Original Article

Marital Satisfaction amongst Parents of Children with Attention Deficit Hyperactivity Disorder and Normal Children

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Objective: The aim of this study was to compare marital satisfaction between parents of children with attention deficit hyper activity disorder (ADHD) and parents of normal children.
Methods: In this study we have selected 400 parents (200 parents of children with ADHD and 200 parents of normal children), whose children age range was 6-18 years. Data were collected using Enrich marital satisfaction Questionnaire, Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS-PL) and Conner's Questionnaire (parent and self-report forms). For data analysis, SPSS software17, bivariate $\chi 2$- test, and independent t- test were used.
Results: The mean of marital satisfaction in parents of normal children was higher than parents of ADHD children. In the bivariate $\chi 2$- test, the p value was less than 0.05, and the obtained t was more than the table-t (1.96), so it can be assumed that there is a significant difference between parents of normal children and those with ADHD children in their marital satisfaction. The level of marital satisfaction (strongly agree level) was 2.8% lower among parents of ADHD children compared to parents of normal children.
Conclusions: Findings indicate that parents with ADHD children have lower level of marital satisfaction than parents with normal children.

Key words: *Attention deficit disorder with hyperactivity, Child, Family conflict, marital satisfaction, Parents.*

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Attention Deficit Hyper Activity (ADHD) is a chronic and traumatic disorder that appears in childhood and often persists into adulthood. Epidemiology studies show that 3-5% of children hold diagnostic criteria for this disorder (1). The incidence of ADHD has been reported to be between 3-6% among 7-12 years old Iranian children (2).

Overall, large parts of world population 3-7% of children suffer from this disorder (3).

According to the fourth edition of the Diagnostic and Statistical Manual of mental disorders, four editions, text revised (DSM-IV-TR) there are three basic subtypes of ADHD, predominantly inattentive, hyperactive and combined types (hyperactive-inattentive).

This disorder is diagnosed when the symptoms are severe in tow areas and last for at least 6 months prior to reaching 7 years of age and observable at least in two different situations (4).

The symptoms are to persist into adolescence and even adulthood. It is estimated that signs and symptoms of at least 15-20% of ADHD children continue into adulthood and that the prevalence in the young children has been estimated to be between 2-7% (5).

Though the pathological causes of ADHD are still unclear, etiological factors of ADHD (6) are as follows: 1) constructive damages in nervous system; 2) developmental factors; 3) cerebral damages; 4) neurophysiologic factors; and 5) psychosocial factors.

One study indicated that how genetic multiplicity is related to cerebral changes and how dopamine transmitter gene (SLCG A3) and 10R gene can

influence ADHD (7). They also found reduced activity of 10R at the left side of the cerebellum as well as of lateral-anterior cortex at the right side of the brain.
Another study found no important relationship between DAT 110 and HTT LPR (8). Generally, the pathological causes of ADHD are still unclear. The sufferers undergo severe, long-term problems with inattention and hyperactivity-impulsivity (9). Many of these children suffer from emotional disturbances, behavioral disorders, and learning disabilities (10). Social, educational and occupational performance of ADHD sufferers is often disturbed. The signs of hyperactivity and impulsivity usually resolve in affected children. However, inattention and poor concentration tend to persist in these children (11).
There is a wide variety of theories regarding inadequate diagnosis of this disorder (12.13). Most findings have demonstrated destructive consequences within family context; they have also stressed family conflict and children' s adaptable performance (14).
One study, consider family beyond groups with communal specific psychological-physical settings (15). Similarly, they count its core features; family is a natural social order that embodies specific features and the communicative patterns are complex in family context (16). Certainly, family is the initial and most important context in which human beings develop. Psychologists, sociologists, and educationists have focused on the importance of family at all times. Through marriage, men and women initiate their marital life; and marital satisfaction ensures the family's mental health (16).
Parents' marital satisfaction plays a crucial role in maintaining life balance and emotional setting. Marital satisfaction is an effective factor to help the person to deal with tensions, and to have proper performance during lifetime (17, 18). However, the present evidence reflects the fact that spouses undergo many problems to keep a sense of concordance and communication (19).
Simultaneously, marital satisfaction and conflicts may directly through modeling and indirectly because of unstable parenting affect children (3).
Although parents with ADHD children report higher marital conflicts and lower marital satisfaction levels than parents with non-ADHD children, this conclusion at different ages and ADHD levels is not out of exception(3).
In one study parents of children with ADHD did not report more marital problems than the control group.
Although most evidence presents that marital dysfunction is related to ADHD, findings are in contradiction with each other (3 and 20), from these evidences, disruptive behavioral disorders are observed more among families with function disorder. However, this problem among those with disruptive behavioral disorders, ADHD, oppositional defiant disorder, and conduct disorder is still unclear.
The fact that psychosocial factors potentially contribute to identifying causal factors of ADHD is often ignored (20).
According to a meta-analysis (3), even if family problems are a result of ADHD or genetic vulnerability, family conditions influence child characteristics. In the change process, family dysfunction may be viewed as a risk factor that makes a child susceptible to show and keep on having ADHD symptoms. Reviewing about marital satisfaction and behavioral disorders of children show that limited studies have sought to review some processes underlying marital satisfaction and child behavior (3).
Therefore, this study was conducted to compare marital satisfaction level between parents with ADHD children and those with non-ADHD children.

Materials and Method

In this study, the research method is descriptive. The subjects of the research were 400 parents of children (200 parents of children with ADHD and 200 parents of normal children; children's age range was 6-18 years). Data were selected through available sampling among clients of Roozbeh hospital and the private clinic of one of the authors, and control group was from healthy children of schools in the third and fifth educational districts of Tehran.
Normal children were evaluated by two child and adolescent psychologists, and ADHD children were diagnosed to have this disorder by a child and adolescent psychiatrist, DSM-IV-TR diagnostic criteria, Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS-PL) and Conner's Questionnaire. Marital satisfaction has determined by Enrich marital Satisfaction Questionnaire.

Instruments

K-SADS Questionnaire: This questionnaire is a semi structured diagnostic of the Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS-PL). They assess the existence of ADHD over lifetime and present. The questionnaire was conducted by a clinician and was given to 6-18 year old children, and measured ADHD based on DSM-IV-TR diagnostic criteria.
Validity of all of the psychiatric disorders was good to excellent. Consensual validity was highest for conduct disorder, simple phobia and panic disorder. Test-retest reliabilities of attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder, and tic disorder were 0.81, 0.67, and 0.56; respectively. Inter-ratter reliabilities of ADHD, and oppositional defiant disorder were both 0.69. ADHD, Post traumatic stress disorder (PTSD), tic disorder and panic disorder had the highest positive predictive validities (21).
Conner's scale: The diagnostic questionnaire for hyperactivity together with attention deficit was used in two forms in this research: adolescents' self-report 11-16 years of age; report form of parents of children between 4-16 years of age. Conner's scale consists of 30 questions, each of which having 4 items: No, low,

high, very high. Scoring was done as 0, 1, 2 and 3. The CARRS questionnaire for adults consists of statistical indexes for hyperactivity, attention deficit and hyperactivity/attention deficit combined. Conner's scale is sensitive to treatment changes. Repeating this test has no effect on subjects' efficacy. The validity and reliability of this scale have been confirmed (22).

ENRICH scale: ENRICH (Evaluation and nurturing relationship issues, communication and happiness) marital satisfaction questionnaire includes 47 questions with multiple items. Sanaii confirmed its validity as 0.95 Cronbach alpha in Iranian population. This questionnaire assesses potentially problematic settings, and identifies power settings associated with marital relations. This questionnaire was used to identify those spouses who need to improve their relations and need counseling (23).

This questionnaire in addition to conventional response questions measures marital satisfaction into the 10 following components: satisfaction, personality issues, marital relations, conflict solving, financial management, entertainment activities, side relations, offspring marriage, relatives and friends, and religious orientations. There are 5 items to each question and they are as follows:

Quite agree, agree, neither agree nor disagree, disagree, and quite disagree. Scoring was done as 1, 2, 3, 4 and 5 with higher scores showing more marital satisfaction (24).

Procedure

After the questionnaires were prepared and their validity and reliability were confirmed, parents and their children were interviewed by a psychologist. She completed the Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS-PL) in Roozbeh hospital, child and adolescent psychiatric clinic and schools of districts 3 and 5 of Tehran, and after ADHD was diagnosed by a child and adolescent psychiatrist based on DSM-IV diagnostic criteria. Conner and marital satisfaction questionnaire were given to the children and their parents. We mentioned them that the data are secret and the parents signed the consent forms. Data and statistic indexes including mean and SD related to ENRICH marital satisfaction questionnaire for subjects are described.

Results

Based on guidelines on the classification of subjects, the frequency and percentage of marital satisfaction levels for the statistical sample are as follows.

Results in table 1 show that the frequency and percentage of the parents with hyperactive children among those with high marital satisfaction level is low, compared to the parents of non-hyperactive children. In contrast, the percentage of parents with hyperactive children among those with marital dissatisfaction is much higher compared to parents of normal children. To compare mean scores of marital satisfaction,

Table 1. Frequency distribution for marital satisfaction levels among parents of hyperactive children and parents of non-hyperactive children

Marital satisfaction levels		Index	Group		Total
			Normal Children	Hyperactive Children	
Marital satisfaction levels	Less than 30 very much disagree	N	31	42	73
		%	7.9	10.7	18.6
	30 to 40 disagree	N	76	73	149
		%	19.3	18.6	37.9
	40 to 60 relatively agree	N	72	74	146
		%	18.3	18.8	37.2
	60 to 70 much agree	N	15	9	24
		%	3.8	2.3	6.1
	70 and more	N	0	1	1
		%	0	0.3	0.3
	Total	N	194	199	393
		%	49.4	50.6	100.0

Table 2. The result of independent t-test for marital satisfaction among parents of hyperactive children and parents of non-hyperactive children

Variable	parents	M	SD	SE	t	df	P
Marital satisfaction	Normal children	151.46	34.64	2.48			
	Hyperactive children	145.24	31.56	2.23	0.8613	391	0.046

Table 3. Bivariate x^2-test for marital satisfaction levels among parents of hyperactive children and parents of non-hyperactive children

Statistic	amount	df	P
Pearson Chi-Square	14.182(a)	4	0.002
Likelihood Ratio	14.590	4	0.002
Linear-by-Linear Association	11.342	1	0.007
Number of Valid Cases	393		

independent t-test was used and the results are in table 2.

It can be concluded that there is a significant difference between parents of ADHD children and those with non-ADHD children at the level of marital satisfaction, such that the mean of marital satisfaction among parents of normal children is much higher than those with hyperactive children.

In addition, to examine the potential difference of marital satisfaction level between both groups, bivariate X2-test was used.

Considering the results of bivariate X2-test, a significant difference was found between the number of parents with hyperactive children and those with normal children in the level of marital satisfaction. The frequency and percentage of the parents of hyperactive children among those with high marital satisfaction level was low compared to the parents of non-hyperactive children. In contrast, the percentage of parents with hyperactive children among those with marital dissatisfaction was much higher than parents of normal children.

Discussion

In this study, a significant difference was observed between two groups in the level of marital satisfaction. Findings of this research indicated that parents with ADHD children have lower level of marital satisfaction as compared to parents with normal children. By the end of the first half- 20th century, there was no discussion about the effect of children on marital satisfaction or dissatisfaction. Nowadays as the role of children is stressed in family life, they are considered as a factor that causes marital conflicts and dissatisfaction because child-birth changes family function (25). According to the study of DuPaul about ADHD children at preschool ages, higher levels of disobedience have been observed at many parent-child relationships (26). Parent-child interactions especially, at adolescence among ADHD families are evidently more negative than other families (27).

Additionally, the effect of ADHD on families is evident. Parents of children with ADHD experience higher levels of parenting-related tensions and feel incompetent (28). Increased marital conflicts and high depression levels among mothers are seen concerning such individuals (29). In this study it was also found that marital satisfaction of parents with ADHD children is lower than parents with non-ADHD children.

Based on some researches, there is a relationship between marital adjustment and behavioral problems of children (30). Some studies show that ADHD is related to additional marital disturbances (29, 3). In one research called" the role of marital conflict and family emotional security on children's physical and psychosocial health", findings indicate that reversely, marital conflict and family emotional insecurity are related to children's physical and psychosocial health. As expected, marital conflict reversely influence child emotional security. The results demonstrate that marital conflicts result in child insecurity attachment to parents (30). Likewise, findings of this study represent a reverse relationship between marital satisfaction of parents and a child with ADHD. Over a 13-year follow-up regarding a group of preschool children whose parents had diagnosed them to have problems, represented family disturbances (e.g. social class, mother-depression, and parenting-stress) and mother's negative behaviors with a 3 year old child. However, in several cases and independent of primary semiology this follow up predicted to endure signs of hyperactivity and aggression in children. Additionally, family problems in control group in which children had no problem in the beginning proved to cause both problems. Longitudinal studies show parenting role in causing behavioral disorders and ADHD. But there has been no certain conclusion as to how ADHD and parenting problems are correlated with each other. Furthermore, these studies emphasize that family problems are a general risk contributing too many problems in children and by no means are limited to ADHD children (3). The findings of this study corroborate those of in which marital satisfaction of parents with ADHD children turned out to be lower than that of parents with non-ADHD children(3).

Other study found that parents-child relationship patterns can affect children's personality and cause positive or negative behavioral characteristics. The findings of this study showed that the more positive child-parent relationship, the more marital satisfaction and the less severe ADHD symptoms. The findings of this study corroborate those of in which marital satisfaction of parents with ADHD children turned out to be lower than that of parents with non-ADHD children (31).The way parents treat children has long-term effects on behavior, performance, expectations and eventually their personality in the future. The findings showed that the higher "acceptance" score in parents, the lower of severity of ADHD symptoms in their children and the higher of "positive control" in parents, the lower of severity of signs. Also, the higher of interactive model scores of "aggressive control" and" aggressive nonattachment", the higher the severity of ADHD. However, it seems understanding

the relationship between marital satisfaction and behavioral problems depends on the identification of the impact of other related variables especially parent-child relationships (32).

In most cases, ADHD is with other co-occurring problems such as defiance, disobedience, behavioral disorders, and lack of academic achievement (33). Parents of ADHD children rarely respond to their questions. They give slight rewards to their child's appropriate behaviors (34). These children's siblings also exhibit higher levels of conflict than their peers (3). It is expected that family meet not only nutritional and developmental needs of family members but also convey traditional values, beliefs, and past family stories to children. More importantly making a comfort situation can provide children with sense of personal identity, support and can direct members to give unconditional love to children. This possibility represents the efficacy of family on personal identity formation (35). However, findings show that within-family interactions among parents with ADHD children are with high level of mal-adaptation and maladjustment because these children do not follow family members, fail to finish their tasks and exhibit more negative behaviors than their peers; and such conditions consequently lead to family dysfunctions (3 and 32). The effect of marital quality on child behavior is due to changes, resulting from parent-child relations.

Limitations

The limitations of this study are as follows:

Findings of this study were based on parents' self-report questionnaires for marital satisfaction which should be reservedly considered when generalizing the results.

The subjects were non-ADHD male students from the 3rd district of Tehran, and female students were selected from the fifth district of Tehran along with their parents. Therefore, the results cannot be generalized to all students.

The core limitation of this study was non-random sampling.

Conclusion

The results of this study indicate a significant relationship between both groups in total index of marital satisfaction. Further, the mean scores of marital satisfaction in parents of non-ADHD children were higher than parents of ADHD children. Therefore, it can be assumed that marital satisfaction in parents with hyperactive children was lower than those with normal children.

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