

*Short Communication***Parental interaction patterns in children with attention deficit hyperactive disorder and control group***Mojgan Karahmadi\****Abstract**

**BACKGROUND:** Parental communication patterns influence children's personality. This study investigated effects of parental interaction patterns on children with attention deficit hyperactive disorder (ADHD).

**METHODS:** There were 50 male children, 7-12 years old, selected in two groups. The first group included students with ADHD referred to psychiatry clinics in Isfahan-based on diagnostic scale of DSM-IV (25 subjects). The second group involved healthy boys selected by random cluster multistage sampling from primary schools in five districts of Isfahan (25 subjects) from September 2005 to March 2005. Schaffer and Edgerton parental interaction questionnaire was filled for them.

**RESULTS:** Mean scores of parental interaction patterns in healthy children were all higher than those in ADHD children except for "aggression control" and "lack of aggressive attachment".

**CONCLUSIONS:** The severity of ADHD signs has negative relationship with parental "admission" and parental "control" patterns. It also has positive relationship with "lack of aggressive/attachment" and "aggressive/control" patterns.

**KEY WORDS:** Parental interaction patterns, ADHD.

JRMS 2007; 12(3): 143-146

One of the common disorders in childhood is attention deficit hyperactive disorder or ADHD. The children who suffer this disorder are hyperactive, restless and energetic. They are busybodies and apparently behave as if an engine runs them. Most of these children have problems paying attention. Another characteristic is that they are unable to control their impulsive behaviors<sup>1</sup>. ADHD disorder like other mental disorders is caused by a collection of biopsychosocial factors. The most important and the first social factor to be investigated is the family unit. The family unit is the first place where physical, emotional and personal characteristics are gradually formed. The role of family unit as the first educational environment, either in causing or not causing behavioral disorders, diseases and mental

disorders cannot be ignored. In this way, the family acts as a center of love and affection, education and emotions. It transfers civilization and culture. Eventually, the family completes the personality and psychosocial balance<sup>2</sup>. Since ADHD children face psychomotor emotional and educational problems, parents have a negative reaction to them. In some cases, they even impose physical and emotional abuse and contempt towards them. The family members, in fact, try to control the child's behavior and focus him on a specific subject through punishment. But, this is not only inefficient but also makes him/her tired and anxious. In this way, the child is actually more stimulated. So, the disorder is not treated but increased by disobedience and stubbornness. Self-esteem and self respect are lowered

\*Assistant Professor, Department of Psychiatry, Isfahan University of Medical Sciences, Isfahan, Iran. e-mail: karahmadi@med.mui.ac.ir

in these children due to frequent failures, physical abuse, parental blame, and contempt. The application of a rough and wrong training method in these children possibly predisposes them to oppositional defiant disorder and conduct disorder as well as antisocial personality in their adulthood<sup>3</sup>. Siezer et al concluded that two dimensions of parental communication with children (admission versus rejection and taking hard versus taking easy) are very important<sup>4</sup>. Some researchers investigating the effect of familial interaction patterns in ADHD either consider this disorder as a reaction towards familial disorganization such as alcohol addiction, parental chronic anxiety and mother's depression or as being due to inappropriate environmental stimulators such as high number of family members or lack of comfort; since a high number of ADHD affected children are found in crowded families<sup>4</sup>. Barkley (1992) and Anastopolos (1992) showed in their researches that ADHD adolescent's young mothers have more negative communication with their children compared to other mothers and that they lose temper sooner in a conflict. These adolescents' mothers are often stubborn and dictatorial and they are less interested in problem solving. Their specific interaction pattern makes communication and conflict solution more difficult<sup>4</sup>. Paternity et al (1976) in a research on 99 ADHD boys treated with Ritalin and Dexedrine concluded that familial parameters play no role in primary signs of ADHD such as hyperactivity, lack of attention and impulsive behavior but mainly contribute to secondary signs of disorder (aggression, antisocial behavior and low self-esteem)<sup>4,5</sup>. Elements such as weak parental relationship with children, a father with shifting moods, hard working parents, psychopathology of parents and parental marital problems all contribute to ADHD signs<sup>6</sup>. Johnston in a research investigated parents - ADHD children interaction and observed that these parents show a more negative reaction to their children and employ fewer positive methods. Two studies showed that mothers with ADHD children have a more controlling and critical

method, use less mutual social relation and answer to their children less<sup>6,7</sup>.

## Methods

This was a descriptive analytical study conducted on 25 boys aged 7-11 years referred to psychiatry clinics in Isfahan as the study group and a control group of 25 students, 7-11 year-old from September 2005 until March 2005. The samples in the study group were selected after a clinical interview conducted by a child psychiatrist and based on the DSM-IV and CSI-4 questionnaire (group A Parental Form). The children with ADHD were diagnosed and those with no physical or major psychiatric disorder were included in the study. Then, Schaffer and Edgerton parental interaction pattern questionnaire (1981) were filled for them. This questionnaire has been translated by Dr Oreizi and Ms Akrami in 1995 and its validity has been confirmed (0/89)<sup>4</sup>. This questionnaire has 24 questions and has been designed to measure 6 scales of parental interaction. Each scale has 4 questions for measurement and each question assessed on a 0-4 scale. The scales include communication, admission, control independency, aggressive control and lack of aggressive attachment. The data was analyzed with statistical software of SPSS 11.5. The applied statistical tests were independent t and chi-square tests.

## Results

In table 1, the mean and standard deviation (SD) of the scores for familial interaction patterns have been presented. As shown in the table, the mean scores of all parental interaction patterns were higher compared to those of ADHD children except for aggressive control and lack of aggressive attachment. According to table 2, the coefficient index between "communication" interaction pattern, parental "independency" and children's hyperactivity severity were -0.270 and -0.244, respectively. These figures were not statistically significant suggesting no association between "communication" interaction pattern and parental "independency". Coefficient patterns of "admis-

sion", "control", "aggressive control" and "lack of aggressive attachment" were -0.433, -0.498, -0.438 and -0.615, respectively and all were statistically significant. It can be concluded that: 1- the higher the parental "admis-

sion", the lower the ADHD severity; 2- the lower the parental "control", the higher the children's hyperactivity; and 3- the higher the "lack of aggressive attachment", the more severe the ADHD signs.

**Table 1.** Mean and SD of the scores for familial interaction patterns based on group membership.

Total			ADHD children			Healthy children			Statistic
SD	Mean	No	SD	Mean	No	SD	Mean	No	
3.16	14.26	50	3.25	13.42	25	2.9	15.08	25	Communication
3.84	13.26	50	4.25	11.76	25	2.71	14.76	25	Admission
4.24	12.88	50	4.44	10.88	25	2.96	14.90	25	Control
3.72	12.52	50	3.37	11.76	25	2.59	13.28	25	Independency
4.44	14.84	50	3.08	16.68	25	4.87	13.00	25	Aggressive control
2.79	15.06	50	1.89	16.67	25	2.58	13.36	25	Lack of aggressive attachment

**Table 2.** Coefficient index between hyperactivity severity and parental interaction patterns.

significance	Co-efficient index	No	Statistic
0.054	-0.270	50	Communication
0.0002	-0.433	50	Admission
0.000	-0.498	50	Control
0.088	-0.244	50	Independency
0.0001	-0.438	50	Aggressive control
0.000	-0.615	50	Lack of aggressive attachment

## Discussion

The findings of this study showed that "communication" interaction pattern had no significant association with ADHD severity. This is possibly due to the vast prevalence of interaction pattern in Iranian families. The "admission" interaction pattern was significantly associated with ADHD severity in that the higher parental admission, the lower the ADHD severity. This means that admission interaction pattern organizes the family system. Admission lowers the tension in a family that results in improvement of family mental health, something reported by former studies <sup>4</sup>

7. The "control" interaction pattern also showed a significant association with severity of ADHD signs as the lower the parental control, the more severe the ADHD signs because imposing extra control causes tension and resistance. A few other studies also reported the same results <sup>8,9</sup>. The "aggressive control" interaction pattern showed a significant association with hyperactivity; the more aggressive control, the more severe the ADHD signs. This is due to specific and negative methods of control that if imposed by aggression, results in counter-resistance bringing about more tension and obstinacy, something reported by other

studies<sup>8,9</sup>. The “lack of aggressive attachment” interaction pattern had a significant association with ADHD severity so that the more the rejective behavior, isolation and lack of attachment especially in the form of verbal aggression among family members, the higher the severity of the signs. Therefore, based on the findings, the most appropriate pattern is the “ad-

mission” pattern. This pattern calls for paying positive attention to the child and organizing a systematic and regular structure for the family in that emotional support for the members. Such a system not only stops hyperactivity of the child but also lowers its predisposing factors.

## References

1. Weiss MG, Weiss GR. **Attention deficit hyperactive disorder**. In: Lewis M, editor. *Child and adolescent psychiatry. A comprehensive textbook*. 3<sup>rd</sup> ed. Philadelphia: Lippincott Williams & Wilkins; 2002. 645-670.
2. Waslick B, Greenbill L. **Attention deficit hyperactive disorder**. In: Wiener S, editor. *Textbook of Child & Adolescent Psychiatry*. 3<sup>rd</sup> ed. Philadelphia: WB Saunders; 2004. 485-509.
3. Dadsetan P. **Attention deficit hyperactive disorder**. In: Dadsetan P, editor. *Abnormal psychology: from children to adolescent*. 1<sup>st</sup> ed. Tehran: Semat; 2003. 45-84.
4. Zarei M. Effect of PMT and drug therapy on symptoms of ADHD. Isfahan University of Medical Sciences: School of Psychology; 2000.
5. Godarzi A. **ADHD**. In: Godarzi A, editor. *Hyperactive Children*. 1<sup>st</sup> ed. Mashhad: Samim; 1990. 58-105.
6. Barlow DH, Durand VM. **Hyperactive children**. In: Barlow DH, Durand VM, editors. *Abnormal psychology: an integrative approach*. New York: Brooks/Cole; 1995.
7. Carlson CL, Pelham WE, Jr., Milich R, Dixon J. **Single and combined effects of methylphenidate and behavior therapy on the classroom performance of children with attention-deficit hyperactivity disorder**. *J Abnorm Child Psychol* 1992; 20(2):213-232.
8. Aspland H and Gardner F. **Observational measures of parent-child interaction: an introductory review**. *Child Adolesc Mental Health* 2003; 8:136-143.
9. Whalen CK, Henker B. **Therapies for hyperactive children: comparisons, combinations, and compromises**. *J Consult Clin Psychol* 1991; 59(1):126-137.