



Research Article

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## ***A Comparative Study of Attachment Relationships: Normal Children and Children with Conduct Disorder (CD) and Attention-Deficit Hyperactivity Disorder (ADHD)***

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### **ABSTRACT**

*Over the last few decades, psychological research has been highly tied to the elucidation of children's behavioral problems. With a casual-comparative method, in this inquiry, we made an attempt to investigate the attachment relationships of the children with externalizing disorders, Conduct Disorder (CD) and Attention-Deficit Hyperactivity Disorder (ADHD), in comparison to normal children. To this end, a total number of 150 (100 with externalizing disorders and 50 normal) were randomly sampled from 7-12 -year-old male students in Tabriz, Iran. In the process of data collection, the participants were asked to fill two questionnaires, included KCAQ (Halpern & Kappenberg, 2006) and CSI-4 (Sprafkin, Lanny, Unitat & Gadow, 1984). Data were analyzed through one-way ANOVA. The findings demonstrated a statistically significant difference between two groups of children with externalizing disorders and normal children in relation to their attachment relationships. Put it another way, ADHD children had insecure attachment and those with CD enjoyed an avoidant ambivalent insecure one. In contrast, normal children possessed secure attachment relationships. Studies of this kind will stir more research on child psychology in order to help parents to be aware of their key role in their children's mental health.*

**Keywords:** Attachment Relationships, Externalizing Disorders, Normal Children.

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### **INTRODUCTION**

Studies on children's behavioral problems have been a field of increasing interest as well as publication activities in the last decades, especially triggered by both psychologists' and parents' attention and need to diagnose and treat such problems. It is generally agreed that obtaining a better understanding of the etiology and diagnosis of behavioral problems will absolutely help children who are at risk of the mentioned problems. As confirmed by Campbell & Ewing (1990, as cited in Khanjani & Hadanandkhani, 2013), this growing attention is due to the fact that the children who suffer from behavioral problems, such as aggression and attention problems, are at greater risk for several continuous disorders in teenage years.

According to American psychiatric association, externalizing disorders which include law shattering and aggressive behaviors, can be considered as the most challengeable behavioral problems in children and are of prominent impact on society, teachers, families, and children themselves. As mentioned in Diagnostic and Statistical Manual (DSM-5), externalizing disorders encompass Attention deficit hyperactivity disorder (ADHD), Conduct disorder (CD) and Oppositional defiant disorder (ODD). These behaviors, unquestionably, cause the suffered children to be excommunicated from their friends and expose them to some other problems like learning and antisocial disorders,

aggressiveness, drug abuse, alcoholism, and even committing crime in adulthood (Cassidy & Berlin, 2015). Needless to say, these disorders may stem from several factors such as genetic, physiology, environment and more particularly, family. In this regard, since the role of parents stands as the most perceptible factor in child's mental health, it seems necessary to consider it as the determinant issue of the present inquiry in relation to the influence of their training style, emotional interaction, as well as their ability to manage their children's behavioral problem. Ainsworth (1998) and Mikulincer & Shaver (2005) put forward that parent's failure in controlling children's status and behavior, expose them to the problems like externalizing disorders. As they believed, families' behavioral pattern is of great importance in children's mental health and is practical to help them to solve their problems.

On the other hand, concerning parent's role in developing and maintaining child's mental health, attachment relationships are worth mentioning in considering the causes of externalizing disorders. Here upon, this paper is devoted to a comparative study of attachment relationships of normal children and children with externalizing disorders (CD and ADHD) and answer whether there is any difference between two groups of children with the symptoms of externalizing disorders (CD and ADHD) and normal children in relation to their attachment relationships.

Based upon the overview delineated above, it is hypothesized that:

1. There is difference between attachment relationships of children with ADHD in comparison to normal children.
2. There is difference between attachment relationships of children with CD in comparison to normal children.

The study is also intended to answer the following question, as well.

Is there any difference between attachment relationships of children with ADHD and those with CD?

## **2. Review of Literature**

### **2.1. Attachment**

Attachment in children is defined as a biological nature in which closeness to parent or caregiver is required when the child senses or notices danger or distress. Put it simply, attachment relationship in children delineate characteristics that silhouette children's sense of themselves, their habits of emotional relationship, and developing interactions with others (Hejazi, et. al, 2013). Found by Sadock & Kaplan in 2003, children's styles of attachment determine their behavior and mental health in adulthood. Mikulincer and Shaver (2005) and Bowlby (1969), likewise, noted that a person's attachment style regulates his cognitive and emotional principles as well as conducting emotional reactions and interpersonal relationships with other people.

Taking into account different patterns of attachment, Khanjani (2005); Crittenden (1983) and Sadock & Kaplan (2003) advanced a more elaborate explanation on attachment classification and introduce them as follow.

#### **2.1.1. Secure Attachment**

As declared by Casidy and Marvin (1992), children with secure attachment feel to be secured when their parents are present. They possess self-confidence, prefer to explore everything, and try to rely on themselves (Casidy, 1998). They sally prefer to engage with others and are every so often perceptibly distressed during the absence of their parents, but commonly cheerful when they return. It is also to be noted that the extent of their distress and happiness is contingent upon their situational factors and attachment rank (ibid).

#### **2.1.2. Resistant Insecure Attachment / Ambivalent Attachment**

Children with this kind of attachment often have cautiousness in dealing with strangers, even in the presence of their parents. They also feel greatly unhappy when their parents depart, but are usually ambivalent when they return. In comparison with secure attached children, they generally tend to explore little in dealing with strange situation. They are also more vulnerable and own less coping skills than secure attached children (Casidy and Berlin, 1994).

### **2.1.3. Avoidant Insecure Attachment**

Casidy and Marvin (1992) declare that children who have avoidant insecure attachment, try to avoid or ignore their parents and even show little emotion and attention in their absence or existence. They don't like to explore very much notwithstanding of who and what is there. They also do not display their distress on parting, and either ignore their parents when they return. Additionally, these children possess a kind of physiologic excitement which stem from a hidden anger and aggressiveness.

### **2.1.4. Disorganized/Disoriented Attachment**

Children with this kind of attachment are hardly considered between two groups of resistant insecure attachment and avoidant insecure attachment. Hence, Crittenden (1983) named this group as avoidant/ambivalent attachment. Disorganized attached children do not manifest a clear reaction in the situations when their parents depart or return. They own the characteristics of both resistant insecure and avoidant insecure attached children (ibid).

## **2.2. Externalizing Disorders**

As was mentioned earlier, externalizing disorders include Attention deficit hyperactivity disorder (ADHD), Conduct disorder (CD) and Oppositional defiant disorder (ODD). In this paper we come into the first two disorders.

### **2.2.1. Attention-deficit/hyperactivity disorder (ADHD)**

As believed by Barkly (1997), ADHD resulted from developmental disorder in controlling attention, impulsivity, restlessness and conducting behavior. Regardless of neurological, sensory and motion factors, this disorder emerges naturally. Children with this disorder, frequently can't pay attention to details or may make inconsiderate mistakes in schoolwork, or other activities, usually forget their routine tasks, repeatedly do not look as if they listen when spoken to, do not follow through on instructions and fails to do their assignments or any other activities, every so often straightforwardly distracted by inessential incentives.

### **2.2.2. Conduct disorder (CD)**

According to American psychiatry association, CD consists of repeated behaviors of ignoring law and even other people's right. Johnsgmy, et. al. (2000) declared that children with CD are usually physically harsh to people, escape from home or school, steal people's properties, fight with others, deliberately destroy others' properties, lie to earn goods or favors or to avoid responsibilities, etc. It is worth noting that in order to diagnose CD, one must have 3 of these symptoms and other similar ones for at least one year or at least 2 symptoms for at least 6 months.

### **2.2.3. Oppositional defiant disorder (ODD)**

ODD is a chronic and progressive disorder that almost always interferes in interpersonal relationships and academic performance of children. These children often have no friend and pleasing relationships with other people (Sadock & Kaplan, 2003). They usually suffer from decreased self-esteem, low tolerance for frustration, depressed mood and irritability (Steiner & Rensing, 2007). According to Waschbusch (2002), a Child with ODD frequently loses temper, is often angry and offended, touchy or easily infuriated, argues with other people, and has some other similar behaviors. Risk factors and prognosis of the disorder include natural factors, environmental, genetic and physiological factors (Barkley, 1981).

## **2.3. Related Research**

In one of her studies, Shoaibi (2013) investigated attachment relationships patterns in children who suffered from PTSD, ODD, and CD. As she concluded, attachment problems may cause from some factors like abuse, neglect, or trauma in early childhood. These children have usually had some behavioral problems as destructive behavior towards themselves and others, lack of self-control, cruelty towards animals, and immature conscience and emotion.

Najafi, et. al. (2011), likewise, scrutinized externalizing disorders in children and determined that the extent of the mentioned disorder found in boy more than girls. The most common ones were ADHD (%7.6), ODD (%6.3) and CD (%5), respectively. It was also manifested that these disorders are different from one child to another based on their gender and their fathers' level of education.

As found by Smart (2001, cited in Waschbusch, 2002) the quality of parent and child interaction anticipates their behavioral problems. Interactions that are usually associated with mutual aggression, mistrust, excessive control and violence are involved in many pathological factors during childhood. Banek (2002) also conducted a piece of research in relation to externalizing disorders in children and stated that children with ODD suffered from weak self-concept, depression and aggression attributable to coping behaviors, weaknesses in education and relationships with others. Neal & Edelmann (2008), similarly, in their inquiry titled the relationship between perceiving parental educational practices, attachment and anxiety in anxious children, confirmed that in child-rearing practices that result from maternal attachment, the rejection of his children was significantly associated with anxiety.

### **3. Method**

#### **3.1. Participants**

As mentioned previously, a casual-comparative method has been used in the present study.

A total number of 150 (50 with ADHD, 50 with CD, and 50 normal) were randomly sampled from 7-12 -year-old male students from 3 schools in Tabriz, Iran, 2015. Put it in more details, the existence of externalizing disorders was determined through screening score which was conducted with CIS-4 questionnaire. As such, the children who obtained a lower score from cut-off points in the two mentioned disorders, were put in the normal group and others with higher scores remained as the group of children with disorder.

#### **3.2. Instrument**

The instruments opted for the current inquiry are two questionnaires titled KCAQ (Halpern & Kappenberg, 2006) and CSI-4 (Sprafkin, Lanny, Unitat & Gadow, 1984).

##### **3.2.1. Kinship Center Attachment Questionnaire (KCAQ)**

This questionnaire was developed by Halpern & Kappenberg in 2006 in order to measure attachment in children aged from 3-12. It comprises 20 items that are to be answered from always to never (0-5). Primary reliability of this questionnaire was testified as 0.85 through internal correlation and 0.83, by means of Split-half reliability by its developers. Furthermore, its validity was also examined by Randolph Attachment Disorder Questionnaire (RADQ) and manifested an acceptable result. It can be said that KCAQ is of suitable psychological criteria.

##### **3.2.2. Child Symptom Inventory-4 (CSI-4)**

CSI-4 is one of the most common screening instruments for psychiatric disorders which was developed consistent with the Diagnostic and Statistical Manual of Mental Disorders criteria. It has two forms of parent and teachers that here, we used the parent form which consists of 112 questions. Each item is answered via the range of never to sometimes, often and most of the time. The main part of the questionnaire includes 32 questions about ADHD and its three sub-types (predominantly inattentive, predominantly hyperactive-impulsive, and combination type) and CD.

Additionally, validity and reliability of the mentioned questionnaire are examined by several scholars in the field. Kalantari (2001) for example reported its validity as 0.85 and Tavakolizade, at. al. (1997) confirmed its reliability as 0.90.

#### **3.3. Data Collection Procedures**

In the initial stage, three boy's schools were randomly selected from five regions. After arranging needed matters with school principals, two 4<sup>th</sup> grade classes were randomly sampled from each school. The questionnaire was administered to students' mothers. They were also asked to answer carefully the questions through which the existence of externalizing disorders was investigated.

### 3.4. Data Analysis Procedure

Data were analyzed through SPSS in relation to both descriptive and inferential statistics. In the descriptive part, mean, variance, and standard deviation (SD) were used. Analysis of variance was applied in data analysis, as well.

## 4. Findings

### 4.1. Descriptive Data

The mentioned questionnaires were examined cautiously in relation to attachment patterns of two groups of normal children and children with disorders (ADHD and CD). Table below displays descriptive statistics regarding the results of attachment in the subjects of the study.

**Table 4.1.** Attachment relationships of the normal children and children with disorders.

Variable	groups	N	average	SD	The lowest score	The highest score
	normal	50	36/2	1/045	52	90
	ADHD	50	44/66	1/459	39	78
	CD	50bo	75/86	1/193	23	67
	total	150	53/27	20/99	23	97

### 4.4. Data Analysis

In this stage, Leven test was applied in order to be sure about the homogeneity of the variances. Since the obtained Leven index (5.273) was significant at 0.05 ( $P=0.002$ ), the homogeneity of the variances didn't confirm and it was to do analysis of the variances along with post hoc test. Since then, one-way ANOVA was applied to examine research hypotheses.

The first hypothesis:

There is difference between attachment relationships of the group of children with ADHD in comparison to normal children.

**Table 4.2.** A comparison between ADHD and normal children in relation to attachment relationships

variable	groups		I & J Mean score difference	SD	sig
	I	J			
Attachment relationship	ADHD	normal	8.46	1.65	0.001

The above table manifests the results of the comparison between ADHD and normal children in relation to attachment relationships. As is clear, the average difference between the two groups (-10.8) with the standard error of 1.65, is statistically significant ( $P < 0/05$ ). It can be concluded, therefore, that there is difference between attachment relationships of ADHD children in comparison to normal children.

The second hypothesis:

1. There is difference between attachment relationships of children with CD in comparison to normal children.

**Table 4.3.** A comparison between CD and normal children in relation to attachment relationships

<i>variable</i>	<i>groups</i>		<i>I &amp; J Mean score difference</i>	<i>SD</i>	<i>sig</i>
	I	J			
Attachment relationship	CD	normal	39.66	1.65	0.001

**Table 4.3.** exhibits the results of the comparison between CD and normal children with respect to attachment relationships.

It is to be mentioned that mean score difference between the two groups (-50.46) with the standard error of 1.65, is statistically significant ( $P < 0/05$ ). Put it another way, children's attachment relationships with CD compared with normal children are revealed to be different.

**Research question:**

Is there any difference between attachment relationships of children with ADHD and those with CD?

**Table 4.4.** A comparison between ADHD and CD children in relation to attachment relationships

<i>groups</i>		<i>I &amp; J Mean score difference</i>	<i>SD</i>	<i>sig</i>
I	J			
ADHD	CD	-31.2	1.65	0.001

In what follows, the results of post hoc tests concerning the investigation of research question and hypotheses are mentioned.

**Table 4.5.** Homogeneous matrix of the investigated groups

Post hoc test	groups	N	Alpha subscales (0.05)		
			CD	ADHD	Normal
Schaefter	normal	50	36.2	-	-
	ADHD	50	-	-	-
	CD	50	-	-	86.66
	sig	50	-	-	0.001

As is crystal clear from the contents of the above table, the result of Scheffe post hoc test which was applied to examine the homogeneity of the matrix of the studied groups is statistically significant ( $P < 0/05$ ). So, it is declared that the average variable of the investigated groups is logically correlated to each other.

## 5. Discussion and Conclusion

The inquiry constituted an attempt to shed some light on externalizing disorders in terms of attachment relationships in children in the company of providing illustrations to determine whether there is any difference between two groups of children with the symptoms of externalizing disorders (CD and ADHD) and normal children concerning their attachment relationships. As such, the initial finding revealed a significant difference between the attachment relationships of the group of the normal children in comparison to those with disorder. In other words, children with ADHD enjoyed insecure attachment compared to normal children who owned a secure one. Hence, it can be said that some important factors like the lack of attention and concentration on the one hand, and hyperactivity on the other hand, cause these children's disability in developing a good relationship with their mother or caregiver. Put it in more details, a hyperactive child cannot make a proper decision regarding interacting with others. Accordingly, their interpersonal relationships are different from normal children's.

By the same token, Faraone and Biederman (2008) found a significant difference between two families of normal and hyperactive children on the subject of problem solving and emotional relationships. As a result, a clear crystal difference can be established between family interaction as well as attachment relationships within the cited groups. Normal children, evidently, are of more appropriate attachment relationships and aptitude of developing firm attachment with their parents. Hyperactive children, nevertheless, fail to have such relationships and attachments due to ADHD associated problems. Regarding the above mentioned matter, Johnson (1992) scrutinized the interaction between children with ADHD and their parents, and put forward that these parents have more destructive reaction and less optimistic behavioral patterns toward their child.

The second conclusion illustrated a significant difference between two groups of normal children and those with CD. As a matter of fact, owing to their undesirable condition compared to normal children, children with CD had avoidant ambivalent insecure attachment relationships. This is just in line with the results of the surveys conducted by Ronen (2014), Lachman (2006) and Johnson, et. al. (2001). As reported by Ronen (2014), the children who suffer from CD, own avoidant insecure attachment relationships on account of their unsuitable life situation in comparison to normal children. These children are not able to have a good relationship with other people, especially they age mates. As a result, they usually become isolated and rejected from others. As well, such experience may remain in their adulthood. Several studies indicated that the main problems of these children can be considered as failure in developing social contraction, obeying society norms and controlling aggressiveness. Above all, some other factors like their insecure attachment relationships and undesirable family interactions prevent them from being trained well. Besides, it is indicated that most of the children with CD are of avoidant insecure attachment relationships. With an overall analytic investigation into childhood disorders in relation to the emotional role of parents, Delavar and Ebrahimi (2003) pointed

out that a great number of the mentioned disorder stem from parent's (both fathers and mothers) training and behavioral patterns toward children.

Last but not the least, the ultimate results came into this point that there is a significant difference between children with ADHA and CD concerning their attachment relationships. As cited previously, children with CD enjoyed avoidant ambivalent insecure attachment relationships, so that they always have problems with their parents. This finding is in agreement with the results of the studies conducted by Ronen (2014); Delavar and Ebrahimi (2003), and Gharibi, et. al. (2011).

To explain these findings, it can be held that the difference in the symptoms of these disorders can be considered as a factor of the existing difference in attachment relationships between children and parents or caregivers. Although children with CD and ADHD are both categorized in externalizing disorders, the relationships between these two groups are different from each other. One of the most important differences is that parents of children with ADHD have a relatively better relationship with their own children and have a great deal of effort to solve their behavioral problems. On the other hand, the attachment relationships of children with CD become worse over the time.

In a nutshell, since the role of parent stands as the most recognizable factor, it seems necessary to consider and identify genetic and physiological, environmental, social, cultural, neurological and biological factors involved in causing such disorders. Furthermore, inasmuch as family interaction and attachment relationships between children and parent are considered as the most influential issues in developing child's personality, it seems essential to think through family and attachment relationships. In fact, there is more than meets the eye in the issues of children's behavioral problems and there is an indispensable need to revise them, as well.

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