Comparing Early Maladaptive Schemas of Mothers of Children with Attention-Deficit / Hyperactivity Disorder, Oppositional Defiant Disorder, and Mothers of Normal Children

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ABSTRACT

Objective: According to the significant role of mothers' personality traits and their training styles on the genesis of children's initial personality and destructive manners, present research compares early maladaptive schemas of mothers of children with Attention-deficit/hyperactivity disorder, mothers of children with Oppositional defiant disorder, and mothers of normal children.

Methods: The sample included ninety mothers divided into three groups: mothers of children with Attention-deficit/hyperactivity disorder, mothers of children with Oppositional defiant disorder, and mothers of normal children through purposeful sampling method from patients who went to a specialized center for treatment of children's behavioral disorders. Structured clinical interview for DSM-IV and Young-schema questionnaire (short-form) were used to collect data.

Results: Results showed that the mothers of attention-deficit hyperactivity children gained the highest grade in the sub-fields of Emotional inhibition, Social isolation/Alienation, Defectiveness/Shame, Defectiveness/Shame, Unrelenting standards/hyper-criticalness, Entitlement/Grandiosity, and Insufficient self/control/self-discipline. Mothers of Oppositional defiant children gained the highest grade in the sub-fields of Mistrust/Abuse, Dependence/Incompetence, Enmeshment/Undeveloped self. Also, the mothers of normal children gained the highest grade in the sub-field of self-sacrifice ($P \leq 0.01$).

Conclusion: Therefore, putting into consideration the difference among the schemas of mothers of children with Attention-deficit/hyperactivity disorder, mothers of children with Oppositional defiant disorder, and mothers of normal children, the present study can be useful to evaluate and arrange therapeutic purposes of children with the aforementioned disorders.

1. Introduction

One of the most important and effective factors playing a significant role in the social and mental growth and evolution of human being is family (Gallarin, 2012). Family is a place to meet the various physical, mental and emotional needs. So being aware of the biological needs is an inevitable necessity (Adalaty & Rezowan, 2010; quoted by Mousavi, 2010). It has been also stated that some of family procedures including the training principles and the appropriate regulations can lead to decrease in the negative mental symptoms in children and adults (Larson & Harper, 2010).

Among the family members, mother is the first person who makes a deep and direct relationship with the child (not only during childhood but also throughout the

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world). According to Freud, the emotional relationship between mother and her children is the basis of all the consequent relationships (Berk, 2010).

Many researches show that poor interactions in a family such as unstable child-training based on punishment, negative rejection or cold behavior of the family, strict and unstable principles, insecure dependency, inadequate control by parents, short time spent with children, and lack of positive relationship can be created under the influence of the early maladaptive schemas (Sanders, 2003) affecting the decrease or increase of the mental or behavioral disorders. The early schemas are the people's beliefs about themselves, the others, and the surrounding environment which are usually created by suppressing the emotional needs in childhood (Zhang & He, 2010; Martin & Young, 2010).

According to the five evolutional needs, these schemas fall into five categories: the disconnection and rejection, the impaired autonomy and performance, the impaired limits, the over-vigilance/inhibition, and other directedness. In fact, our biased interpretations of even these maladaptive schemas manifest themselves in the intrapersonal mental pathology as misunderstanding, distorted attitudes, wrong presumptions, and the irrational goals or expectations (Young, 1999; Young et al., 2005; Young et al., 2010). All of the early maladaptive schemas (except for Entitlement/Grandiosity and Self–Sacrifice) have shown significant correlations with the temperament dimension "negative affectivity" in child, adolescent, and adult samples (Thimm, 2010; Rijkeboer & de Boo, 2010).

One of the important fields of intrapersonal relationships in which these schemas play an effective role is the strategies of parents in dealing with their children and their training styles. As a matter of fact, if parents cannot keep a balance between their schemas as the belief patterns and assumptions about the way of behaving with children, this will affect their training styles. Hence, the basis of child's mental health is in danger as the first experiences of the early childhood establish the basis for the individual's mental health or disorder (Mash & Barkely, 2002; Thimm, 2010).

One of the most prevalent mental disorders in childhood is the Attention-deficit hyperactivity disorder and the Oppositional defiant disorder (Sheils & Hawk, 2010; Ohnishi et al., 2010). Many parents of children, who suffer from the Attention-deficit hyperactivity disorder, behave in a violent or forceful way in response to their children's negative behaviors and their disobedience, finding themselves unable to control such cases (Morrengiello & Hogg, 2004). Some parents of disobedient children try to give in, set the child free to train himself/herself, and release themselves from his/her insistence, persistence or crying burden.

On the other hand, some other parents attempt to punish him/her to remove his/her hostility, disobedience, and violence because these children show such behavior while confronting authorities (American Psychiatry Association, 2000). Since the parents of Attention-deficit hyperactivity children or the children suffering from the Oppositional defiant disorder face more parental challenges, they are more stressed than those of healthy children. Therefore, this problem can cause the manifestation of inefficient schemas. In other words, the inefficient nature of the mother's schema appears when they behave with their children in a way that their schemas are approved.

These maladaptive schemas developed at any early age as a result of the interactions between factors such as the temperament of the child, the parenting style of parents, and any significant experiences (Young et al., 2005). When these schemas are activated, they can influence a person's perception, reality, and cognitive processing (Cormier, 2010). Moreover, the early maladaptive schemas in mothers can affect and damage interaction between mother-child. So, modification, and changing these maladaptive schemas can have a major role in the treatment and rehabilitation of these children (Nadermohamadi, 2013). Smart (2001) found out that the parent's reaction to children's behavioral problems through the counter hostility, over control and violence (mistrust/abuse) interferes in many childhood pathologies (Holenstein, 2004).

In this respect, Pinto-Gouveia et al. (2006) have shown that giving a few advantages to children, criticizing them, making them ashamed of what they do, and the ultra-care (mistrust/abuse) make the children feel that they are unable, unqualified and inefficient in their social relationships so that they may act in negative and hostile ways (oppositional defiant disorder) to pay off. Moreover, Lamp (2009) mentioned that the schemas of mistrust/abuse, which usually come with the parent's control and their ultra care, are related to the behavioral and social disorders and stress in children.

In a study under the heading of "addressing the schema questionnaire, examination and psychometry" Tian & Young (2008) concluded that the maladaptive schemas of parents, especially of mothers, is a good predica-

tion factor for less interactions among children in the interrelationships and their behavioral disorders. So, the parent's supervision, especially mothers, on their maladaptive schemas can be effective in decreasing the destructive manners of children and cause an improvement in the parents' or the other family member's relationship with the child (Young et al., 2010).

So, according to the mother's role and her schemas in the genesis of children's primary personality (Mash & Barkely, 2002), the common occurrence of disorders in these periods (Attention-deficit hyperactivity and the Oppositional defiant disorder), and poor background researches, the present research was undertaken with the aim of comparing the schemas of mothers of children suffering from the Attention-deficit hyperactivity and the Oppositional defiant disorders with those of healthy children.

2. Methods

In a retrospective study the participants were all the mothers of children suffering from Attention-deficit hyperactivity disorder and Oppositional defiant disorder and also mothers of normal children in Kerman city.

The sampling was random, and the selection of the participants was purposeful based on the inclusive/exclusive criteria, in such a way that among three specialized centers for treatment of behavioral disorders in children in Kerman city, one of them was selected randomly. Inclusive criteria included suffering from Attention-deficit hyperactivity and the Oppositional defiant disorder, age (for hyperactivity: 4-7 years and for oppositional defiant: 4-13 years), sex (male/female), and the exclusive criteria were divorce background in the family and any physical or mental disorder in the children and mothers, according to the clinical psychologist's diagnosis. Selection of children was based on their files in clinic.

The size of sample consisted of 90 people in 3 groups including the mothers of Attention-deficit hyperactivity children, mothers of Oppositional defiant children, and the mothers of normal children. The mothers of children whose disorder symptoms were approved by the clinical-diagnosis interview were selected as the main sample of this research. It included 30 mothers of Attention-deficit hyperactivity children and 30 mothers of Oppositional defiant children who had been previously interviewed by a clinical psychologist through structured clinical interview (SCID).

After the group completion, the 30 mothers of normal children were selected too. In such a way that mothers of the healthy children (based on the clinical psychologist interview) were selected randomly from Yasaman preschool and they were also interviewed by a clinical psychologist and by applying the structured clinical interview (SCID), finally 30 out of 50 were selected as they had no mental disorders. The selected samples entered the research after getting complete information about the research implementation, being aware of its goals and being ready. Then, Young's questionnaire of schema (the short form) was at the mothers' disposal for three months to examine the maladaptive schemas of them.

Tools

The questionnaire of schema (SQ-SF) (the short form)

Young's questionnaire of schema is created based on the experienced observations by the clinical psychologists. The short version of the questionnaire includes 75 items and 15 early maladaptive schemas. For each item there are six options: 1. Completely untrue of me; 2. Mostly untrue of me; 3. Slightly more true than untrue; 4. Moderately true of me; 5. Mostly true of me; 6. Describes me perfectly. Initially, Young advised to count the most extreme scores (5 and 6) per scale only (see Cecero & Young, 2001). Waller et al. (2001) compared the effect of this method of scoring with one in which all scores on items within the scale were added up and averaged.

They concluded that the last scoring method is preferable, since counting only the extreme scores can lead to psychopathology remaining hidden. This influences the predictive value of the questionnaire. Therefore, it is advisable to calculate the average of all scores per scale. The high grade in the special sub-scale with more probability shows a maladaptive schema for the individual. The validity of YSQ-SF questionnaire is reported 96% by Cronbach's alpha for the whole test, and above 80% for the scales (Young, 1999).

The other studies showed the high internal reliability of this questionnaire (the short form). Baranoff & Oei (2007) reported 96% Cronbach's alpha in a study on Australian students' population. The process of finding norms of this questionnaire was done by Auhi, (2007) in Tehran universities. Also, Sadoughi's study on 370 Iranian students showed that its validity for all sub-scales in the range of 62-90 by the Cronbach's alpha and the range of care in categorizing the studied samples was 87%, which diagnostic validity of the questionnaire (Sadoughi et al., 2008).

Structured Clinical Interview for DSM-IV (SCID) clinical version (SCID-CV)

SCID is created as a tool to recognize the disorders DSM-III IN 1983. This interview has some unique properties that the other tools lack as is used simply in psychology containing a review part by which the patient can describe the occurrence of his/her current disease state. In addition, SCID-CV contains a design pattern that allows the researcher to ignore a set of basic recognizing categories which are not related to his/her study (Bakhtiari et al., 2000).

The most appropriate age of performance is 18, also would be useful for the teenagers by some modifications. At least the primary education level is necessary to understand that and the individuals suffering from the sever cognitive disorders or with the sever psychotic symptoms cannot be examined by this interview (Mohammadkhani et al., 2013). Tran & Hagga (2002; cited in Tran & Smith, 2004) have reported the Kappa ration, 0.60 as the ratio of reliability among examinations for SCID. Sharifi et al. (2005) conducted this interview on 229 samples after translating it into Persian. The recognizing agreement was intermediate or good for most of general or specific recognitions (kappa>0.60).

Also the general agreement was good (kappa of sum of general current recognitions, 0.52 and for the recognitions of life time, 0.55). The research results indicated that the reasonable reliability obtained from Persian SCID version and its desirable capacity in practice can guarantee its use for the researchers and the clinical specialists. In Bakhtiari's research (2000; cited by Mohammad, 2008), the validity of this interview was examined and approved by the clinical psychological specialists and its reliability was 0.95 by reexamination method during one week.

3. Results

The single-way variance analysis test (ANOVA) was used in order to analyze the research data, and the Tukey following test (HSD TUKEY) was used to compare the mean values.

Table 1, demonstrates the mean and standard deviation values in the fields related to the mothers of Attention-deficit hyperactivity, Oppositional defiant, and normal children.

As shown in table 1, the mothers of Attention-deficit hyperactivity and Oppositional defiant children gained a

Table 1. The mean and standard deviation values of grades among studied samples.

Scale	Mothers of oppositional defiant children		Mothers of attention-deficit hyperactivity children		Mothers of normal children	
	Mean	SD	Mean	SD	Mean	SD
Emotional deprivation	16.26	7.06	18.66	7.46	10.70	6.13
Abandonment/instability	13.83	5.81	12.76	6.32	11.53	5.15
Mistrust/abuse	19.86	8.21	17.16	7.68	7.33	2.56
Social isolation/alienation	10.76	3.45	13.00	7.23	7.66	3.21
Defectiveness/shame	12.50	5.28	15.80	7.36	6.66	2.00
Failure	20.86	4.96	11.56	5.87	9.00	5.03
Dependence/incompetence	16.76	7.12	9.70	3.88	10.10	5.68
Vulnerability to illness	10.36	3.85	11.53	6.61	10.06	4.77
Enmeshment/undeveloped self	17.73	7.80	9.96	5.03	11.50	6.12
Subjugation	10.00	5.00	11.46	8.39	10.66	4.77
Self-sacrifice	10.83	4.74	11.93	5.65	15.30	6.02
Emotional inhibition	11.93	4.33	15.70	5.41	15.80	18.75
Unrelenting standards	12.20	4.05	20.23	6.61	17.10	5.84
Entitlement/grandiosity	12.83	5.11	20.00	6.26	14.03	5.04
Insufficient self	15.03	6.97	18.73	6.88	4.95	9.66

Table 2. Summary of analysis of variance to compare schemes in the studied samples.

Schema	Sig.	F	Mean squares		df			Sum of squares		
			Within groups	Between groups	Within groups	Between groups	Total	Within groups	Between groups	Total
Emotional deprivation	0.000	10.497	47.734	501.078	87	2	89	4152.833	1002.156	5154.989
Abandonment/instability	0.310	1.188	33.460	39.744	87	2	89	2911.000	79.489	2990.489
Mistrust/abuse	0.000	29.419	44.371	1305.344	87	2	89	3860.300	2610.689	6470.989
Social isolation/ alienation	0.000	8.644	24.897	215.211	87	2	89	2166.033	430.422	2596.456
Defectiveness/shame	0.000	22.322	28.747	641.678	87	2	89	2400.967	1283.365	3784.322
Failure	0.160	1.873	28.193	52.811	87	2	89	2452.833	105.622	2558.456
Dependence/incompetence	0.000	14.438	32.740	472.711	87	2	89	2848.367	954.422	3793.789
Vulnerability to harm or illness	0.518	0.663	27.153	18.011	87	2	89	2362.300	36.022	2398.322
Enmeshment/ undeveloped self	0.000	11.960	41.281	493.733	87	2	89	3591.43	987.476	4578.900
Subjugation	0.648	0.437	37.036	16.187	87	2	89	3222.133	32.356	3254.489
Self-sacrifice	0.006	5.366	30.280	162.578	87	2	89	2634.333	324.956	2959.289
Emotional inhibition	0.340	1.094	133.275	154.744	87	2	89	1594.967	291.489	11886.456
Unrelenting standards	0.000	15.645	31.433	491.711	87	2	89	2734.867	938.622	3718.489
Entitlement/grandiosity	0.000	16.697	26.473	422.011	87	2	89	2303.133	884.022	3187.156
Insufficient self-Control	0.000	15.509	4.201	623.478	87	2	89	3497.956	1246.956	4744.456

higher degree in most sub-fields of the schema in comparison with the mothers of normal children.

Table 2 shows the summary of analysis of variance to compare the early maladaptive schemas in the studied samples.

As shown in Table 2, the f values for sub-fields of the Emotional Deprivation (10.49), Mistrust/Abuse (29.41), Social Isolation/Alienation (8.64), Defectiveness/Shame (22.32), Dependence/Incompetence (14.43), Enmeshment/Undeveloped self (11.96), Unrelenting Standards/Hypocriticalness (15.64), Entitlement/Grandiosity (16.69), and Insufficient self-control/ self-discipline (15.50) were higher than the critical f in significant level 0.000, and it is shown that the test was significant in the smaller range of error 0.01 with the assurance level 0.99.

Therefore, the difference in the means of scores among the three groups of mothers of Attention-deficit hyperactivity, Oppositional defiant disorders, and normal was statistically significant, but considering the F values for the three groups of mothers, the hypothesis stating this difference was rejected. Yet the hypothesis stating the statistical equivalence was proved for sub-fields of Abandonment/Instability (1.18), and significant level 31%; failure (1.87), and the significant level 0.16; Vulnerability to Harm and Illness (0.66), in significant level 0.51; Subjugation (0.43), in significant level 0.64; self-sacrifice (5.36), in significant level 0.006; Emotional Inhibition (1.094), in significant level 0.34; and shown that the test was not significant in the smaller range of error 0.01 and the assurance level 0.99.

Therefore, the different grades of the sub-fields were not statically significant among the three groups of mothers. According to current research hypothesis of different early maladaptive schemas in the mothers of Attention-deficit hyperactivity, Oppositional defiant and normal children are accepted.

Table 3 demonstrated the results of HSD TUKEY test. As shown in the following table, the mothers of attention-deficit hyperactivity children gained the highest grade in the sub-fields of Emotional inhibition (18.66), Social isolation/Alienation (13.00), Defectiveness/ Shame (15.80), Defectiveness/Shame (15.80), Unre-

lenting standards/hyper-criticalness (20.23), Entitlement/Grandiosity (20.00), and Insufficient self/control self-discipline (18.73), and the mothers of oppositional defiant children gained the highest grade in the sub-fields of Mistrust/Abuse (19.86), Dependence/Incompetence (16.86), and Enmeshment/Undeveloped self (17.63). Also, the mothers of normal children gained the highest grade in the sub-field of self-sacrifice (15.30).

4. Discussion

We found that there was a difference among the schemas of mothers of children with Attention-deficit/hyperactivity disorder, mothers of children with Oppositional defiant disorder, and mothers of normal children. These findings are consistent with the results of Smart 2001 (cited in Holenstein, in 2004), Pinto-Gouveia et al. (2006), Tian & Young (2008), and lamp (2009). To explain these results, it can be said that giving low score to children, criticizing, shamefulness, and ultra-care (mistrust/abuse) convey this message to children that they are unable, unqualified and inefficient in their social relationships.

So, to compensate for all these children may behave in a negative and hostile way (oppositional defiant). Also, Yousefi (2010) mentioned that the schemas cause the bias in our interpretations of various events, and these biases manifest themselves as misunderstandings, distorted attitudes, wrong presumptions, and irrational goals and expectations in intra-psychological pathology. These kinds of beliefs affect the ways of training and the mother-child interactions and lead to an increase in behavioral problems such as hyperactivity or oppositional defiant disorders in the children. If parents, especially mothers, can understand their maladaptive schemas (Young, 1999; Young et al., 2008), then they can employ the appropriate ways of training their children.

Mothers pay more attention to the bad behaviors rather than good ones due to lack of information or the problem resulted from their own unreasonable beliefs. Therefore, this can result in increasing the negative manners which can make the negative cycle in the child-mother interaction that becomes the oppositional-defiant disorder during the time (Faramarzi et al., 2011). In addition, the children suffering from the oppositional-defiant disorder usually lack the cognitive, social and emotional skills needed for meeting the parents' needs (Ohan & Johnston, 2005; Hommersen et al., 2006; Skoulos & Tryon, 2007).

So, this could be a basis for making the mistrust/Abuse schema and consequent severe oppositional-defiant disorder in mothers. Thus, informing mothers psychologically toward recognizing their maladaptive schema can affect the appropriate child-training ways positively and can be consequently helpful in improving disorders like attention-deficit hyperactivity or Oppositional-defiant disorder in children. In other words, if parents improve

Table 3. The comparison of each studied group by using HSD TUKET test.

Scale	Mean difference Mothers of normal children			Mean difference Mothers of ADHD children			Mean difference Mothers of ODD children		
	ADHD	ODD	subset	Normal	ODD	subset	Normal	ADHD	subset
	for alpha (0.05)			for alpha (0.05)			for alpha (0.05)		
Emotional deprivation	-7.97	-5.57	10.7	7.97	1.4	16.27	5.57	-2.4	18.67
Mistrust/abuse	-9.83	-12.53	7.33	9.83	-2.7	7.17	12.53	2.7	19.86
Social isolation	-5.33	-3.10	7.67	5.33	2.23	10.77	-3.10	-2.23	13.00
Defectiveness/shame	-9.13	-5.83	1.67	9.13	3.30	12.50	5.83	-3.30	15.80
Dependence	0.40	-6.67	6.70	-0.40	-7.06	10.10	6.67	7.06	18.77
Undeveloped self	1.53	-6.13	9.97	-1.53	-7.67	11.50	6.13	7.67	17.63
Self-sacrifice	3.37	4.47	10.83	-3.37	1.10	11.93	-4.47	-1.10	15.30
Unrelenting standards	-3.13	4.30	12.20	3.13	8.03	17.10	-4.90	-8.83	20.23
Entitlement/grandiosity	-5.97	1.20	12.83	5.97	7.17	14.03	-1.20	-7.17	20.00
Insufficient self	-9.07	-5.37	9.67	9.07	3.70	15.03	5.37	-3.70	18.73

their capability in understanding the thoughts, emotions, and behaviors of their children, it can have a positive effect on their relationship with their children (Lavac et al., 2008) who can finally be effective in decreasing the behavioral problems (McDonal et al., 2011).

So, as a conclusion, parents have their own schema and mode issues and may have deficits in the parenting they experience and, consequently, impaired parenting ability (Farrell & Shaw, 2012), therefore, training parents to improve their maladaptive schemas can in turn result in an improvement in parents-children relationship patterns (Havighurst et al., 2010). Finally, the results of this research, in accordance with previous studies, demonstrate that early maladaptive schemas in mothers can be effective in increasing or decreasing behavioral problems in children, so training parents to know and improve their maladaptive schemas can be profitable.

This study had some limitations. First it was limited to mothers. It is recommended to repeat this study with fathers. Second, the sample size could be viewed as a potential limitation. Since there were only 90 mothers (30 for each group) participating in the study, results of the findings could be difficult to generalize to the population. So, this study could be expanded to include a larger population of mothers.

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