



# Studying the Impulsive Behaviors and Aggression Extent in Hyperactive Children

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## ABSTRACT

*Considering the childhood problems is of particular importance for both the individual and the community. If, these problems remain untreated, not only children do not get rid of, but also it turns into adult mental disorders. Significant mental disorders in childhood, even if minor, are likely to have serious consequences; because they may disturbed the child's learning and growth, as well as the occurrence of various damaging behaviors. In this regard, the present research conducted with the objective of studying the extent of impulsive behaviors and aggression in hyperactive children. The present research is applied studies in terms of purpose and quasi-experimental studies in terms of method. The statistical population of the present study is all children with hyperactivity disorder in Tehran District 2, numbering 100 people, which 80 people was randomly selected as a sample in accordance with the calculation of Morgan table. Spss23 software was used to survey the objective of the research and analyze of the data. The results of data analysis demonstrate that impulsive behaviors and aggression in hyperactive children have a significant role. In other words, impulsive and aggressive behaviors in hyperactive children have a significant amount that influences their behavior.*

**KEYWORDS:** Impulsive behavior, Aggression, Hyperactive children.

## 1. INTRODUCTION

Anger is expressed in the form of physical aggression, verbal aggression, hostility, opposition, criticism, resentment, continuously talking about something and avoidance of issues and individuals. The concepts of anger, irascibility and aggression are sometimes used instead of each other, and it is still difficult to provide a clear definition of each concept as well as their differences. Nevertheless, anger can be defined as an emotional state with an inner feeling of physiological excitation and recognition of thoughts relevant to the implacability. To separate these three concepts, anger can be considered as emotion,

implacability as attitude and aggression as behavior. Anger is described as an emotional state that forms the basis of implacability and aggression. Implacability regarded as an aggressive attitude that leads a person to aggressive behavior, while aggression is considered as a visible behavior that is done with the aim of harm or damaging (Padyab, 2012). Anger is also a satisfying yet destructive emotion that prepares people to face the potential dangers around them. Inability to manage anger, in addition to personal inconvenience, disruption of public health, interpersonal relationships and incompatibility leads to harmful consequences of aggressive behavior. Violent acts and aggressive

behaviors have been prevalent in human societies of past. Respect to statistics in scientific articles and sources indicate violence and conflicts that result in very high rates of homicides and suicides (as the most severe forms of external and internal aggression, respectively). Among the human growth stages from childhood to old age, the most aggressive behavior is visible in adolescence (Ceresoli-Borroni et al., 2019).

Aggression is a behavior that occurs in children and adolescents in different manners and is a growing problem in adolescents. Mc namara & fildez, 2003 state that the same trend in aggressive behaviors has developed in recent years. The first trend is the increase of aggression in different social groups and the decrease in the average age of the perpetrators of such acts, so that most of the beatings are committed by adolescents. The second trend is to increase these behaviors in schools. Aggressive adolescents cannot correctly predict the consequences of their behavior, in social stimuli, they see many hostile signs that do not understand their level of aggression and use more aggressive solutions. It is noteworthy that in the social education of children and adolescents, no behavioral form is as important as aggression in terms of individual and social compatibility. Aggression, if remain untreated in childhood, becomes an antisocial character and other acute psychiatric disorders in adulthood. Faringtun (2000) also states that, unfortunately, when children become aggressive at a young age, their tendency to aggressive behavior remains constant until adulthood and their response to treatment decreases (Gohari, 2016).

In fact, it can be said that impulsivity is the main core of violent behaviors. Anger and violence will become more dangerous when a person acts aggressively without sufficient thought and consideration, and when violent behaviors occur without self-restraint and instantly, it will have more negative consequences. Impulsivity is at the main core of many social damages such as substance abuse, gambling, personality disorders, and aggressive acts. Various definitions have been presented for this concept, some of these definitions include "Human behavior without sufficient thinking"; "The act of instinct without resorting to ego control" "The rapid action of the mind without foresight and conscious judgment" (Eunden, 1999; quoting Hafezi and Khajouie, 2011). Impulsivity may also considered as the mean of acting with the least thought regarding the future behaviors or

acting on the thoughts that are best option for one or the other. Impulse is a strong urge and will to take an action in response to a mental or external stimulus. What is important is the impulsive relationship with a number of psychological damages in the community, including violence, antisocial behaviors, crime, and many others (Suan & holander, 2002; Quoted from Hafezi and Khajouie, 2011). Lack of control over aggression and impulsive behaviors causes social, occupational, educational, physical and mental health problems of adolescents and predicts substance and alcohol use, smoking, as well as school incompatibility such as academic failure, delinquent depression and other disorders in adolescents. In the field of reducing aggressive behavior in adolescents, most research is relevant to the cognitive-behavioral approach, all of which is based on the behavior cognitive moderation model of Master Granchoy, 2002. This approach is founded based on the essential connection of thought, feeling and behavior components. Therapist's intention is to increase awareness of the primary symptoms of hostile arousal and teach encounter control techniques to reduce the likelihood of aggressive behaviors (Ekhtiari et al., 2011).

Meanwhile, the family as the most important institution in the social system can play a very influential role, so in the treatment field, the use of social support systems, especially the family, helps us to deal with stressful events. The methods that parents use in dealing with their children have a profound and significant effect on the formation of childhood growth and their subsequent personality traits and behaviors. Improper parental patterns and behaviors and unhealthy behaviors can lead to severe early incompatible schemas and eventually behavioral problems, emotional disorders, personality disorders, and so on. According to carried out studies, adolescent and half-life crises have indicate that family behavior and adolescent parental relationships are consistent with adolescent behavioral and psychological growth. Contradictory parental behavior, parents separation, prolonged absence of one parent, unfavorable atmosphere in the family, aggressive behavior of one of the parents or both of them, discrimination and injustice against the adolescent, humiliation and insecurity feeling, over-interfering in his work and threatening behavior are the psychosocial

causes of adolescent aggression occurrence (Jayi et al., 2011).

Regarding the childhood problems is of particular importance for both the individual and the community. If these problems remain untreated, not only children do not get rid of, but also it can become adult mental disorders. Major mental disorders in childhood, even if are temporary and transient, they are likely to have serious consequences; because they may disrupt the child's learning and development. Hyperactivity disorder is a developmental neurological disorder that appears from the early years of development and has several main features. These features include attention deficit, hyperactivity and impulsivity (American Psychiatric Association, 2013; Willcut, 2012; and Kaplan & Sadock, 2015). Children with hyperactivity disorder form a heterogeneous population and show significant difference in the amount of symptoms available, the prevalence of those symptoms in diverse situations, and the degree of comorbidity of other disorders such as externalized behavioral problems and law-breaking behaviors (Bussing et al., 2012). Estimates of the hyperactivity disorder prevalence vary between 9.5 to 1.7% depending on the diagnostic criteria used (Willcut, 2012). Deficit of behavioral inhibition and executive dysfunction are a major problem for children with hyperactivity disorder. These children do not have the adequate and necessary skills to monitor their behavior and cannot regulate their behavior for a long time (Bussing et al., 2012; Finzi-Dottan, 2011 and Barkley, 2006).

Experts believe that the symptoms of hyperactivity develop when the underlying causes of the disorder are accompanied by an authoritarian and inefficient parenting style. In this situation, the child is unable to follow the parent's orders and the parents become more authoritarian and strict to restrain their children, and this cycle is repeated over and over again to lead the child to behavioral problems and disobedience to parental orders and family environment laws (Ali Asgari and Qamarani, 2017). On the other hand, the symptoms of attention deficit hyperactivity disorder affect the interaction of children with their parents and the way parents respond to these children, because these children are very talkative, negative and inattentive and less involved and cooperating. These children may also disobey the rules and regulations, demonstrate externalized behaviors

such as aggression and law-breaking and be negligent in performing their assigned tasks, and have difficulty performing the required activities and order in daily life (Bussing et al., 2012 and Barkley, 2006). Therefore, the existence of behavioral disorders such as aggression and lack of psychology in parenting skills cause them to feel inadequate (Schilling, 2012), so most of the time the parents of these children to control the child may resort to the methods that worsening the symptoms of the disorder in the child and by exercising strict control over the child, they create a situation that results in a serious conflict between the parent and the child and the worsening of the symptoms of the disorder such as hyperactivity and impulsivity and externalized behavior problems in a child with hyperactivity disorder (Amiri, 2016). Therefore, the objective of this study was to study the extent of impulsive and aggressive behaviors in hyperactivity children. The question is whether impulsive behaviors and aggression have a significant effect on hyperactive children? For this purpose, in this research, in addition to the stated explanations regarding the research variables, similar internal and external studies in the field of article title have been carried out. In addition, the methodology, findings, (data analysis) as well as final conclusions and recommendations are also expressed.

## 2. RELATED WORK

Tiz dast and Ghaffari molabashi (1400) in a study examined and compared emotional intelligence in children with normal hyperactive attention deficit (with emphasis on parenting styles). The objective of this article was to study and compare emotional intelligence in children with normal and hyperactive attention deficit (with emphasis on parenting styles). Data research method was used in terms of purpose and descriptive-comparative in terms of data collection method. The statistical population was all mothers of children with hyperactivity and attention deficit disorder in Ardabil. The statistical sample included 70 mothers of children with attention deficit disorder and mothers of normal children who were selected based on convenient sampling. Data collection tools included the Standard Baumrind Parent Questionnaire (1973) and the Emotional Intelligence Questionnaire (1998). The reliability of the above questionnaires was obtained 0/70. Content validity was also used to assess the validity of the questionnaire,

which was approved by relevant experts. Data analysis was performed using multivariate analysis of variance. Findings showed that there is a difference between moderate parenting styles in mothers of children with attention deficit disorders and mothers of normal children. Also, the average emotional intelligence in mothers of children with hyperactivity and normal children is different. In accordance with the results, it can be stated that attention to parenting styles and emotional intelligence in mothers of children with hyperactivity is of particular importance.

Gohari and Khojasteh Chatroudi (2016), in a study surveyed the effectiveness of mind games on the two symptoms of impulsivity and aggression in hyperactive preschool children in District 1 of Kerman. The present research studied the effect of mind games on improving the two symptoms of aggression and impulsivity in hyperactive preschool children aged 5-7 years old in schools in district one of Kerman. The statistical population was: all preschool children aged 5 to 7 years old who referred to Kerman Education Counseling Center who were suspected of having a disorder. The sample size was 20 people who were randomly assigned to two experimental and control groups of ten considering the probability of a decrease in the initial selection of this number. Sampling was selected as convenient method. The research was quasi-experimental with pre-test, post-test as well as two groups of experimental and control. Research tool Witt Conners Grading Scale (1969) a short form for parents consisting of 48 questions, which had the necessary validity and reliability. Descriptive and inferential statistical methods were used to analyze the data. Descriptive statistics include descriptive indices of the studied variables in the sample group of mean and standard deviation. Also, after examining the statistical assumptions of covariance analysis, univariate analysis of covariance (ANCOVA) and multivariate analysis of covariance (MANCOVA) were used. Considering the results of covariance analysis; the effect of intervention (mind games) on the symptoms of hyperactivity and attention deficit was significant at the level of 0.01. This effectiveness was 0.52 according to the measure of the effect and this result was confirmed 0.99 according to the obtained statistical power. Analysis of covariance demonstrates the measures effect of the independent variable on hyperactivity 39% and attention deficit 0/037.

Therefore, mind games have the least effectiveness on attention deficit and had the greatest impact on the hyperactivity of the subjects.

Connor et al. (2019) in a study examined incompatible aggression: focusing on impulsive aggression in children and adolescents. Aggressive behavior is one of the most common reasons for referring to psychiatric clinics and has a significant burden on people. At present, there is no consensus on the best ways to diagnose and treatment of aggression in a clinical setting. In this study, the existing literature on aggression in children and adolescents is combined and the concept of impulsive aggression is recommended as an important structure relevant to diverse and sustained psychological pathology. The results showed that impulsive aggression is a type of incompatible treatable aggression that is different from other subgroups of aggression. The disease occurs in a variety of psychiatric and neurological diagnoses and significantly influences the sub-population. Impulsive aggression can act as an important structure in clinical practice and has significant potential for research progress.

Hosseini (2018) in a study surveyed the application of predicting aggression with deficit and hyperactivity in children and adults. This study presents a method for simultaneously fitting a genetic covariance structure and a regression model for multivariate data from single and diggut twin pairs to test the prediction of a dependent trait by multiple correlated predictors. This model has been used for aggressive behavior as a trait and studied the prediction of aggression due to deficit attention and hyperactivity in two age groups. Predictions were assessed in twins with an average age of 10 years and in adult twins with an average age of 30 years. They have different results for predicting aggression in children, where hyperactivity was the most important predictor, and in adults, deficit attention was the most important predictor. In children, about 36 of the total variance of aggression were explained by the genetic and environmental components of hyperactivity and deficit attention. Most of these were explained by the genetic components of hyperactivity and deficit attention, 29.7%, with 22.6% due to the genetic component of hyperactivity. In adults, about 21% of the variance in aggression was explained. Most of this was explained by the genetic components of deficit attention and

hyperactivity (16%) due to the genetic component of deficit attention.

By examining research backgrounds, limited research has been conducted on aggressive and impulsive behaviors. Therefore, it can be said that no direct research has been carried out to study the extent of impulsive behaviors and aggression in hyperactive children and conducting such research is essential. Conducting such research will help reduce the incidence of these different behaviors in hyperactive children.

### 3. METHODOLOGY

The present study is a quasi-experimental study. The statistical population of this study includes all children with hyperactivity disorder in Tehran. The sample size in this study is 100 children with hyperactivity disorder that 80 people were randomly selected as a sample according to Morgan table. Sampling was also selected by convenient method. The collection tools of the present study is the standard questionnaire of impulsive behavior 19 questions of Hirschfield et al (2007) and the standard questionnaire of aggression 29 questions of Bass and Perry (1992). For this purpose, first, it was distributed among the specified sample and then the obtained information was analyzed and classified, and finally, Cronbach's alpha coefficient was used to assess the reliability of this questionnaire. In addition, descriptive and inferential statistics with the help of SPSS23 software are used to analyze the data obtained from the questionnaire. For this purpose, test of the research hypotheses using t-test was conducted with the help of SPSS23 software. In this regard, the hypotheses of this article are as follows:

❖ **Main hypothesis:**

\* Impulsive and aggressive behaviors have a significant role in hyperactive children.

❖ **Sub-hypotheses:**

\* Impulsive behaviors have a significant role in hyperactive children.

\* Aggressive behaviors have a significant role in hyperactive children.

\* According to the research hypotheses, the operational definition of variables is as follows:

**Impulsive behaviors:**

Impulsive behavior usually refers to problem behavior that is physically offensive and causes property damage, or verbal aggression, or is milder than normal

misbehaviors. Impulsive behaviors are harmful in any situation and psychological behavioral interventions were used to manage and improve it. Impulsive behaviors refer to the answers of the participant's in the research to the research questionnaire which are evaluated in the results section.

**Aggressive behaviors:**

Aggression is behavior in which anger peaks and is not managed. Thus, aggression is a separate issue from anger. All human beings can become angry when they feel disappointed and fail to achieve their goal, but aggression is a behavior beyond anger. Aggression means harming oneself or others, which can be physical, verbal, mental and psychological. Aggressive behaviors refer to the participant's responses to the research questionnaire, which are evaluated in the results section.

### 4. FINDINGS

In this study, first, Table 1 describes the statistical population.

Table 1. Frequency distribution and gender percentage of respondents

Gender	Frequency	Percentage	Age	Frequency	Percentage
Male	63	78/8	Less than 6 years old	60	75
Female	17	21/2	More than 6 years old	20	25
Total	80	100	Total	80	100

The results of the study showed that out of 80 children with the disorder, 63 (78.8%) were male and 17 (21.2%) were female. Also, in terms of age, 60 people (75%) were under 6 years old and 20 people (25%) were over 6 years old. In the following, the research variables are described.

Table2. Description of research variables

	Mini mum	Maxi mum	Me an	Stand ard devia tion	Varia nce	Kurt osis	Skew ness
Impuls ive behavi or	59	91	73/6 50	7/204	51/90 1	0/017	-0/626
Aggres sive behavi or	60	111	92/0 50	11/196	125/3 65	-0/52 4	-0/156

According to Table (2), it can be seen that the lowest value of the variable "impulsive behavior" is 59 and the highest value is 91, the mean is 73.650 and the standard deviation is 7.204 and its variance is 51.901. Also, since the amount of skewness is in the range of (-3 and +3), so it can be said that the data have a normal distribution. The lowest value of the "aggressive behavior" variable is 60 and the highest value is 111, the mean is 92.050 and the standard deviation is 11.196 and its variance is 125.365.

**Studying the normality of data distribution**

To test the normality, the Kolmogorov-Smirnov test is used. In interpreting the test results, if the amount of error level observed is greater than 0.05, then the observed distribution is the same as the theoretical distribution and there is no difference between the two. That is, the obtained distribution is a normal distribution. However, if the significant value is lesser than 0.05, then the observed distribution is different from the expected distribution and the above distribution will not be normal.

Table3. Normality test of the variables

Variable	Significance level	Error amount	Result
Impulsive behavior	0/200	0/05	Normal
Aggressive behavior	0/071	0/05	Normal

According to the values obtained from Smirnov-Kolmogorov statistics in Table 3, it can be inferred that the expected distribution is not significantly different from the observed distribution for all variables and therefore the distribution of these variables is normal.

**Hypothesis1:** Impulsive behaviors in hyperactive children have a significant role.

Table4. Testing the first hypothesis

	Test value = 3					
	t	Degree of freedom	Significance level	Mean difference	Confidence level 95%	
Impulsive behaviors	87/174	79	0/000	70/650	Low limit	High limit
					69/046	72/253

The results of the study showed that the first hypothesis based on impulsive behaviors in hyperactive children have a significant role, due to having a significance level of less than 0.05 is confirmed. Therefore, it can be said that impulsive behaviors in hyperactive children have a significant role. In other words, impulsive behaviors in hyperactive children have a significant amount that affects their behavior.

**Hypothesis 2:** Aggressive behaviors in hyperactive children have a significant role.

Table5. Testing the second hypothesis

	Test value = 3					
	t	Degree of freedom	Significance level	Mean difference	Confidence level 95%	
Aggressive behaviors	71/136	79	0/000	89/050	Low limit	High limit
					86/558	91/541

The results showed that the second hypothesis based on aggressive behaviors in hyperactive children have a significant role, due to having a significance level of less than 0.05 is confirmed. Therefore, it can be said that aggressive behaviors in hyperactive children have a significant role. In other words, aggressive behaviors in hyperactive children have a significant amount that affects their behavior.

## 5. FUTURE SCOPE AND CONCLUSION

The present study was conducted to peruse the extent of impulsive behaviors and aggression in hyperactive children. The results obtained from the research showed that the first hypothesis about impulsive behaviors in hyperactive children has a significant role, due to having a significance level of less than 0.05 is confirmed. In other words, the extent of impulsive behaviors in hyperactive children due to their problems is more than a normal child. Also, the results of the research showed that the second hypothesis based on aggressive behaviors in hyperactive children has a significant role, due to having a significance level of less than 0.05 is confirmed. In other words, the extent of aggressive behaviors in hyperactive children due to their problems is more than a normal child. In general, behavioral, psychosocial, and pharmacological treatments for impulsivity related disorders are common. Pharmacological interventions in impulsivity disorders have shown evidence of positive effects. Behavioral interventions also have relatively strong evidence of impulse control disorders. Therapies such as cognitive-behavioral therapy, family therapy, and social skills training have shown positive effects on aggressive behaviors. Since aggression is one of the most common behavioral problems in children, it can have many transformational consequences, as some of these problems somehow extend into adulthood and cause academic failure, psychiatry disorders, delinquency and depression. Aggressive behavior of children is an important issue for sociologists, psychologists and educational officials. From this point of view, the reason for the necessity of this study was the lack of essential and sufficient studies in this field as a research concern. To prevent and intervene during this damage, its causes and roots should be studied, because prevention is always better than treatment, and this damage will remain until the sources and factors of aggression are

identified and eradicated. Aggression and its unfavorable effects have a detrimental effect on interpersonal behaviors as well as on the inner and psychological states of the individual, and if it not controlled, the individual will face to problems such as crime, delinquency and violation of other people's rights. A review of statistics shows that the level of aggression has increased and has had devastating effects on human relationships. According to the results, it can be said that the results of the present study are consistent with the studies of Ghaffari molabashi (1400), Gohari and Khojasteh chatroudi (2015), Connor et al. (2019) and Hosseini (2018). The present study is no exception to this rule and has the following restrictions:

- Limiting the statistical population to hyperactive children in Tehran
- The unwillingness of some children to continuation of research
- The uncontrollability of some factors for children
- Time limit in terms of the length of the period under evaluation

According to the results of the study, it is recommended that in order to control aggression in hyperactive children, parents by consulting with their doctor and psychologist, take measures to treat their child and act in accordance with their opinions to improve and treat their child.

It is recommended that parents establish a friendly relationship with their children to improve their relationships with their children and take steps to improve their children's behavior with appropriate and controlled behaviors.

It is recommended that during future research, the present study be examined by gender and its results compared with the current study.

### Conflict of interest statement

Authors declare that they do not have any conflict of interest.

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