

Research Paper

Impact of Individual Differences Intervention (Floortime) Based on Parents' Expressed Emotion on Children's Social Skills With High-Functioning Autism Disorder

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ABSTRACT

Objectives This study was conducted to design Individual Differences intervention based on parents' expressed emotion and its impact on children's social skills with high-functioning autism disorder.

Methods The first part of this study is comparative-causal and the second part is a semi-experimental study. In order to design Floortime treatment plan based on parents' expressed emotion, first in an Embedded Design Mixed Research Method by means of researcher's questionnaire for qualitative measurement and family questionnaire for quantitative part of emotional state of mothers with autistic children were measured.

Accordingly, the treatment plan with 23 meetings was codified. Finally, 20 children with high-functioning autism were selected from the autism centers by available sampling. Out of them, 10 children were put into the experimental group and they were provided designed intervention plan in addition to the ABA intervention, and the other 10 children formed the control group, who merely received Applied Behavior Analysis (ABA) intervention. Tools used were Family Questionnaire, ASSQ test, Stanford-Binet intelligence test, and Gilliam and Vineland social compatibility tests.

Results Results show that there are significant differences in mother's expressed emotion in case of normal and autistic children. The expressed emotion of mothers of autistic children is high in terms of the total score of expressed emotion, criticism, and Emotional Over-Involvement (EOI). After the intervention, no significant difference was observed in the social compatibility and communication skills between the two groups of children who were under the ABA intervention and who were under Floortime intervention. But after the intervention, the experimental group had a better score in relation variable.

Conclusion Given the high level of excitement expressed by parents of children with autism, various interventions have to reduce their excitement. You can also use social interventions such as floortime intervention to increase the association of children with high performance autism disorder.

Key words:

Autism, Expressed emotion, Floortime, Mothers, Social skills

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Extended Abstract

1. Introduction

Studies show that high expression of emotions results in increased probability of relapse and poor outcome in vulnerable patients [1, 2]. Researchers have argued that emotions expressed by parents of children with autism spectrum dysfunction are higher than parents of normal children. This causes behavioral problems and more social and social problems in their children [3-6].

Children under the age of 7 years who have symptoms of autism spectrum disorders benefit principally from intensive care [7]. Some of the most important treatments for autism is Lovas and Applied Behavior Analysis (ABA), but its benefits on autistic children are limited. Another well-known therapeutic approach used for autistic children is the therapeutic methods of social realism [8, 9]. A prototype of the main social interventions that manifests individual and developmental differences, Developmental Individual-difference Relationship-based model (DIR) is "Floortime model". In this behavioral model, the child's inner mental state is not seen or underestimated. While in floortime model, communication circles are encouraged in targeted activities. Therefore, instead of learning through habit and repetition, children create a connection between their behavior and intention [10].

The present study intends to develop a rehabilitation program to avoid the limitations of ABA intervention by combining floortime and ABA interventions and considering the influence of the expressed excitement of parents of autistic children. The impact of this program and the impact

of ABA intervention on the social skills of children with high-performance autism are measured.

2. Methods

Step 1: Mixed method research

Mixed method research was used to formulate therapeutic package. The mixed method research focuses on collecting, analyzing, and integrating quantitative and qualitative data in a single study, or in a series of studies. The type of combination method used in this research is embedded design mixed research method. The statistical population of this study consists of all mothers of autistic children and normal children within the ages of 3 to 13 years in Tehran city in 2014. At this stage, 50 children were selected from each group, and the emotions expressed by their mothers were reviewed.

Step II: Test method for pre-test and post-test design with control group

At this stage, 20 autistic children aged 3-6 years old were assessed by psychiatrists, those who fulfilled the selection criteria were selected. Children who had autism severity in the mild range (50-100) in the ASSQ test, and their intelligence in the Stanford Binet Intelligence Test was above 70 were selected by available sampling method and were randomly assigned into two groups of 10 subjects each. The expressed emotion-based Floortime intervention program was then presented in 23 sessions of 2 hours each, once a week. During the intervention, there was a drop in the number of mothers in both control and experimental groups and the samples were reduced to 14 patients, 7 each in experimental and control group.

Table 1. Demographic variables in mothers of children with autism and normal children in the first stage of the study

Variables	Groups	Sex	Number/Percent	Mean/Standard Deviation
Child sex	Autism	Girl	12(24)	-
		Boy	38(76)	-
	Typical	Girl	31(62)	-
		Boy	19(38)	-
The age of the subjects	Autism	-	-	7.45(2.42)
	Typical	-	-	6.77(2.98)
Age of diagnosis	Autism	-	-	3.32(1.42)
Mother's age	Autism	-	-	6.99(35.1)
	Typical	-	-	31.42(4.68)
Father's age	Autism	--	--	40.34(7.15)
	Typical	-	-	35.6(4.9)

Measuring tools

Demographic characteristics questionnaire, ASSQ test, Stanford Binet intelligence test, Family Questionnaire (FQ), Quiz Questions Expressed Emotion, Gilliam autism scale, Social skills test (villand) were used as measuring tools.

3. Results

Table 1 shows the demographic characteristics of mothers of children with autism and normal children in the first stage of research.

The results of statistical analysis of the expressed emotions of parents of autistic children were compared (Table 2). A significant difference was revealed between parents of all three sub-scales, namely total score of expressed emotion ($P=0.0001$), extreme emotional involvement ($P=0.0001$), and critique ($P=0.003$). Results of data analysis of the qualitative section led to the production of five main themes that included “worrying about others, worrying about the future of the child, ignoring oneself and the child’s needs for their needs and the needs of other members of the family, comparing their child with other children, criticizing the child all the time” (Table 3).

Table 2. Mean and standard deviation of expressed emotion score by mothers of autistic and normal children

Variables	Groups	Mean/Standard Deviation
Total score of expressed expressed	Parents of autism children	56.58(7.08)
	Parents of ordinary children	48.06(9.69)
	Total	52.32(9.47)
Extreme emotional involvement	Parents of autism children	30.88(4.37)
	Parents of ordinary children	25.65(5.14)
	Total	28.24(5.44)
Criticism	Parents of autism children	25.7(4.6)
	Parents of ordinary children	22.46(5.89)
	Total	24.08(5.51)

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Table 3. Difference in average of the expressed emotion scores of mothers of children with autism and normal through the Manova statistical test

Variables	df	F	P-Value	Eta	Power
Total score of expressed expressed	1	25.16	0.0001	0.20	0.99
Extreme emotional involvement	1	0.30	0.0001	0.23	100
Criticism	1	9.37	0.003	0.087	0.85

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Table 4. Mean and standard deviation of communication and adaptation and social inhibition in pre-test and post-test

Variables	Groups	Mean	Standard Deviation	Mean	Standard Deviation
Relationship	Experiment	0.142	0.377	3.717	3.199
	Control	1.50	1.603	1.714	2.360
social skills	Experiment	1.428	2.149	5.176	2.429
	Control	2.50	3.625	6.285	3.383
Social adjustment	Experiment	36.714	10.688	37.66	10.682
	Control	34.156	7.314	32.406	6.194

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Results tabulated in Table 4 indicate that there is no significant difference between the experimental and control groups with respect to the variables of social skills, and social adjustment, but there is a significant difference between the two groups with respect to communication variable ($P=0.028$).

4. Conclusion

Results show that despite the high expressed emotion of mothers of children with autism in comparison with mothers of normal children between control and test nodes in the post-test phase, social skills and social adjustment variables were significantly different after the intervention of floortime. Based on the excitement expressed by mothers in the control group and the experimental group, it was observed that only the experimental group had a better performance.

Results of this study were not consistent with other studies done on the efficacy of floortime intervention on communication problems and social skills of children with autism spectrum disorder [7, 11-14]. The lack of coherence between the results of these studies and the results of this study is that in all of these studies, the group receiving floortime intervention was compared with a group that did not receive any intervention. The floortime intervention group simultaneously receiving ABA when compared with the control group receiving ABA intervention only had no significant difference in terms of achieving social skills. Of course, some studies also found that flutter-mediated intervention did not affect social skills. Of course, all of these studies provided floortime without considering the emotional characteristics of mothers and these studies were compared with ABA intervention. It was noted that this study did not have any effect on the communication skills of the subjects in the groups that received floortime and ABA [15].

Due to dispersion and lack of parental cooperation, there is failure to implement follow-up evaluation to verify the effect of postoperative performance stabilization over time. Due to ethical issues there were no control groups that did not receive any intervention and there was no current intervention with that control group without intervention.

This study was conducted in other groups of children with autism spectrum disorder. The comparison is based on family-based group-based interventions (based on parenting education) and center-based (based on employee and mentor training) and the combination of these two. Workshops were conducted to reduce the expressed emotion of parents in order to influence the various interventions for parents of autistic children.

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Conflict of Interest

The authors declared no conflicts of interest.