

Developing a Family-based Floor Time Therapy and Evaluation its Effectiveness on the Developmental Profile of Children with Interactive Disorders (Anxiety and Depression)

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Abstract

Background: Floor time therapy is the center of Greenspan developmental model. In Family-based of this model, to enhance the abilities of the child, family functioning is set the objective as a general unit, the purpose of this study was developing a Family-based Floor Time Therapy and evaluating its effectiveness on the developmental profile of children with interactive disorders.

Materials and Methods: This research study was conducted according to the pretest-posttest design. The statistical population of the study consisted of all Mashhad preschoolers with depression and anxiety disorders along with their mothers. They were selected by using voluntary sampling and assigned to groups. In order to examine the effectiveness of therapy, the researcher-made instruments of Developmental Family Function Assessment Questionnaire and Greenspan Functional Emotional Developmental Scale were used.

Results: According to the result there were significant differences between the control and floor time therapy groups of depressed children in developmental stages 4, 5 and 6 ($P < 0.05$), between the floor time therapy and family-based floor time therapy groups in stage 4 ($P < 0.05$), and between family-based floor time therapy and control groups in stage 6 ($P < 0.05$). There were also significant differences between floor time therapy and family-based floor time therapy groups of anxious children in stage 1 ($P < 0.05$), and between family-based floor time therapy and control groups in stages 1 and 4 ($P < 0.05$). The results showed that there was a significant difference in developmental family function between the three groups of depressed children in stage 5 ($P < 0.05$), and those of anxious children in stages 1, 2, 3, and 7 ($P < 0.05$).

Conclusion: Family-based floor time therapy, can increase the effectiveness of floor time therapy and be used as an effective therapy for the treatment of preschoolers with depression and anxiety disorders.

Key Words: Anxiety, Developmental Profile, Family-based floor time therapy, Interactive disorders.

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1- INTRODUCTION

Floor time therapy is a method for treatment of child. It is proposed by Greenspan and Wieder in 1997, and its effectiveness approved in many studies (1-4). In Iran, Amin Yazdi (2013), wrote about it for first time, and in another study, Aali et al. (2015), designed family based floor time therapy based on Developmental Individual difference Relationship based model in improving Autism Spectrum Disorder (5, 6). Since changing the emotional and behavioral patterns is difficult in adulthood, the mental health problems in early childhood is one of the preventive public health issues which would affect academic, social, and economic achievements besides public health (7). Anxiety and depression are of the most common childhood disorders (8, 9).

Anxiety is painful psychological distress evoked by anticipating future threats and comes with varying degrees of fear, anxiety, stress, and excitement (10). The prevalence of anxiety disorders in preschool period has been differently reported as 1% to 2% (11), 9% (7), and above 19% (12). Infants and young children may exhibit stable levels of fear and anxiety that could inhibit them from experiencing a range of emotions and having their own age-appropriate performances. Maladaptive emotion regulation strategies serve to maintain symptoms and associated impairments in anxiety disorder (13). The majority of the problems related to the customs of going to the bathroom and comfortable defecation, along with sleep and eating problems in older children may have its roots in the child's anxiety (14).

While, in healthy development, infants and young children gradually increase their skills to express and experience a wide range of emotions; some may instead begin to show a stable pattern of sadness and depression (14). Depressive disorders

in children negatively affect their personal and normal family performances and in some cases continue into adulthood (15). The prevalence of depression has been estimated between 1% and 2% in a study (16). Childhood is a crucial period for diagnosis, prevention, and treatment. According to the research evidence, most of the children who experience signs of depression and anxiety in their childhood are more vulnerable to mental health disorders in adulthood (17). Developmental Individual Difference Relationship-based Model (DIR), is a new approach in the etiology and treatment of anxiety disorders and depression in children. During the process of integrated human development, children's relationships with the important people in their life are very important (18).

After birth, influenced by their exclusive biological characteristics, children start interacting with the environment and people. Through these interactions, skills of shared attention and self-regulation, engagement in relating, two-way intentional affective signaling and communication, long chains of co-regulated emotional signaling and shared problem solving, creating representation, and logical thinking are developed as the basic features of human by which self-awareness, language, empathy, creativity, thinking, and social and emotional skills gradually emerge in children. Therefore, in this approach, unique biological characteristics of children in interaction with the family dynamics determine their stage of development (19). From DIR perspective, depression and anxiety disorders are regarded as complex interactive disorders. Interactive disorders are pertinent to the ways children understand and experience the world or related to the maladaptive child-caregiver interactions. Personality, abilities of the caregiver and the family and organization of child's experiences along with the way

these two are associated through child-caregiver interactions are the main, important components which contribute to both understanding the nature of the child's problem and designing an efficient intervention program. The problems of children with interactive disorders are mainly related to the features of environment, family, or child-caregiver interactions rather than being pertinent to their processing profiles and unique biological characteristics. A special type of baby-caregiver interaction in combination with a specific regulatory sensory-processing profile often leads to the occurrence of excessive anxiety in children. The developmental path in these children indicates a way that the child understands and responds to different senses and accordingly plans for his/her actions and also includes the ways which the child care environment interacts with these individual differences and also the stages of emotional and mental organizations function within these interactions. Anxious people usually over-respond to senses such as sound and touch, and experience and express emotions drastically. The caregiver of an anxious child does not remain silent, but overreacts to the child's emotional exchanges. As a result, the child gets overexcited and under regulated and experiences associated unpleasant feelings (14).

DIR approach is based on the underlying assumption that emotion is the basis for learning and development, and human relations play a vital role in child development (20). Regarding treatment, it deals with the development of all human dimensions in social communications and purposeful interactions especially with parents (21). Reviewing the literature, we came to this view that the studies of DIR such as those of Solomon and Chung (2012), Solomon, Necheles, Ferch, and Bruckman (2007), Greenspan and Weider (1997, 2005, 2009), and Liao et al. (2014),

have confirmed the effectiveness of maternal upbringing on promoting developmental abilities of children with autism spectrum disorder (3, 4, 14, 18, 19). But there is evidence that family functioning is the effect of signs of parental depression on children's behavior and quality of life (22). A supportive family environment paves the way for the development and treatment of symptoms of anxiety and depression in children (23).

Family support may represent an important intervention target to decrease anxiety. Research examining family influences on anxiety disorders has been a steady focus for more than a decade (20). If the family environment is regulated and calm with intimate relationships and the family members tend to foster mutual emotional interactions, they are able to provide the children with rich experiences and facilitate their treatment. Thus, the family-based treatment designs are of utmost importance. Empowering and enabling families are the key components of family-based treatments with the literature suggesting treatment interventions as one of the influential factors in improving the performances of families, parents, and children. According to the previous research findings, the main question of this study was whether integrating the floor time therapy with family-based practices could improve functional-emotional development profile of children with interactive disorders of anxiety and depression?

2- MATERIALS AND METHODS

2-1. Study design and population

This research study was conducted according to the pretest-posttest design with two groups of anxious and depressed children. Anxious and depressed children were assigned to floor time therapy group, family-based floor time therapy group, and control group.

2-2. Methods

The statistical population of the study consisted of all Mashhad preschoolers with depression and anxiety disorders together with their mothers during the 2015-2016 academic year. Sampling was done in two complementary phases. In the first phase, subsequent to confirming their disorder via the Child Symptom Inventory (CSI), 30 anxious and 30 depressed children along with their mothers were selected using voluntary sampling from Mashhad Municipality zones. The simple random sampling was likewise used to put the participants in to control, floor time therapy, and family-based floor time therapy groups (10 participants in each group). Multivariate analysis of covariance (MANCOVA), was used to analyze the data. For this purpose, the pre-test scores were controlled and in order to investigate the effect of independent variable, the post-test scores were checked.

To ensure accurate results, the following assumptions must be met in this type of analysis. One of the assumptions of MANCOVA, is to examine the homogeneity of variance-covariance matrices. For this purpose the Box's Test of Equality of Covariance Matrices functional-emotional profiles, was used. Levene's test was also used to assess the homogeneity of variances. Furthermore, "Pillai's trace, Wilks' lambda, Hotelling's trace, and Roy's largest root", was calculated for the subscales of functional emotional development and development of family functioning in the three groups of control, floor time therapy, and family-based floor time therapy.

2-3. Measuring tools

2-3-1. Child Symptom Inventory (CSI-4) (25):

To identify anxious and depressed children, CSI was employed. This inventory is a kind of Behavior Rating Scale designed for the first time by

Sprafkin and Gadow in 1984, and revised after the fourth edition of the DSM-IV in 1994. The inventory has parent and teacher versions (25). Its reliability and validity was investigated through 680 normal samples and 408 clinical samples of Tehrani students ranging in age from 6 to 14. The results indicate the test – retest reliability of the inventory between 0.29 and 0.76 in the measured areas (26).

2-3-2. Functional Emotional Developmental Scale (27):

To measure functional emotional development of the participants, Greenspan's functional emotional developmental scale was used. This 35-item scale has been designed to assess the functional-emotional developmental level of children. The items of this inventory investigate the current situation of children in six separate levels of development. Parents or caregivers of the children endorse the items arranged on the 6-point Likert scale. The concurrent validity of the scale with the Bayley scale-III's fine and gross motor skills, cognitive, receptive communication, expressive communication, and language subscales were 18%, 23%, 25%, 21%, and 25%, respectively. The concurrent validity of the scale with Bayley scale-II's mental motor, and behavior subscales were 25%, 24%, and 38%, respectively. Its correlation with Wechsler Intelligence Scale for Children concerning the sub-scales of verbal Intelligence Quotient (IQ), performance IQ, and full scale IQ was 0.53, 0.27, and 0.43, respectively. Its internal reliability was measured as 0.90 (27).

2-3-3. Developmental Family Function Assessment Questionnaire (DFFAQ) (28):

This instrument contains 43 items under 7 subscales and is developed by the researcher and colleagues (2014). It actually measures family functioning from the DIR perspective with respect to:

attention and regulation, engagement in human relations, mutual interaction, shared social problem solving, generating representations and ideas, logical thinking and discipline. Each item is scored based on a 4-point Likert scale from zero (never) to 3 (always). A low score on each subscale indicates poor family functioning in a given area. The psychometric properties of this instrument have been investigated in previous studies. The criterion validity of this inventory with the McMaster Family Assessment Device (FAD), is -0.75 , its test-retest reliability coefficient is 0.93 , and the overall Cronbach's alpha of the inventory is estimated as 0.92 (28).

2-4. Intervention

2-4-1. Family-Based Floor time Therapy (6):

In the developmental model, relationship-based individual differences are the axis of floor time therapy. Floor time is the course of an unstructured and spontaneous game or conversation in which adults follow the instructions of a child and become aware of his/her interests as much as possible, and react in such a way to support and strengthen the child's interested topics. Floor time aims to provide a warm and intimate relationship and focuses on paying unconditional attention to the child, raising intentional growth, motivation, assertiveness, and exploration, facilitating self-initiation and problem solving in the child, increasing focused and sustainable attention, correcting the child's signaling through games, expanding parents-child interactions and, developing a safe and enjoyable attachment between parents and the child. In floor time, the game setting is designed to have the child's favorite toys that match his/her level of development and biological differences, aiming to purposefully stimulate the child to interact with adults and promote his/her sensory-motor development. Parents are taught to

observe children's behavior. In floor time, the adult attracts the child through play and teaches him/her the social skills and emotional regulations. Greenspan and Weider (2009), believe that to achieve optimal growth, children need a developed family environment. In other words, before a child is able to achieve developmental abilities, it is necessary for the family, as a whole systematic unit, to already achieve those developmental abilities (14). From his perspective, family system as a unique unit undergoes functional- emotional stages of development similar to the stages of development of every human person. The researchers in this study have described these steps according to the theoretical foundations of DIR approach as follows.

2-4-1-1. Stage 1: Attention and regulating

At this level, a healthy family is a quiet and regulated family that its members consider the tolerance of each other against environmental stimuli. In times of challenge, the family also plays as a regulator for the members. Instead of emotional bombing or indifference, the family tries to regulate and calm the cluttered individual.

2-4-1-2. Stage 2: Intimacy

The members of such families participate in each other emotional experiences, so that the subjective and emotional experiences of each family member matter to other members in which they participate in.

2-4-1-3. Stage 3: Bilateral interaction

At this developmental level, the family members are able to exchange their feelings, intentions and thoughts with others.

2-4-1-4. Stage 4: Social problem solving

The family members who have achieved such a developmental ability have a

problem-solving approach in dealing with challenges and problems, and through participation in problem solving, they consider the individual problems of members as part the whole family problems.

2-4-1-5. Stage 5: Making representations or ideas

Rather than controlling each other's feelings, the members harmonize and regulate themselves with emotional experiences of each other. The family members talk about and exchange ideas about a wide range of emotions, such as love, intimacy, aggression, curiosity and jealousy.

2-4-1-6. Stage 6: Logical thinking

At this level, in dealing with issues, the family acts realistically and rationally. When family members are together as a group, they are realistic thinkers in the face of problems and events behave less emotionally and more pragmatically.

2-4-1-7. Stage 7: Discipline

At this level, the rules within the family are determined through dialogue and exchange of ideas with all members, and also proportionate to their abilities. In such a family, the rules are clear and obvious for all members, and they act decisively based on them. In this study, children were treated by researchers and two educated assistant at the center of psychological services in Ferdowsi University of Mashhad. Treatment consisted of weekly sessions for three months. In Floor time therapy the relationship between mother and child was observed and trained principle of playing with children based on Floor time with role playing. In family-based floor time therapy, in addition to the objectives of floor time play therapy, the achievement of the above development levels by the family is also one of the treatment goals. In Family based sessions, mothers were trained separately. Family-

based floor time therapy includes mother-child floor time sessions and some training sessions for parents. In parent training sessions, functional-emotional development, sensory-regulatory individual differences, and the role of interaction are introduced. Thereafter, anxiety disorder (in the group with anxious children), and depression (in the group with depressed children), together based on the floor time approach are presented to correct attitudes and beliefs about these disorders, explain the way family dynamics influence the problems of children, teach family communication patterns and emphasize the interactive nature of these disorders. This is actually done through accentuating calm and regulated interactions, evoking a sense of shared intimacy between the members, investigating and modifying emotional cues and how to respond to them properly, stressing the support for the expression of a wide range of feelings, and emotions in the form of family conversations, logical and realistic thinking, realistic expectations, and consensus and participation of all members in setting the family rules. Thus far, the researchers has verified the effectiveness of this method on behavioral symptoms of autistic children and parenting stress of their mothers as well as the functional-emotional development profile of families with autistic children (6).

2-5. Ethical consideration

The questionnaires and treatment design used in this study were approved by the ethics committee of General Education Office of Mashhad. The necessary information was also given to the participants, and they all consented to participate in this research study.

2-6. Inclusion criteria

Inclusion criteria included the age range of 4 to 6 years old, mothers agree and cooperate, lack of comorbid disease and

not receive further treatment at the same time not taking medication to reduce anxiety and depression, not more than two sessions absence.

2-7. Data Analyses

The descriptive indices of the experimental and control groups before and after the treatment are presented in the following tables. In order to investigate the differences between the pretest and posttest mean scores, analysis of covariance (ANCOVA), was used (which controls the linear effect of pre-test scores). Prior to the experiment, some of its assumptions were investigated. The results of these assumptions along with those of ANCOVA for the experimental groups are separately shown in the tables.

3-RESULTS

In **Table.1**, the statistical indices of scores for the subscales of functional-emotional development and developmental family functioning have been provided for each group. As it can be seen, in the pre-test stage, the reported means and standard deviations (SD) of the three groups are very close together. However, in the post-test stage (after the inclusion of the independent variable), further differences are seen between the control and experiment groups regarding the family-based floor time therapy and floor time therapy. This difference is more in the anxious group than the depressed group. So, it can be concluded that treatment is more effective in anxious children.

Due to the pretest-posttest design of the study MANCOVA, was used to analyze the data and to control the pre-test. To ensure accurate results, the following assumptions must be met in this type of analysis. One of the assumptions of MANCOVA is to examine the homogeneity of variance-covariance matrices. For this purpose the Box's Test of Equality of Covariance Matrices, was

used (functional-emotional profile of anxious children, Box's=65.74, $F=1.04$, $P=0.395$), (functional-emotional profile of depressed children, Box's=69.32, $F=1.100$, $P=0.305$), (developmental family functioning of depressed children, Box's=118.22, $F=1.28$, $P=0.377$). Since the p-value of the Box's test is more than 0.05 ($P>0.05$), it can be concluded that the variance-covariance matrix is homogeneous. Levene's test was also used to assess the homogeneity of variances. Given that, Levene's test for equality of variances was not significant ($P > 0.05$), the data is homogenous.

Furthermore, "Pillai's trace, Wilks' lambda, Hotelling's trace, and Roy's largest root" was calculated for the subscales of functional emotional development and development of family functioning in the three groups of control, floor time therapy, and family-based floor time therapy. According to the results, the three groups of control, floor time therapy, and family-based floor time therapy had significant differences at least in one of the subscales of each instrument ($P < 0.05$).

According to **Table.2**, and considering the pre-test scores as a covariate variable, while the functional-emotional development of depressed children is significantly different ($P < 0.05$), in stages 1, 2, and 5, the functional-emotional development of anxious children is significantly different in stages 4, 5, and 6 in the three groups of control, floor time therapy, and family-based floor time therapy. Results showed that there was no significant difference in other subscales. In order to identify the differences between groups, Bonferroni post-hoc test was used. According to the results of this test, there were significant differences between the control and floor time therapy groups of depressed children in stages 4 ($P =0.001$), 5 ($P =0.014$), and 6 ($P =0.018$), between the floor time therapy and family-based floor time therapy groups in stage 4

($P=0.035$), and between family-based floor time therapy and control groups in stage 6 ($P=0.000$). There were also significant differences between floor time therapy and family-based floor time therapy groups of anxious children in stage 1 ($P=0.001$), and between family-based floor time therapy and control groups in stages 1 and 4 ($P=0.001$). In general, the effectiveness of family-based therapy especially in the group of anxious children was more than the depressive child.

The results of the MANCOVA showed that there was a significant difference between the three groups of control, floor time therapy, and family-based floor time therapy of depressed children in stage 5 ($P = 0.05$), and those of anxious children in stages 1, 2, 3, and 7 ($P = 0.05$). Given the eta-squared computed for the subscales at each of the subscales (i.e., 0.26, 0.76, 0.52, and 0.69, respectively), differences were due to the intervention. However, there was no significant difference in other subscales. According to the results of Bonferroni post hoc test, there was no

significant difference between control and floor time therapy groups of depressed children in each of the subscales; so, there was a significant difference between family-based therapy and control groups in stages 1 ($P =0.001$), and 4 ($P =0.001$), and between family-based therapy and floor time therapy groups in stage 1 ($P =0.001$). There was no significant difference between groups in other stages. There was a significant difference between floor time and control groups of anxious children in stages 1 ($P=0.000$), 3 ($P=0.000$), and 7 ($P=0.004$), between family-based floor time therapy and control groups in stages 1 ($P =0.001$), 2 ($P=0.000$), and 7 ($P=0.001$), and between family-based floor time therapy and floor time therapy groups in stages 1 ($P=0.001$), 2 ($P=0.007$), 3 ($P=0.001$), and 7 ($P=0.004$). There was no significant difference between the groups in other stages. In general, family based therapy not increased the family functioning in depressed group, while increased in anxious child significantly.

Table-1: The Mean and Standard Deviation (SD) of Groups regarding Functional-Emotional Development and Developmental Family Functioning

Group		Depressed				Anxious			
		Functional-emotional development		Developmental family functioning		Functional-emotional development		Developmental family functioning	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
Control	Pre-test	105.30	3.74	78.30	7.63	100	5.29	75.60	9.25
	Post-test	104.80	3.52	79.60	6.27	100	5.54	78.80	6.28
Floor time	Pre-test	97.70	3.23	74.50	2.87	104	3.80	79.30	9.71
	Post-test	99	4.40	77.10	3.60	108	6.18	82.70	7.79
Family-based	Pre-test	98.30	4.44	74	2.80	100	5.03	76.60	5.98
	Post-test	101	3.15	84.30	4.26	110	3.98	90	4.96

Table-2: Results of Multivariate Analysis of Covariance for Subscales of Functional Emotional Developmental Scale

Change source	Dependent variable	Depressed				Anxious			
		df	F	P-value	Eta square	df	F	P-value	Eta square
Pre-test	Step 1	1	4.80	0.037	0.156	1	4.52	0.043	0.148
	Step 2	1	9.79	0.004	0.274	1	7.28	0.012	0.219
	Step 3	1	0.50	0.484	0.019	1	0.04	0.830	0.002
	Step 4	1	11.85	0.002	0.313	1	9.78	0.004	0.273
	Step 5	1	1.16	0.291	0.043	1	2.56	0.121	0.090
	Step 6	1	0.38	0.543	0.014	1	1.65	0.210	0.060
Group	Step 1	2	6.50	0.005	0.334	2	3.03	0.065	0.189
	Step 2	2	4.88	0.016	0.273	2	2.17	0.134	0.143
	Step 3	2	2.84	0.077	0.179	2	2.74	0.083	0.175
	Step 4	2	2.11	0.141	0.140	2	7.83	0.002	0.376
	Step 5	2	3.65	0.040	0.220	2	4.26	0.025	0.247
	Step 6	2	3.30	0.053	0.203	2	10.13	0.001	0.438

df: Degrees of freedom.

Table-3: Results of Multivariate Analysis of Covariance for Subscales of Developmental Family Function Assessment Questionnaire

Variables	Dependent variable Eta square	Depressed				Anxious			
		df	F	P-value	Eta square	df	F	P-value	Eta square
Covariate variable	Step 1	1	0.684	0.416	0.026	1	0.154	0.691	0.006
	Step 2	1	7.57	0.011	0.226	1	1.02	0.320	0.038
	Step 3	1	1.28	0.268	0.047	1	0.34	0.565	0.013
	Step 4	1	0.76	0.391	0.028	1	7.68	0.010	0.228
	Step 5	1	7.35	0.012	0.221	1	4.01	0.056	0.134
	Step 6	1	2.97	0.096	0.103	1	48.17	0.000	0.649
	Total	1	14.29	0.001	0.355	1	30.27	0.000	0.538
Group	Step 1	2	1.06	0.359	0.076	2	42.14	0.000	0.764
	Step 2	2	0.975	0.391	0.070	2	16.37	0.000	0.557
	Step 3	2	1.13	0.337	0.080	2	14.59	0.000	0.529
	Step 4	2	1.44	0.254	0.100	2	0.075	0.928	0.006
	Step 5	2	4.72	0.018	0.267	2	2.11	0.141	0.140
	Step 6	2	0.52	0.597	0.039	2	2.81	0.078	0.178
	Step 7	2	0.13	0.875	0.010	2	29.99	0.000	0.698

df: Degrees of freedom.

4- DISCUSSION

Accordingly to the results presented in table 2, floor time therapy has increased capabilities of social problem solving, making ideas and logical thinking of depressed child and family based floor

time therapy increased logical thinking in comparison with the control group significantly. In anxious child, Floor time therapy has also increased capabilities of regulating and family based floor time therapy increased regulating and logical

thinking in comparison with the control group. Accordingly to the results of family functioning presented in table 3 capabilities of regulating and problem solving in family of depressed child and capabilities of regulating, Intimacy, bilateral interaction and Discipline in family of anxious child has significantly increased. The main objective of this study was to investigate the effectiveness of family-based floor-time therapy developed by the researchers in this study. In comparison with floor time therapy, the family-based intervention is designed to improve the functional emotional developmental profile of children with interactive disorders of anxiety and depression.

This treatment applied in this study aimed to improve family functioning along with the performance of the child. The comparison of the groups' scores showed that family-based floor time therapy, emphasizing calm and regulated relationships, intimacy, problem solving, and expanded circles of communication in the family increases the effectiveness of floor time therapy especially in the anxious group. In the explanatory model of Greenspan for disorders in children, biological characteristics of children in interaction with family properties that the child is brought up with would affect the quality of child-caregiver interactions and determine the level of child development. If children do not have the interactions tailored to their biological abilities, they won't benefit from a healthy development and consequently experience symptoms of anxiety and depression. The leading target of floor time therapy is, thus, to bring children back to their normal development path (14). In this study, paired comparisons of the groups showed that, in comparison with the control group and regarding anxious children, floor time therapy for depressed children during joint problem solving, creating representations

and ideas, and logical thinking, better improves child developmental profile in attention and regulation stages. These findings are consistent with the results of previous studies on the role of play therapy in children with disorders (29-30), according to which play therapy improves social skills, reduces the symptoms of anxiety and depression, and raises the levels of self-esteem in children. Therefore, since playing is the language of children and is indeed a means of expressing feelings, communicating, describing experiences, and developing aspirations and self-fulfillment, it can be a proper way to treat their problems, too (31). In this regard, teaching floor time therapy to parents, fosters functional-emotional development of children with autism spectrum disorders (ASD), and makes a noticeable shift in the communication skills of the children (3, 18, 32). In floor time therapy mothers are taught to interact with their children according to their level of development. In this way, the therapist observes the child-mother interaction and, while sympathizing with their fears and anxieties, guides the parents when they have difficulty in attracting and engaging their children. As the research literature shows, this topic has helped parents to understand their children's abilities besides their sensory-motor properties and strengthen their behavior and development according to the children's capacities (4, 32, 33). The aim of floor-time for parents and especially mothers is to better understand the signs and needs of children, promote responsive interaction, and develop a sense of competence in mothers (14). Therefore, being consistent with previous studies on autistic children, the results of the current study indicate that both mother and child will benefit from floor time training programs. At current, in the study conducted by Aali et al. (2015), who designed a family training program and simultaneously applied it along with

floor time therapy, this treatment showed to increase the effectiveness of floor time interventions (6). The findings of this study indicate that family-based therapy in the depressed group would further improve children's problem-solving ability and ability of attention and regulation of family compared with the floor-time therapy group. Arieti and Bemporad's study (1980), manifested that depressed children have authoritative parents who act critically and have low tolerance for children who fail to meet behavior expectations and respond to children with misbehavior and punishment and destructive methods of communication such as creating feelings of guilt, shame, threat and rejection. This way, children receive affection only if they meet behavior expectations of their parents (34).

Accentuating calm regulated relations in the family, family-based floor time therapy seeks to increase the tolerance of family members, so that individuals would consider the tolerance level of each other. Here, family plays the role of a regulator in challenging times by making the troubled person calm and regulated instead of facing indifference or emotional bombardment. Based on the results, underscoring the stated components has improved the self-regulation skills of the family. There was also a significant difference between problem-solving ability of depressed children in family-based therapy group compared with the control group. The study results can be used to explain this finding. The results showed that depressed children prefer to have less participation in family decision-making which contributes to their helplessness and increased sadness and depression. In family-based therapy, parents are trained to have a problem-solving approach in dealing with the challenges and problems, and consider the problems of the family members as those of the family. This would develop self-efficacy and

assertiveness in children and improve their mood. Furthermore, the family-based therapy has been able to improve their ability of attention and regulation, together with opening circles of communication and discipline in the family of anxious children as well as self-regulation and attention in the children. In this regard, the study results reveal that children who receive further parental monitoring experience more anxiety and depression compared to those who receive normal monitoring. In family-based therapy program of this study, parents are instructed to set the family rules with an emphasis on the participation of all members and dialogue. On the whole, it could be mentioned that discovering and highlighting the feelings of parents, family communication patterns, and the way they respond to them are the critical element of the family-based therapy. This treatment may have a desirable effect on developmental family functioning and consequently functional-emotional development of children through modifying parental attitudes and beliefs about depression and anxiety disorders, explaining the influence of the family dynamics on the problems of children, teaching communication patterns in accordance with DIR features concerning family relationships, emphasizing calm and regulated interpersonal relationships, evoking a sense of shared intimacy between the members, reviewing and correcting emotional cues and giving desirable responses to them, accentuating the importance of expressing a wide range of emotions in the form of conversations, and having logical thinking, realistic expectations, consensus and participation of all members in setting family rules (6).

5- CONCLUSION

Parents of children with psychological problems experiencing many of distress that prevents of desirable interaction between parents and their child. Family-

based floor time therapy which was designed by researchers of this study, increased the effectiveness of floor time therapy the especially in the anxious group by improving the interactive capabilities of parent. This treatment, emphasizing calm and regulated relationships, intimacy, problem solving, and expanded circles of communication in the family. Moreover, family-based floor time therapy for the depressed group further improves children's problem-solving ability and the ability of attention and regulation of family compared with the floor time therapy group. As the results show family based treatments can be effective treatments by considering to family as a unit. Reading more about it can be useful.

6- CONFLICT OF INTEREST: None.

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