



ORIGINAL ARTICLE

Survey the Effectiveness of Therapeutic Intervention with Applied Behavior Analysis (ABA) on Autism Childrens' Communicative Problems

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ABSTRACT

The main goal of current research is to scrutiny the effectiveness of therapeutic intervention with applied behavior analysis (ABA) on communication problems of Autism children. This study is experimental and single-tested type which based on ABA model. In this experiment 8 children (1 girl and 7 boys) that have Autism between 6 to 12 years old with the use of sampling method selected from the patients of Autism disorders Rehabilitation and Organization Center and they are treated in 3 month there (20 sessions).the devices which are used in this research are: direct observation and scale gradation of Gilliam Autism. Data attained with the use of single sample t tests and couple comparison t test and co-variants. The research results showed that the coefficients average of children's behavior problems decreased considerably during teaching period although their learning speed were different it indicated positive effects of therapeutic intervention. According to the research achievements, method of therapeutic intervention (forming behavior) with form of applied behavior analysis (ABA) was effective on the decrease of communication problems of Autism children.

Key Words: Therapeutic Intervention, applied Behavior Analysis, Communication Problems, Autism

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INTRODUCTION

Pervasive developmental disorder doesn't recognize in some stricken children until their school age, because these children have few requests and they confront less problems due to their low social cooperation with others. Children with developmental disorders usually show intense and exclusive interest toward a limited spectrum of activities and they resist against changes and do not show any sensitivity and suitable response to social environment. Above disorders effect generally on different aspects of growth and with pretense in early life redound to sustainable disorder. Introvert disorder is the most prominent in these disorders [1].

According to this, the main goal of current research is the effect of therapeutic intervention with the method of applied behavior analysis on the decrease of communication problems of Autism children. And the hypotheses in this research are as below:

- 1- Therapeutic intervention with the method of applied behavior analysis (ABA) is effective on the decrease of communication problems of Autism children.
- 2- Therapeutic intervention with the method of applied behavior analysis (ABA) is effective on face to face contact problems of Autism children.
- 3- Therapeutic intervention with the method of applied behavior analysis (ABA) is effective on shaking hand problems of Autism children.

METHOD

Participant

Research method is Experimental with the use of pre-test and post-test. Research scheme in this project is internal group (single-tested) which perform by ABA method. The participants of this research are Autism children in Teaching and Rehabilitation Center of Gorgan Township. The number of children with

the attention to sampling participated in this project are 8 children (1 girl and 7 boys).the method of sampling for identified Autism children is available.

MATERIAL

Oztost Garz (Gilliam Autism Rating Scale) is used in this research.Garz-2 consist of three subscales. Each subscale has 14 items which includes stereotype behaviors, communication and social cooperation .Internal stability of Garz-2 was appointed by Cronbach Alfa. Performed studies represented 84% coefficient Alfa for stereotype behavior, 86% for communication, 88% for social cooperation and 94% for Autism. In Iran society according to the studies of Ahmadi, Safari, Hamtiyan and Khalili [2] the coefficient of Cronbach Alfa is acquired 89% in Garz Test. this coefficient shows the high perpetuity of Garz which can be used in therapeutics and diagnostics aims [3].

Procedure

To perform this study 8 Autism boys and girls are selected from Teaching and Rehabilitation Center of Gorgan Township with the age of 6 to 12 and then the Garz-2 of Gilliam Autism Rating Scale was performed 3 times on these children, at first draw base line on pre-test children and then on therapeutic intervention children (therapeutic intervention after20 session of 30 minute lasted about 3 month on 8 children which taught separately and changes are recorded each session).After the end of intermediation ,a test was given to children and at last intervention was stopped about 2 weeks and then they gave post-test to children.

Achievements, Discussion and Conclusion

In this section we scrutiny the research results. At first, development process charts of therapeutic intervention are studied and then with the use of statistical method of single sample t test and couple comparison t test and co-variants we attend to research hypotheses.

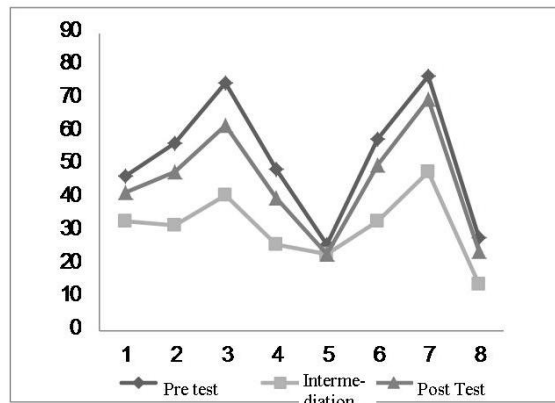


Chart 1: Grades multi-lateral Chart of Communication Problems in Pre-test and Post-test

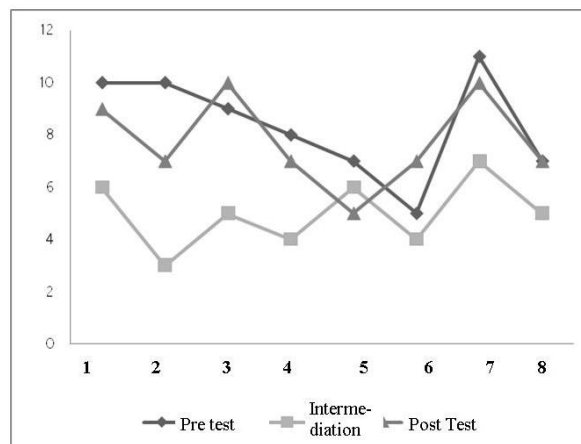


Chart 2: Grades multi-lateral Chart of Fact to Face Contact in Pre-test and Post-test

According to chart 1, which shows the grades comparison of communication problems in Autism children in pre-test, intervention and post-test positions, indicates that children communication problems decrease during intervention and after stopping intervention their communication problems are adjacent to base line. In fact children in column 1, 5 and 8 due to lack of or low language utterance cannot acquire

the score of this part and because of this, their communication problems are lower than the rest of children in chart ; their problems are further and their development process are slower. According to chart 2, which shows the grades comparison of face to face contact skills in Autism children in pre-test, intervention and post-test positions , indicates that all of the children during intervention , have changes in direction of decreasing problems and after stopping the intervention, majority of them are adjacent to base line.

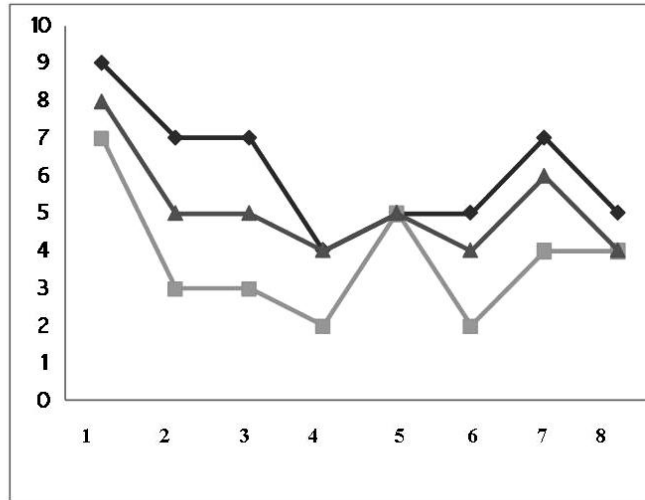


Chart 3: Grades multi-lateral Chart of Shaking Hand in Pre-test and Post-test

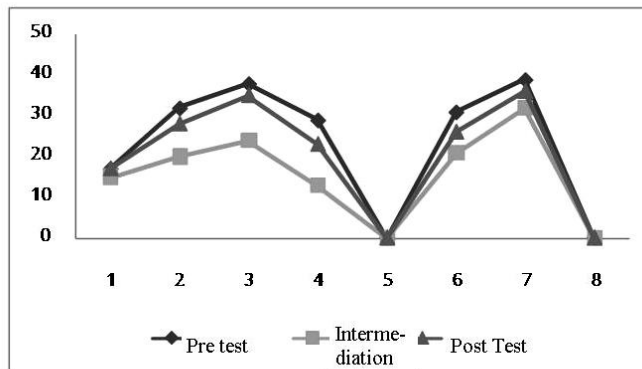


Chart 4: Grades multi-lateral Chart of Saying Hello in Pre-test, Intermediation and Post-test

According to chart 3, which shows the grades comparison of shaking hand skills in Autism children in pre-test, intervention and post-test positions, except number 5, the rest of the children represent some changes in the direction of learning the skills of shaking hand.

According to chart 4, which shows the grades comparison of saying hello of studied Autism children in pre-test, intervention and post-test positions, in which the extent of saying hello in 5 children (2, 3, 4, 6, 7) increased but 3 children (1, 5, 8) are remain without any utterance, after stopping the intervention , all of them are adjunct to base line.

DISCUSSION AND CONCLUSION

Table 1: Statistical Analysis Outline of Single Sample t Test for the Main Hypothesis of Research

Variants	Groups	N	M	SD	DF	T Grade	sig
Communications	Pre- Test	8	21/94	14/558	15	6/028	0/000
	Post-Test	8					

Social Cooperation	Pre- Test	8	26/56	5/876	15	18/082	0/000
	Pre- Test	8					

The result of Table 1 shows that output table of calculated t communication (t=6/028) at the certainty level of 95% (P 5%) is bigger than critical t (t=2/131) and also according to calculated t (t=18/082) social cooperation at the certainty level of 95% (P 5%) is bigger than critical t (t=2/131) and the difference of two averages from statistical viewpoint are meaningful, it means the communication and social cooperation of Autism children have meaningful difference after and before the intervention. According to foresaid remarks, we conclude that: there is a meaningful difference in therapeutic intervention with the method of applied behavior analysis (ABA) on communication problems of Autism children after and before the intervention.

Table 2: Statistical Analysis Outline of Couple Comparison t for Hypothesis Number 1, 2 and 3

Saying Hello	Base line		23/52	15836	2	11/11	0/01	0/614
					14			
	Intervention	8	15/63	11/224	2			
					14			
After Intervention	8	20/63	14/121	2	14			
Face To Face Contact	Base line	8	8/38	1/996	2	16/108	0/00	0/697
					14			
	Intervention	8	5/00	1/309	2			
					14			
After Intervention	8	7/75	1/753	2	14			
Shaking Hand	Base line	8	6/13	1/642	2	20/116	0/00	0/742
					14			
	Intervention	8	3/75	1/669	2			
					14			
After Intervention	8	5/13	1/356	2	14			
					14			

The results of table number 2 show that, the calculated F is bigger than the table F, and all of research hypotheses are approved but the zero hypotheses is rejected. In fact, the results of current research are equal to investigations [4-8] and confirm the effectiveness of therapeutic intervention on communication problems of Autism children. The teaching of Autism children should be consistent and continuum and their ability to perform something are just acquired by practice and repetition and if an interval occurs in their teaching and practice, their learning will face a tribulation. Also early intervention will decrease

symptoms and problems of Autism children and also decrease negative backwash on their families, so the attention to cure this disorder is very significant.

There were some limitations to perform this research such as:

- 1-Lack of cooperation of some Autism children and their parents
- 2- Disorder in learning because of some problems such as: stereotype behavior, quarrel, lack of concentration and attention and ultra activity of some Autism children because of not using drugs.

Also it is recommended that:

1. According to acquired results of this research, essential preparations provide to treat these children
2. To improve social growth of Autism children; perform more researches with newer topics
3. Because of the repetitive type of this research, performing researches with the use of this method is recommended to different areas of our country

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