



The Effectiveness of Applying Behavior Therapy's Techniques on Social Interaction of Autistic Children

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ABSTRACT

This study was designed and implemented aimed to determine the efficacy of behavior therapy techniques on improving casting, social interaction in autism children. This study was semi-experimental and without controlled group. Sample included sixteen 7-14-year-old children who were selected by available sampling method from special autism school children in the city of Tehran. These children were participated for 2 months in therapy sessions with a psychologist specializing management. For the treatment, documented procedures were used by Ivar Lovas titled "Treatment intervention by Applied Behavior Analysis ". Garez test was used for data collection. For the analysis of data, T test of affiliated groups and the SPSS software were used. Results showed that the techniques of treatment behavioral cause to increase social interaction in autistic children. This confirms the fact that no child should be abandoned without an education program fit the children needs.

Keywords: Behavior Therapy's Techniques, Social Interaction, Autistic Children

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INTRODUCTION

Developmental pervasive disorders (autism pervasive disorders) comprise autism, Rett S, childhood disintegrative, Asperger S disorder, and pervasive developmental disorders if not otherwise specified (Association, 2000). Out of these disorders, autism has been significant and salient both in research and in clinical areas. Autism is a collection of symptoms accompanied with neurological disorders appearing during the first years of childhood so that the brain cannot function properly in social and communication skills. As a result, the manner of communication and interaction with others interfere with learning (Fombonne, 2003; Sigman, Spence, & Wang, 2006). These children significantly encounter problems in social interactions and communication with others demonstrating cliché, stereotyped, and ritualistic behaviors. Additionally, behavioral disorders such as aggression, unaccommodating, and self-injury are common among them (Association, 2002; Volkmar, Paul, Klin, & Cohen, 2005). This disorder interferes in the learning of children and in older ones (at the school age) results in their failure in academic achievement.

In their social interactions and activities related to play, they also have problems. The autistic children avoid interaction and maintaining relation with peers which can lead to limitations in their communicational ability. Eye contact and appropriate response of these children to peer group and their parents is very limited. This disorder makes communication with others and the world around them difficult. This disorder is globally universal lacking the pattern related to a social group or having an exact etiology. It was assumed in the past that autism was caused due to the behaviors of the parents or based on behavioral principles, but the existing evidence rejects the above assumptions. A series of biological components and genetic factors has been brought up which are under study and investigation. However, there is no definite and specified cure for this disorder (Myers & Johnson, 2007; Nefdt, Koegel, Singer, & Gerber, 2010). The actions taken in this area have only been planned and developed with the goal of maximizing personal adaptation. In this regard, psychodynamic programs and drug therapy have not been so effective. But, intensive behavioral

correction activities have proved to be with more encouraging results. In other words, among the available treatments, behavioral therapy has benefitted from more research support (DeMyer et al., 1973; Lord, 2001; Lovaas, 1987).

-The research performed by (Beh-Pajoo, Ahmadi, Shokoohi-Yekta, & Asgary, 2011) aimed at the study of the effectiveness of social stories in the reduction of behavioral disorders in autistic children showed that the behavioral disorders of two of the three children under experiment were reduced after intervention. The results showed that social stories are effective in the reduction of a number of behavioral disorders.

-Bahmanzadeh Jahromi (2008) embarked on the study of the effectiveness of training social skills in autistic behaviors and the effect of social stories on social development of children suffering from autism. The results of the research showed that the training of social skills through social stories brought about reduction in their autistic behaviors such as disorder in nonverbal behaviors, in building and maintaining relation with others as well as disorder in sharing joys with others; they demonstrated better social and adaptive behaviors in relation to environment and others.

-Foxx (2008) embarked on a study reviewing the application of intensive behavioral techniques in the treatment of behavioral problems in autistic people. He concluded that the behavioral techniques based on (ABA) have been the most important method for the treatment of behavioral disorder in children suffering from autism.

-Crozier and Tincani (2005) studied the effects of social stories on the disruptive behavior of the autistic students. The findings showed that the disruptive behaviors had been reduced significantly in the autistic children.

In spite of the extensive studies performed in the west, no regular study was found to show the rate of the spread of this disorder in Iran, but clinical experiences show that the rate of the spread of this disruption in Iran over the recent years has been increasing (Mohtashami, 2010). Therefore, the pathological study of this disorder especially from the view of rehabilitation and treatment actions seems to be more necessary than before. It is not expected that the treatment programs for autistic people lead to remedy, because there is no decisive and specified treatment for it (Johnson & Myers, 2007). Only some actions are planned and developed to maximize personal adaptation. Among them are treatments based on behavior therapy (Johnson & Myers, 2007; McEachin, Smith, & Ivar Lovaas, 1993; Sallows & Graupner, 2005).

For this purpose, the present research intends to study the effectiveness of behavior therapy techniques in the cliché-stereotype behavior, relation, and social interaction in autistic children. It is worth mentioning that the present research is of the few studies carried out in Iran and the importance of the present research is related to this issue.

METHODOLOGY

This study in terms of the objective, is a functional study, and is a semi-experimental research because of using medical interventions in experimental group. The statistical population for this study includes Autistic students from

Autism special schools of Tehran at 91-92 academic years. From these students from Autism Schools in Tehran, 16 students were selected with available sampling method and were placed in experimental group (16 students). The selected group includes students who have difficulties in terms of Social Interaction, in psychologists and teachers opinions.

RESEARCH TOOLS

In this study, Gilliam (GARS-Gilliam Autism Rating Scale) is used in order to measure the educational variables. Some descriptions are followed about this questionnaire: Gilliam Questionnaire: GARS (Gilliam Autism Rating Scale) is a checklist which helps in identifying Autistic people. This test is standardized in 1994 in America, and shows the Autistic people features based on a 1094 Autistic people from 46 states from Columbia, Porto Rico and Canada.

GARS test is prepared based on the definitions from ASA (Autism Society of America), APA (American Psychiatric Association) and suggestions from DSM-IV (Diagnostic and Statistical Manual of Mental Disorders). GARS test is suitable for 3 to 22 - year people and can be conducted by parents or professionals at school or at home.

GARS (Gilliam Autism Rating Scale) test is evaluated and standardized according to a population consists of 1092 kids, teenagers and adults from USA and Canada. Its reliability is defined by Cronbach's Alpha technique, which shows 90 % for alpha coefficient for stereotype behaviors, 89 % for communications, 93 % for social interactions, 88% for growth disorders and 96 % for sign identification in Autism Disorder. Also confidence and persistency of GARS test is evaluated by studying 134 Autistic children. The results show 90 % of confidence coefficient for this test (Eaves et al., 2003). In Iran (Beh-Pajoo et al., 2011) evaluated the Gilliam Autism Diagnosis measure with the name of Isfahan Autism. The validation of this measure is confirmed by professional and specialist from Isfahan Autism Society. The validation of the test Social Interaction is calculated by Cronbach's alpha, which shows a total coefficient equals to 0.911 that is a very high degree of confidence for the questionnaire. In order to validate the measure, the opinions from many specialists were used for confirmation, and this shows that the questionnaire is accepted and confirmed.

MATERIAL

In this study, the statistical population consists of Autistic children from special Autism schools in Tehran, includes 16 students (7 to 14 years) which were selected by available sampling method and placed in experimental group. The selected group consists of students who have With Social Interaction, in psychologists and teachers opinions. The experimental group kids were cured by behavioral therapy in 15 sessions, 2 sessions per week and 60 minutes for each session. When the sessions ended, again the assessment form was completed by teachers in order to evaluate the treatment process. The after-treatment scores were selected and used as the measure for comparison and assessment, and then these scores were analyzed statistically in order to define any significant trend in tests. In this research, behavioral therapy

was conducted exactly as the same of its principles, except parent's coordination.

RESULTS

The main hypothesis of this research is as follow: Using Behavioral Therapy Methods has Significant Effects on Social Relationship of Autistic children. Results from

statistical show the comparison between the average scores after and before the test for social relationship of Autistic children in experimental group. Also the results from t-test, Kolmogrov-Smirnov test and correlation test are shown in separate tables. The statistical results and comparison between the average scores after and before the test for social relationship of Autistic children in experimental group are as:

Table 1. Gender

Gender		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Girl	4	25.0	25.0	25.0
	Boy	12	75.0	75.0	100.0
	Total	16	100.0	100.0	

Table 2. Statistics

Social Interaction	N		Mean	Std. Deviation	Variance	Mode	Skewness	Kurtosis
	Valid	Missing						
pre	16	0	22.1250	10.38509	107.850	1.93	-0.723	0.445
post	16	0	16.8750	11.23017	126.117	0.86	0.689	0.245

Results from statistical for the Social Interaction between the average scores after and before the test for communication of Autistic children in experimental group

Table 3. One-Sample Kolmogrov-Smirnov test Table

		Pri. Social Interaction	Post. Social Interaction
N		16	15
Normal Parameters ^{a,b}	Mean	21.0625	15.4000
	Std. Deviation	10.62995	9.89083
Most Extreme Differences	Absolute	0.179	0.099
	Positive	0.103	0.099
	Negative	-0.179	-0.099
Kolmogorov-Smirnov Z		0.715	0.384
Asymp. Sig. (2-tailed)		0.685	0.998

*a. Test distribution is Normal. b. Calculated from data.

Also in Kolmogrov-Smirnov test, the average scores for social relationship in Autistic children before the test is 0.715 and after the test is 0.384. In order to compare between the average scores before and after the test for social relationship in Autistic children of experimental group, the correlated t-test is used. The results shows that average score of the social relationship for Autistic children in experimental group, was 21.600 before test and 15.400 after test. In the experimental group, the social relationship for Autistic children has increased, because the average score after the test is decreased (df =14).

Table 4. Correlation Coefficient Table (Paired Samples Correlations)

		N	Correlation	Sig.
Pair	pri. Social Interaction post. Social Interaction	15	0.798	0.000

The Correlation coefficient between the average scores before and after the test for social relationship in Autistic children in experimental group is 0.798 which is a significant value (p<0.000).

Table 5. t-test Table (Paired Samples Test)

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair	pri. Social Interaction- post Social Interaction	8.46667	6.73866	1.73991	4.73492	12.19841	4.866	14	.000

This decrease in experimental group with the value of $T = 4.866, P = 0.000$, is significant statistically. So,

applying behavior therapy's techniques has a Significant Effect on the Social Relationship in Autistic children.

CONCLUSION

With regard to the above mentioned issues and significant relationship between them confirmed by t-test, generally the main hypothesis of this research is confirmed. Pre-test scores and comparing them to the after-test scores (the average difference between before and after test scores) shows a decrease in symptoms which is significant. The main problem of Autism children is in social relationship; with regard to the decrease in scores and symptoms in experimental groups, we conclude that effect of functional behavior education on social relationship in Autism children is significant. This research shows that medical intervention by analyzing functional behavior, in order to improve the social relationship of Autism, can children be an effective method. Autism children in experimental group of this research, could show a increase in symptoms in terms of social relationship, after passing treatment sessions (about 2 months of education), which this shows that these Autism children

should not be left without any structured and organized educational program. The study shows that behavior therapy's techniques with ABA method have the greatest Effectiveness on Autistic children social relationship, and thus the results endorse (the necessity) of giving a specially designed plan for these children. A limitation to this research is that GARS merely indicates the number of symptoms and disorders in Autistic children. By manipulating this test, we can only assess the reduction in symptoms after training, but not children are other improvements such as knowledge enhancement, as well as comprehending complicated concepts. Some other restrictive factors are as follow:

- Choosing limitation by Autistic Children
- Insufficient educational aids
- lack of a control group which could otherwise further support the result

A similar study is suggested to be carried out in larger group of Girls and boys autistic children, using different tools and method and considering other features of these children.

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