

# Parenting Self Efficacy in Mothers of Children with Attention Deficit Hyperactivity Disorder vs. Normal Children

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**Objectives:** The main purpose of this study was to compare parenting self efficacy between mothers of children with attention deficit-hyperactivity disorder (ADHD) and mothers of normal children .

**Method:** One hundred twenty mothers including 60 mothers of children with ADHD and 62 mothers of normal children were selected. In each group the participants were allocated between three subgroups of preschool, first and second grade of primary school. The participants were evaluated for ADHD symptom severity and parenting self efficacy, using Conner's Parents Rating Scales-Revised Short (CPRS-R:S) and Berkeley Parenting Self-efficacy scale. Data were analyzed using independent sample T test, Chi square, Pearson and Spearman correlation and stepwise linear regression statistical analysis when appropriate .

**Results:** The results of this study did not show any significant difference between self efficiency in mothers of children with ADHD and mothers of normal children in preschool and first grade of primary school. However, between group differences were significant in mothers of children in second grade of primary school. The most associated factors with parenting self efficacy were Children's age, and education level.

**Conclusion:** No difference was observed in self efficacy of parents of ADHD children and parents of normal children in pre-school and first grade of primary school. However, parenting self efficacy was significantly lower in parents of the second grade ADHD children compared to the normal group. Increment in age and education level of children with ADHD may be associated with lower level of parenting self efficacy.

**Key words:** Attention deficit disorder with hyperactivity, Parenting, Self efficacy

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Self-efficacy was defined by Bandura as “a belief in one’s own capabilities to organize and execute the courses of actions to manage prospective situations” (1). In parenting domain, self-efficacy is a predictor of optimistic, authoritative and consistent interaction in parent-child interactions (2). Parenting self efficacy influences parenting competence and adjustment; and it will be more difficult for parents with low self efficacy to manage effectively challenging situations in the face of difficult children (3). Therefore, parenting self-efficacy is an important factor for parenting satisfaction (4), and parents with low self-efficacy may experience more psychological distress (5). Attention deficit-hyperactivity disorder (ADHD) is the most common childhood neuropsychological disorder which may affect Parenting self esteem and competence (6). Rogers et al. (7) in a research examined parental participation in child learning, and observed less

participation and self efficacy in parents of children with ADHD compared to parents of normal children. This study also revealed that fathers of children with ADHD are involved in their children’s learning less than normal groups, and they use more punitive and mandatory parenting styles .

A few studies have investigated parenting self efficacy in Iranian parents and in children with ADHD. The main purpose of the current study is to compare parenting self efficacy between parents of children with ADHD and the parents of normal children in Iranian parents, and to investigate the role of demographic variables with parenting self efficacy.

## Materials and Method

In this cross sectional study, we compared parenting self efficacy between 62 parents of children with ADHD and parents of 60 normal children in preschool,

first and second grades of primary school. ADHD group were selected from children who referred to Child and Adolescent Psychiatry Clinic in Children's Medical Center of Tehran, and mothers of normal children were selected from dental clinic of Tehran Shahed University. The inclusion criteria were the first time diagnosis of ADHD and no history of pharmacotherapy, normal IQ, speaking Farsi as a mother tongue and studying in preschool, first and second grades of primary school. Children with chronic medical and psychiatric disorders or disabilities were excluded. All children in ADHD group were interviewed by a child and adolescent psychiatrist. After describing the aims of the study for the mothers and obtaining oral consent, demographic questionnaire were completed and the severity of ADHD symptoms and parenting self efficacy were evaluated using Conners' Parents Rating Scale-Revised Short version (CPRS-R:S) and Berkeley Parenting Self Efficacy (BPSE).

Normal group was selected according to clinical interview and CPRS-R: S score below the cut of point and was matched with the ADHD group based on education level. Demographic questionnaire and parenting self efficacy scale were completed for the normal group as well .

#### **Instruments**

*Berkeley Parenting Self-Efficacy (BPSE)* scale has three versions for parents whose children are studying in preschool, first and second grade of primary school. Preschool, first and second grade versions of BPSE have 25, 28, 20 questions, respectively. This questionnaire has a six-degree Likert scale with number 1 indicating complete uncertainty, and number 6 complete confidences. Each version has two factors: Child outcome and Parenting self-efficacy. The first 10-items of each version are relevant to Parenting strategy and others pertain to Child outcome. Based on Holloway et al. research, Cronbach's alpha coefficient was 0.91 (8).

Azizi et al. (9) in a research on 317 mothers in the Iranian population determined that Cronbach's alpha coefficients of BPSE were 0.84, 0.87, and 0.64 in three levels of preschool, first and second grade of primary school. The results showed that this scale can be used as a valid index for Iranian populations.

*Conner's Parents Rating Scales-Revised Short (CPRS-R: S)*: In order to assess the severity of ADHD, the Conner's Parents Rating Scales-Revised Short version (CPRS-R:S) was completed for the patients. CPRS-R:S which has been used in this study has 27 questions and 5 subscales including opposition, cognitive problems, inattention, hyperactivity and ADHD index. The scores for the CPRS-R: S were converted to T-scores (10).

Normative data of the revised versions have been evaluated in a wide sample of parents, teachers and adolescents in the United States and Canada. Internal eternity coefficients have been reported in a range of 75% to 90% and test-retest reliability coefficients with

the 8-week interval have been achieved in a range of 60% to 90%. Construct validity of the CPRS-R:S version was obtained, using factor analysis methods. Divergent and convergent validity have been approved by examining the relationship between CPRS-R:S scores with other related scales (11).

#### **Statistical Analysis**

Data were analyzed using the SPSS 11.5. Independent sample T test was used to find the significance of differences of variables between groups. To find the correlation between the variables, Pearson and Spearman correlation coefficients were used for parametric and non parametric variables respectively. Stepwise linear regression analysis was used to evaluate the association of different variables with parenting self efficacy scores. P value less than 0.05% was noted as significant.

#### **Results**

A total number of 122 subjects were enrolled the study. ADHD and normal groups consisted of 62 and 60 mothers respectively. In each group, the participants were allocated between three subgroups according to their children's education levels (preschool, first grade and second grade of primary school). The demographic characteristics were compared between ADHD and normal groups. The results of this comparison are demonstrated in Table 1.

In terms of mean scores of BPSE, the subjects in different education levels were compared using independent sample T test. No significant difference was detected between ADHD and control group in parenting strategies, children outcome and the total score of BPSE except for the parents of children with ADHD in the second grade of primary school whose mean scores in all BPSE subscales and the total score were lower than the control group and were statistically significant (Table 2).

#### **Correlations**

Considering the total participants as a single group, the correlation between demographic characteristics and BPSE scores were investigated. According to the results, significant correlations were observed between parenting strategies and father's age. These results also showed significant correlation between children outcome and total score of BPSE with children's age, children's education level, mother's occupation and education. There was no significant correlation between other variables with the two subscales, and the total score of BPSE ( $p < 0.05$ ).

In ADHD group, significant correlations were detected between children age and parenting strategies. Children's outcome shows correlation with children age, children education level and mother occupation. The total score of BPSE in this group shows a significant correlation between children age and education level ( $p < 0.05$ ).

## Parenting Self Efficacy in Mothers of Children with ADHD

**Table 1. Comparison of demographic characteristics of Attention Deficit/Hyperactivity Disorder And control groups**

Variable	Pre school			First grade			Second grade		
	ADHD Group	Control Group	P	ADHD Group	Control Group	P	ADHD Group	Control Group	p
Child Age (mean/SD)	5.87±.34	5.89±.35	.881	6.96±.21	7.0±.21	.489	7.74±.52	8.01±.21	.040
Mother Age (mean/SD)	31.38±4.20	34.80±6.16	.044	34.15±4.43	33.70±4.28	.746	33.38±8.21	36.20±4.47	.180
Father Age (mean/SD)	36.76±5.13	40.85±6.32	.028	38.35±4.55	39.45±4.07	.426	39.38±5.79	39.80±4.52	.798
Children Number (mean/SD)	1.57±.50	1.75±1.01	.479	1.65±.58	1.40±.50	.156	1.61±.66	1.45±.51	.370
Children Gender (n/%)									
Boys	15(71.4)	8(40)	.062	13(65)	9(45)	.341	14(66.7)	10(50)	.350
Girls	6(28.6)	12(60)		7(35)	11(55)		7(33.3)	10(50)	
Mother educations (n/%)									
Low	4(19)	5(25)		4(19)	4(20)		1(4.8)	1(5)	
Intermediate	12(57.1)	9(45)	.738	12(57.1)	16(80)	.108	10(47.6)	19(95)	.002
High	5(23.8)	6(30)		5(23.8)	2(10)		10(47.6)	-	
Very high	-	-		-	-		-	-	
Father educations (n/%)									
Low	4(19)	8(40)		4(19)	4(20)		4(19)	6(30)	
Intermediate	12(57.1)	3(15)	.008	12(57.1)	11(55)	.895	10(47.6)	12(60)	.189
High	3(14.3)	9(45)		3(14.3)	5(25)		7(33.3)	2(10)	
Very high	2(9.5)	-		2(9.5)	-		-	-	
Mothers job status (n/%)									
Housewife	19(90.5)	17(85)	.663	19(95)	17(85)	.661	13(69.1)	11(55)	.756
employed	2(9.5)	3(15)		2(9.5)	3(15)		8(38.1)	9(45)	
Fathers job status (n/%)									
unemployed	1(4.8)	1(5)	.744	1(4.8)	1(5)	.500	-	17(85)	.107
employed	20(95.2)	19(95)		20(95.2)	19(95)		21(100)	3(15)	
Positive history of chronic medical illness in mothers (n/%)	3(14)	2(10)	.524	3(14.3)	2(10)	.407	3(14.3)	1(5)	.606
Positive history of psychiatric disorders in mothers (n/%)	9(42.9)	4(20)	.181	9(42.9)	3(15)	.082	6(28.6)	2(10)	.238
Positive history of chronic medical illness in fathers (n/%)	4(19)	-	.107	4(19)	1(5)	.342	6(28.6)	2(10)	.238
Positive history of psychiatric disorders in fathers (n/%)	5(23.8)	-	.048	5(23.8)	3(15)	.695	6(28.6)	1(5)	.053

**Table 2. Comparison of means scores of Berkeley parenting self-efficacy scale in Attention Deficit/Hyperactivity Disorder and control groups in three levels**

Education Level	Variable	ADHD Group	Control Group	t	P
		Mean (SD)	Mean (SD)		
Pre School	Parenting strategy	42/47±6.87	45/85±4.29	-1/87	0/069
	Child out come	68/09±12.01	68/7±12.35	-0/15	0/875
	Total	110/57±17.61	114/55±15.10	-0/77	0/443
First Grade	Parenting strategy	45/10±6.06	47/70±5.18	-1/45	0/153
	Child out come	85.70±14.03	88.8±8.08	-0/85	0/397
	Total	130/80±18.03	136/50±15.35	-1/16	0/251
Second Grade	Parenting strategy	35.09±12.48	47.95±4.16	-4.37	<0/001
	Child out come	44.28±5.86	53.05±3.08	-5.94	<0/001
	Total	79.38±17.13	101.00±6.45	-5/29	<0/001

In the control group, significant correlations were detected between parenting strategies and father's education. Children outcome and total score of BPSE were correlated with children age, children education level and mother's occupation ( $p < 0.05$ ).

Stepwise linear regression analysis model considering parenting strategies, children outcome and total score of BPSE as dependent variables and correlated demographic characteristics as independent variable shows that children age is the most associated variable

with parenting strategies in both ADHD (Beta= - 0.351 & P=0.005) and normal children (Beta= -0.376 & P=0.002). In the control group, father's age (Beta= 0.280 & P=0.02) was also associated with parenting strategies. The most associated variable with children outcomes was children education level in both ADHD (Beta= -0.487 & P<0.001) and control group (Beta= - 0.378 & P=0.003). The most associated variables with total score of BPSE were children's education level in the ADHD group (Beta= -0.472 & P<0.001) and

children's age (Beta= -0.302 & P=0.019) in the control group.

## Discussion

This study is the first to evaluate parenting self efficacy in parents of normal children and children with ADHD in three different education levels in Iranian population. The results of this study may be used to plan for parenting interventions in children with ADHD. The findings of this study showed no differences in self efficacy between parents of children with ADHD and parents of normal children in pre-school and first grade of primary school. However, parenting self efficacy of parents in ADHD group whose children were in the second grade of primary school was significantly lower than the control group. On the other hand, data show that children's age and education level are the most consistent variables in association with parenting self efficacy subscales and total score in ADHD and normal group and in the whole participants as a single group. However, this correlation was stronger in the ADHD group. Therefore, we can conclude that parenting self efficacy is reduced as children's age and education level increases, and this reduction is more prominent in mothers of children with ADHD. This difference may be under the effect of more academic problems in higher education levels and also the more demands and behavioral problems in older ages in children with ADHD which may frustrate their mothers. In this study, overall self efficiency score in mothers of children with ADHD was significantly lower in comparison with mothers of normal children. These results are consistent with other studies which showed that behavior problems in children may affect the parenting capacities and competence in parents (12,13). Rogers et al. (2009) in a study on parent of ADHD and normal children showed that parents of children with ADHD have lower self efficacy than parents of normal children. In addition, less involvement in children's learning process and more punitive and mandatory practices have been observed in fathers of ADHD than normal children (7). The finding of this research is in line with the results of Johnston et al. Research and Review confirmed that ADHD is associated with reduced parenting self-efficacy especially in upper age groups of children (14, 15). Donenberg in a study showed that parents with externalizing children reported less positive feeling about parenting (16). Baker et al. in a study showed that children's behavior problems strongly contributed to parenting stress (17). Although our study shows that parents of children with ADHD have lower parenting self efficacy especially in older ages and higher education levels, these results may be under the influence of some limitations. One limitation of this study was its small sample size, and the other was selecting parents of children in only three education levels. We recommend further studies with larger sample sizes and different age groups.

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