children: the children who have already been diagnosed as having autism disorder, according to Childhood Autism Rating Scale CARS and Autistic Behavior Checklist (ABC) in Mafraq Governorate.

Hand flapping and head banging behavior: the total degree, which represents the number of repeated non-functional responses by the (ASD) child on a hand flapping and head banging behavior scale prepared by the researcher

The study variables:

 (Reinforcement, modeling, and exclusion) represents the independent variable, and the hand flapping and head banging behavior represents the dependent variable.

4. Research Design and Methodology

Study Approach: Quasi-experimental approach

study sample: the study sample was selected purposely from special education centers in Mafraq Governorate for the first semester of the school in 2015-2016, the researcher chose 16 students from the centers diagnosed that they have autism disorder, according to Childhood Autism Rating Scale CARS and Autistic Behavior Checklist (ABC) and they were divided randomly into two groups: controlled and experimental groups, where each of them consisted of 8 children aged between 9 to 10 years old.

Study tools:

First: hand flapping and head banging behavior scale:

The researcher has done a comprehensive and profound review for the concept of the hand flapping and head banging behavior, its justifications and motives among children in general and autistic children in particular. He, also, looked for some of the tools and methods of measuring hand flapping and head banging behavior in children with autism, after that, the researcher did the following steps to measure the work of the hand flapping and head banging behavior.

  a. General Information about the child (the child's name, age, sex and date of entry to the center), training programs obtained and the child's diagnosis method.
  b. Building hand flapping and head banging behavior scale which included on (30) paragraph of the manifestations of the hand flapping and head banging behavior which done by the autistic child in its final image. in order to obtain indications of validity and reliability of the scale, the researcher did the following steps:
    1. Liability of the hand flapping and head banging behavior scale for children with autism.
    2. The researcher presented questions that measure the hand flapping and head banging behavior on a group of arbitrators (faculty, special education teachers, and parents).
    3. Notes of the arbitrators have been modified and deleted some of them.
    4. After that the scale may be considered logical semantics sincerity.

Stability of the hand flapping and Head banging behavior scale for (ASD) Children.

For the purposes of extracting stability indicators to measure the hand flapping and head banging behavior, the scale was applied on an exploratory sample of 20 students from the autistic disorder students, where it was applied twice in one week , the correlation coefficient was calculated between the application ,the value of the correlation coefficient was (0.88), this result indicates that there is an indication of the stability of the scale, where it can be considered valid for measuring hand flapping and head banging behavior in children with autism.

Second: The training program based on (Reinforcement, Modeling, and Exclusion):

The philosophy of the program:

The practical application of behavior modification procedures reduces of the hand flapping and head banging behavior of (ASD) Children.

Steps to build the training program:

  (A) Access to educational literature about the behavior modification procedures, and their effectiveness in influencing change in human behavior, especially in children with autism.
  (B) The researcher, by taking advantage of his experience to work with and supervise the autistic students, has chosen the appropriate behavior modification procedures, (Reinforcement, Exclusion, and Modeling) in the reduction the hand flapping and head banging behavior of (ASD).
  (C) the researcher built a training program based on behavior modification procedures to reduce the hand flapping and head banging behavior of (ASD) Children, the program consisted of twenty-five session, distributed (10) weeks and an average of 40 minutes per session.

Procedures and the implementation of the study:

First: the prior application for the hand flapping and head banging behavior scale

The prior application of the hand flapping and head banging behavior scale was on the experimental

group and the controlled group, and in order to test the homogeneity of the two samples on the hand flapping and head banging behavior, the application data was entered to the statistical SPSS program, standard arithmetic means were extracted, and with the use of Mann-Whitney statistical analysis, the results were as follows:

Table 1 shows the difference between the experimental group and the controlled group in the prior measurement scale on the hand flapping and head banging behavior scale.

Group	number	Average grades	Total grades	U value	significance level
controlled	8	7,56	60,50	24,5	Not significant
experimental	8	9,44	75,50		

The table shows that the values of (Mann Whitney) for the two experimental and controlled group on the scale behavior hand flapping and head banging is not statistically significant; demonstrating the homogeneity of the two groups in hand flapping and head banging behavior of the two groups.

Second, the application of the training program to reduce the hand flapping and head banging behavior:

1. The researcher took approval from the director of the Autism Center to apply the training program, noted that the researcher is supervising the field training students at Al al-Bayt University in Mafraq.
2. the researcher has an introductory meeting with the teacher who is performing the training program, the meeting included the following:

• presenting the research problem, its significance and the goals it seeks to achieve.

• Showing how to deal with the training program sessions, in terms of how the configuration of each meeting, how to implement a behavior modification measures in a timely manner, and provide feedback and flexibility in the application and how to end each session.

Third: post application to gauge the hand flapping and head banging behavior

After finishing the application of the training program directly, the researcher applies the hand flapping and head banging behavior scale on the controlled and experimental groups.

Results:

1. Is there no statistically significant differences at the level of significance $(0.05 \geq \alpha)$ between the control and experimental groups in the post measurement scale on the hand flapping and head banging behavior scale? The application data were entered to the statistical program SPSS, averages grades were extracted, and by using statistical analysis Mann-Whitney, results were as follows:

Table 2: shows the difference between the experimental group and the controlled group in the post measurement scale on the hand flapping and head banging behavior scale

Group	number	Average grades	Total grades	U value	significance level
controlled	8	12,50	100	zero	0,001
experimental	8	4,50	36		

It is seen from Table: 2 that the (Mann-Whitney) statistical values, it's statistically significant for the experimental group; which means that there statistically significant differences show the role of the training program in reducing hand flapping and head banging behavior for members of the experimental group.

2. Is there a difference statistically significant at the significance level $(0.05 \geq \alpha)$ between (reinforcing, and exclusion, and modeling) in the post measurement on hand flapping and head banging behavior? The application data were introduced to the statistical program SPSS, extracted averages grades, and by using the Chi-Square test of independence, the results were as follows:

Table 3: shows the difference between Reinforcement, exclusion, and modeling on hand flapping and head banging behavior.

behavior modification procedures	number	Average Ranks	Chi-Square test	significance level
Reinforcement	4	2	6,25	0,05
Exclusion	4	5,50		
Modeling	4	7,50		

It is seen from Table (3) that of Chi-Square test of independence value; which means the existence of differences between the reinforcement, exclusion, and modeling in the reduction the hand flapping and head banging behavior of (ASD) Children.

(A) For comparison between the behavior modification procedures whichever is more effective in reducing the hand flapping and head banging behavior of (ASD) Children, the researcher makes the following comparisons:

Table 4: shows the difference between Reinforcement and exclusion

Group	Number	Average grades	Total grades	U value	significance level
Reinforcement	4	2	6	Zero	0,05
Exclusion	4	5	4		

It is seen from table(4) that the value of the Mann-Whitney is statistically significant in favor of the reinforcement; which means that it is more effective than Exclusion in reducing the hand flapping and head banging behavior.

(B). To compare which one is more effective in reducing the hand flapping and head banging behavior of (ASD) Children between the reinforcement and modeling, data were analyzed statistically by using the SPSS software and summarized as follows:

Table 5: shows the difference between reinforcement and modeling

Group	Number	Average grades	Total grades	U value	significance level
Reinforcement	4	2	6	Zero	0,05
Modeling	4	4	13		

It is seen from table (5) that the value of Mann-Whitney is statistically significant in favor of the reinforcement; which means that the reinforcement is more effective in reducing the hand flapping and head banging behavior of (ASD) Children.

(c) To compare which one is more effective in reducing the hand flapping and head banging behavior of (ASD) Children between modeling and exclusion, data were entered into the spss statistical analysis program and summarized the results as follows:

Table 6 shows the difference between exclusion and modeling

Group	Number	Average grades	Total grades	U value	significance level
Exclusion	4	2.5	7.5	1.5	Not significant
Modeling	4	4.5	5.13		

It is seen from table (6) that the value of the Mann-Whitney is not statistically significant; which means there is no difference between exclusion and modeling in the reduction of the hand flapping and head banging behavior of (ASD) Children, which means each one of them has the same role and effectiveness in reducing the hand flapping and head banging behavior.

Results discussion

For the first null hypothesis, there are no statistical significant differences at the significance level ($0.05 \geq \alpha$) between control and experimental groups in reduction of the hand flapping and head banging behavior attributed to (reinforcing, exclusion, and modeling). The results showed a rejection of the null hypothesis, and it cleared an effective action to modify the behavior (reinforcing, exclusion, and modeling) in the reduction of the hand flapping and head banging behavior of the experimental sample compared with the controlled sample, the researcher can explain this result as follows:

1. It was clear from the theoretical literature for the study the effectiveness of reinforcement to train children to do the required behaviors in children, such as adjusting the urine and feces, and doing business somatic.... etc. Thus, the researcher believes that (ASD) Children are like ordinary children in response to the boosters provided to them to perform the desired behaviors, but they differ from them in social withdrawal, and that can be attributed to the strength of the construction of the training program in the use of reinforcement. Boosters had been canceled that caused hand flapping and head banging behavior, children were also encouraged to learn how to adapt behavior, and use the boosters immediately after the beginning of training, and then to postpone the submission of reinforcement through promotional schedules to adjust the results of behavior reinforcement. As for the exclusion, the exclusion of autistic children for their personal items and toys and keeping them miss out a lot of things that they love and prefer and this is resulting to response for autistic children in the reduction of the hand flapping and head banging behaviors that they carry out in return for not going to the exclusion room prepared them; the choice exclusion place for children makes autistic child feeling weary and tired. Teachers have been trained to be firm, consistent and effective when applying the exclusion for the child, and repeating the exclusion whenever one hand flapping and head banging behavior patterns emerged. As for modeling, the researcher sees that because of the strength of the relationship between the teacher, who is performing the training program, and the love of students and their sense of security towards the teacher, and this is the main focus of the researcher at the teacher training to achieve very important goal, which is making the children to imitate their teacher in some behaviors (the behaviors counter the hand flapping and head banging behavior that is done by autistic), he also have been trained on how autistic child to complete modeling and imitating the behavior of others successfully through the teacher's behavior in a repeated clear and simple behavior until the child repeat the behavior

and imitate it . The training program focused on the development of the attention of the visual child. The modeling methods of teaching behaviors to children by parents or teachers, and this is what was mentioned in the theoretical literature of the study.

2. The researcher shows that the results of this study agreed with the results of a of (Brosa's et al, 2008), and the study of (McDonald et al, 2000).

3. the researcher explains that there is some relevant studies related to this study , which has proven their impact and effectiveness of the autistic children, where they were based on cooperative learning ,social engagement with peers , extension programs, summer camps and integrating autistic children with ordinary children according to the program (TEACCH) and social stories, the researcher worked to employ behavior modification procedures in their program on the advantages of former studies , and through teacher is training on how to activate the behavior modification procedures according to previous methods. Which had a clear impact in increasing the effectiveness of behavior modification procedures to reduce the hand flapping and head banging behavior of children with autism?

With regard to the second zero hypotheses; there are no statistically significant differences at the significance level of $(0.05 \geq \alpha)$ between (reinforcing, exclusion, and modeling) on the post measurement on experimental group to reduce the hand flapping and head banging behavior.

The researcher divides this hypothesis to three post zero hypotheses and as stated in the results of the study can be interpreted these results as follows:

A. Regarding to the question, Are there significant differences at the level of significance $(05, 0 \geq \alpha)$ between the reinforcing and exclusion to reduce the hand flapping and head banging behavior of the experimental group.

The results showed a rejection of the null hypothesis and there were statistically significant differences in favor of reinforcing versus exclusion, the researcher sees that the reinforcement favorite and likable membership action, whether they are children or adults on the contrary the exclusion, the autistic children usually reduce the stereotyped behavior in order to avoid exclusion.

B. Regarding to the question, are there significant differences at the significance level $(0,05 \geq \alpha)$ between the reinforcement and modeling to reduce the hand flapping and head banging behavior of the experimental group. The results showed a refusal for the hypothesis in favor of reinforcement versus modeling, the researcher sees that this is consistent with what stated in the theoretical literature about the importance of reinforcement for children and animals, as well as many studies have shown the effectiveness of reinforcement in the construction of human behavior and animals. Regarding modeling it is possible that autistic children limit their hand flapping and head banging behavior in response to their teacher because of the affectionate relationship with him, but with the absence of the teacher, children may return to the hand flapping and head banging behavior as appeared in the theoretical literature.

C. Regarding to the question, are there significant differences at the significance level $(0,05 \geq \alpha)$ between modeling and exclusion to reduce the hand flapping and head banging behavior of the experimental group, the results showed rejection for the hypothesis and that there are no differences between modeling and exclusion in the reduction of the hand flapping and head banging behavior ,the researcher has concluded that there is a similarity in the force of impact between modeling and exclusion on autistic children's behavior, as explained in points (a, b) the researcher can explain the reduction of the stereotyped behavior of autistic children by exclusion and modeling associated with avoiding exclusion and the teacher himself, in the absence of these two things the hand flapping and head banging behavior of children with autism returns as it was in the past.

Recommendations:
1. Adoption of the training program to reduce the hand flapping and head banging behavior in autism centers.
2. Adoption of the scale prepared by the researcher to measure the hand flapping and head banging behavior in autistic.
3. Rely on behavior modification procedures to reduce the hand flapping and head banging behavior, particularly reinforcement.
4. Conduct prospective studies on other aspects of the hand flapping and head banging behaviors such as self-harm.

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