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Original article

Effect of Parenting Style on Severity of Attention-Deficit/Hyperactivity Disorder among Children Attending Al-Azhar University Hospital, New Damietta

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ABSTRACT

Background: Having an attention deficit hyperactivity disorder (ADHD) child has a disruptive effect on parenting style. As it demands more efforts to be managed and control their behaviors. Insufficient parenting style in childhood can affect the progress of the disorder, worse its signs and symptoms, and increases the risk of development of other behavioral problems, as an oppositional defiant disorder.

Aim of the work: We were aiming in this study to assess the relationship between the severity of ADHD and parenting style.

Patients and methods: This cross-sectional study was conducted on 100 children who had been attending the psychiatry outpatient clinic from January to June 2019. ADHD was diagnosed with an interview. The ADHD severity and parenting style were assessed by Conner's Parent Rating Scale (CPRS-R-L) and parenting style scale, respectively.

Results: The mean age of the enrolled children was 7.91 ± 2.39 years, and 72% were males. The severity of ADHD was 9% mild, 36% moderate, 32% severe, and 23% very severe. There was a statistically significant relation between "negative" or authoritarian parenting style and severity of ADHD ($p < 0.001$).

Conclusion: The results of this study demonstrated that ADHD was more common among males with statistically significant relation with parenting style, and a "positive" parenting style may help in decrease the severity of ADHD symptoms.

Keywords: Parenting style; Attention deficit; Hyperactivity; Children; Severity.

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INTRODUCTION

Attention Deficit Hyperactivity Disorder (ADHD) is characterized by a persistent level of Hyperactivity, impulsivity, and inattention that inconsistent with the patient's developmental stage^[1], which result in impaired function in multiple setting including strained peer relationships and emotional dysregulation^[2].

ADHD approximately affects 5% of children worldwide^[3]. Having a child with ADHD compared to children without, has a disruptive effect on parenting, as it demands more efforts to be managed and to control their behaviors^[4,5]. Because of the severity of symptoms in the field of impulsivity and inattentive, and problems in the field of obtaining parenting skills^[6].

Insufficient patterns of parenting style in the childhood bearing period can affect its progression, worse its clinical presentation, and increases the risk of development of other behavioral problems, such as argumentative/defiant behavior, vindictiveness, and aggressiveness^[7].

Parenting styles have been classified into two dimensions. These include "responsiveness" and "demandingness," usually referred to warmth and control, respectively^[8,9]. An authoritative parenting style is defined by high responsiveness/warmth and behavior control (e.g., clear limit setting, consistent discipline). An authoritarian parenting style reflects low responsiveness/ warmth and high psychological control (e.g., anger/ hostility)^[8,10].

Children learning can take place through observation of actions modeled by their parents, and through the application of reward/punishment system to reinforce specific behavior. Based on these facts, it does not ease to understand how consistent discipline and parental displays of warmth could foster adaptive socioemotional skills, while tough, inconsistent, or furious parenting may facilitate undesirable behaviors in children^[11].

Moreover, a warm and consistent parenting style is believed to increase children's ability to learn and increase the effectiveness of parenting style^[12].

From theoretical views, evidence of normally developing children suggests that "positive" or authoritative parenting dimensions (e.g., warmth, consistent discipline) are correlated to preferable

child behavioral, socioemotional, and academic outcomes. The same evidence also indicates that "negative" or authoritarian dimensions (e.g., verbal hostility, punitive methods) are linked to problematic child outcomes as conduct problems and inferior academic performance^[13,14]. This is believed to come from bidirectional parent-child processes, whereby children with greater levels of symptom severities and challenging behaviors can evoke "negative" parent responses, which in turn contributes to ineffective parenting style^[15,16].

Long term studies indicate a larger influence of child ADHD and externalizing symptoms on eliciting "negative" parenting than vice versa^[17].

There are few data available about the effect of parenting style on the child with ADHD

AIM OF THE WORK

We were aiming in this cross-sectional study to find the effect of parenting style on severity of ADHD in children.

PATIENTS AND METHODS

Participants: This cross-sectional study included ADHD children in the psychiatry outpatient clinic of New Damietta, Al-Azhar Teaching Hospital (Damietta/Egypt) from January to June 2019. Five to 15 years old, child with ADHD and their parents were invited to join our study, 100 parents were voluntarily accepting our invitation. Exclusion criteria were having another psychological disorder, co-morbidity, divorced and illiterate parents. The results used in our study were hidden, and safe. The ethical committee of Damietta Faculty of Medicine, Al-Azhar University, had approved this study.

Instruments: Mini-International Neuropsychiatric Interview; was a diagnostic interview^[18].

The Arabic version of Conner's Parent Rating Scale (CPRS-R-L): Which was a questionnaire completed by parents designed to screen children between 3 & 17 years old might suffer from ADHD; translated by El-Sheikh *et al.*, (2002)^[19].

Measurement of parental treatment methods: were the methods taken by parents to measure methods of parental treatment and consists of a number of axes as follows:

Axis I: Encouragement / Inhibition 22, Axis II:

Tolerance / Bullying 19, Axis III: Neglect / Excess Protection 19, Axis IV: Discrimination / Equality 11, and the Fifth Axis: Acceptance / Rejection 19; the number of phrases (90) words.

The validity and reliability of this tool were tested as following; the tool was revised by 5 psychiatric specialists at Al-Azhar University who confirmed its ability to serve study aim. And for reliability 30 participants were randomly selected to complete this questioner. By Pearson correlation and spearman-brown tests, the correlation coefficient was 0.70, the reliability coefficient was 0.82 and intrinsic validity was 0.91 which indicates this tool has moderate to strong reliability and validity.

Procedures: The study was conducted in two phases. First phase, diagnosis of ADHD by interview according to the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM 5) criteria. Second phase was the estimation of the severity of ADHD, and parenting style using hard copy of a self-reported Arabic version of Conner’s Parent Rating Scale (CPRS-R-L), And Measurement of parental treatment methods, respectively.

Analysis: Analyses were performed using

SPSS software (SPSS version 23). A descriptive analysis was done for the demographic data of participants. Results were given as mean ± standard deviation (SD) for continuous variables and as frequencies for categorical variables. The frequency of ADHD severity and the relation between parenting style and ADHD severity were measured among the participants. A chi-square test was used to compare parenting style among the 4 different severity. Statistical significance obtained at P value of <.05.

RESULTS

The demographic data were reported in Table 1. Patient age ranged from 5 to 14 years; the mean age 7.91 years; 72% were males

CPRS-R-L score, divided patients into mild, moderate, severe, and very severe ADHD. ADHD was mild among 9.0%, moderate among 36%, sever among 32% and very severe among 23.0% (Table 2).

As reported in table (3), negative fathers and mothers parenting style was associated with the severity of ADHD (where all cases with severe and very severe ADHD showed negative style).

Table [1]: Demographics data of studied patients

Age (years)		Mean ± SD	Range
		7.91 ± 2.39	5 -14
Gender	Frequency		Percentage
	Male	72	72.0 %
	Female	28	28.0%

Table [2]: Description of ADHD by CPRS-R-L

	Frequency	Percent
Mild	9	9%
Moderate	36	36%
Severe	32	32%
Very severe	23	23%

Table [3]: The relation between the severity of ADHD and parenting style

		Mild	Moderate	Severe	Very severe	Chi-Square test	
						X ²	P-value
Fathers parenting style	Positive	9	4	0	0	68.563	<0.001
	Negative	0	32	32	23		
Mothers parenting style	Positive	9	4	4	0	49.996	<0.001
	Negative	0	32	28	23		

DISCUSSION

Studying the effect of ADHD on parenting reveal there is much attention on the relation between moms and their children and the impact of its severity of symptoms on its rearing and the results were characterized by an increase over-reactivity and criticism and decline reinforcement and rise of punishment in compare to children without [20].

We found that around 1 out of 4 ADHD children was a girl.

About one in 20 children met the diagnosis of ADHD during their school life. Interestingly, for every girl diagnosed, there are three to seven boys who diagnosed as ADHD children [21].

In comparison male to a female child, it's related to its prevalence and severity of symptoms of ADHD and comorbidity related disorder [22].

Ramtekkar et al. [23] prevalence estimated for children aged 7 through 12 years male (15.7%) and female (7.5%) is slightly lower than those described in comparison with another study of 6- to 13-year-old children (18.7% and 8.4%, respectively)[24].

Parents of a child with ADHD faced multiple obstacles with them during their learning because of their behaviors, which put on the high levels of the stressor on parenting shoulder which affect parenting practices [25].

Regarding the severity of ADHD, our analysis demonstrated that 9% are mild, 36% moderate, 32% sever, and 23% very sever.

Muñoz-Silva et al.[26] found (a) high level of parenting stress was related to the severity of symptoms of children with ADHD and behavior/emotional problems, greater interparental conflict/disagreement; and (b) contextual factors predict parenting stress over and above the children problems and vice versa.

We found that 13% of fathers used a "positive" parenting style versus 87% using a "negative" parenting style, while for mothers 17% were using a "positive" parenting style versus 83% using a "negative" parenting style.

Consistent with past research in clinical samples, in the society, the negative pattern of parenting was found more in ADHD children were

compared with children without. Specifically, these findings indicated that parenting styles for ADHD children were characterized by less consistent discipline and higher levels of angry ("negative" or authoritarian) parenting, compared with children without [27].

As regard to the association between parenting style dimensions and severity of ADHD, we found that there is a significant correlation between "negative" parenting style and ADHD severity. In agreement with our study Moghaddam et al. found that the authoritarian score was lower in the normal group, but the permissive score was higher in the ADHD group. The authoritative score has no significant difference between both groups. Their conclusion was that parents of children with ADHD are less permissive but more authoritarian[28].

Similarly, Sheraz and Najam performed their study in 2015 on parents of 200 schoolboys from five public schools in the city of Lahore. They found that parenting styles and practices had an association with oppositional behavior toward adults and siblings in both settings. Furthermore, there was found to be a significant relationship among the ineffective parenting styles of both parents i.e., authoritarian parenting style. Permissive parenting styles of both parents were also found to be significantly associated with oppositional behavior toward adults, toward siblings and came out to be a significant predictor in-home setting as well. Additionally, a significant negative relationship was also found between fathers' authoritative style and oppositional behavior toward adults and siblings, which came out to be negligible in relation to mothers' authoritative style [29].

In this study we had facing many limitations such as 1) cross-sectional design; 2) a small number of participants; 3) no comparison child with and without ADHD was done to determine the influence of parenting style on the child behavior.

In conclusion, this study demonstrates that ADHD was more common among males with statistically significant relation with parenting style, and a "positive" parenting style likely to decrease the severity of ADHD symptoms.

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Conflict of interest

No conflict of interest.

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