

# Symptoms and risk factors of attention deficit hyperactivity disorder

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Bereda G. Symptoms and risk factors of attention deficit hyperactivity disorder. *J Addict Clin Res* 2022;5(6):3-4.

## ABSTRACT

Attention deficit hyperactivity disorder can be characterized by impaired attention, hyperactivity or excessive motor activity, and impulsivity; which is disproportionate to age and the most common behavioral disorder in children and adolescents. Hyperactivity or excessive motor activity means an individual may seem to move about constantly, including in conditions when it is not appropriate, or excessively fidgets, taps or talks. Hyperactivity or excessive motor activity can be characterized by being unable to concentrate on tasks, being unable to sit still, excessive physical movement,

excessive talking, interrupting conversations and acting without thinking. Attention deficit hyperactivity disorder is correlated with impairments of functioning in cognitive, academic, familial, and finally occupational domains of daily life. Impaired social functioning can be manifested as rejection by peers and conflicts with other children and adults. Highly familial disorder, environmental and other modifiable risk factors such as prenatal substance exposures, heavy metal and chemical exposures, nutritional factors, and lifestyle/psychosocial factors are the commonly identified risk factors of attention deficit hyperactivity disorder.

**Keywords:** Attention deficit hyperactivity disorder; Hyperactivity; Impulsivity; Inattention; Risk factors; Symptoms

## INTRODUCTION

Attention deficit hyperactivity disorder is a neurodevelopmental disorder of childhood onset condition that can be characterized by pervasive and persistent behavioral symptoms of inattention (difficulties with attention), hyperactivity (over activity), and/or impulsivity and also interfere with impairing social, adaptive, occupational and academic functioning and is the most common behavioral disorder in children and adolescents [1,2]. There are three common symptoms of attention deficit hyperactivity disorder; which discussed in turn below:

**Inattention:** Inattention is characterized as the common characteristic of pediatric with attention deficit hyperactivity disorder, manifested itself by not listening, being distracted, and off task, and having trouble switching roles, difficulties of sustaining focus, following instructions, forgetting routine chores and organizing tasks and like hyperactive behaviors, inattentive behaviors may independently contribute to rejection by peers [3].

**Hyperactivity or excessive motor activity:** Hyperactivity or excessive motor activity defined as an individual may seem to move about constantly, including in conditions when it is not appropriate, or excessively fidgets, taps or talks. Hyperactivity or excessive motor activity can be characterized by being unable to concentrate on tasks, being unable to sit still, excessive physical movement, excessive talking, interrupting conversations and acting without thinking [4].

**Impulsivity:** Impulsivity is defined as the tendency to act without thinking and characterized by makes noise that is disruptive, grabs toys or other objects from others, talking and interrupting, and unable to sit still at mealtimes [5].

## LITERATURE REVIEW

The symptoms and impairment of attention deficit hyperactivity disorder can be usually persist into adult life and are correlated with elevated risk of antisocial behaviour and substance misuse, poor educational attainment and workplace performance, unemployment, friendship difficulties and social problems [6]. Attention deficit hyperactivity disorder is frequently the most prevalent psychiatric disorder in childhood and adolescence and it also one

of the main reasons for referring children to mental health clinics [7]. Attention deficit hyperactivity disorder is correlated with impairments of functioning in cognitive, academic, familial, and finally occupational domains of daily life. Impaired social functioning can be manifested as rejection by peers and conflicts with other children and adults [8]. Attention deficit hyperactivity disorder frequently occurs with specific and global developmental and learning problems that include autistic spectrum disorders, difficulties with speech and language, motor coordination and reading, as well as with a range of psychiatric disorders notably oppositional defiant disorder, conduct disorder and tic disorders [9]. Long term outcomes of attention deficit hyperactivity disorder can be dangerous, because it elevated the rates of serious accidental injury, medicine addiction, depression, school or occupational failure, and involvement in the criminal justice system. In pediatric with attention deficit hyperactivity disorder cognitive challenges such as impaired working memory and lowered executive function are commonly occurred [10]. If attention deficit hyperactivity disorder is left untreated in the pediatric; the children are susceptible to elevated risk for antisocial and, addictive behavior as well as mood and anxiety disorders in early adulthood [11].

## DISCUSSION

### Risk factors of attention deficit hyperactivity disorder

Highly familial disorder, environmental and other modifiable risk factors such as prenatal substance exposures, heavy metal and chemical exposures, nutritional factors, and lifestyle/psychosocial factors are the commonly identified risk factors of attention deficit hyperactivity disorder [12]. Attention deficit hyperactivity disorder, like other common medical and psychiatric disorders (eg, asthma, schizophrenia), is influenced by multiple genes, non-inherited factors and their interplay. Genetic predisposition is a major cause in attention deficit hyperactivity disorder, but it does not follow the Mendelian patterns of inheritance and it is likely to be a polygenic disorder so that genes can exert their influence only *via* interaction with the environment [13]. Genetic factors can exert indirect risk effects through interaction with environmental factors. Genes can alter sensitivity to environmental risks (gene environment interaction), for example, environmental toxins or psychosocial adversity. Inherited factors can also influence the probability of exposure to certain environmental risks [14,15].

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**Received:** July 04, 2022, Manuscript No. PULJACR-22-5126; **Editor assigned:** July 06, 2022, PreQC No. PULJACR-22-5126 (QC); **Reviewed:** July 20, 2022, QC No. PULJACR-22-5126; **Revised:** September 05, 2022, Manuscript No. PULJACR-22-5126 (R); **Published:** September 12, 2022, DOI: 10.37532/PULJACR.22.5(6). 3-4



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The elevation in atopic disease was paralleled by accelerating the prevalence's of mental health problems such as attention deficit/hyperactivity disorder and depression [16].

### CONCLUSION

Attention deficit hyperactivity disorder is a prevalent psychiatric disorder characterized by impaired attention, impulsivity, and/or hyperactivity, and correlated with impaired social, academic, adaptive, and occupational functioning. Impulsivity is defined as the tendency to act without thinking and characterized by makes noise that is disruptive, grabs toys or other objects from others, talking and interrupting, and unable to sit still at meal times. Individual with attention deficit hyperactivity disorder are the risk for a wide range of functional impairments such as school failure, peer rejection, injuries due to accidents, criminal behavior, occupational failure, divorce, suicide, and premature death. The impact of attention deficit hyperactivity disorder is obstacle the patient's academic performance, social and familial relationships and causing substantial financial and emotional hardships on the patient's family. Attention deficit hyperactivity disorder, like other common medical and psychiatric disorders (e.g. asthma, schizophrenia), is influenced by multiple genes, non-inherited factors and their interaction.

### ACKNOWLEDGMENTS

The author would be grateful to anonymous reviewers for the comments that increase the quality of this manuscript.

### COMPETING INTERESTS

The author has no financial or proprietary interest in any of material discussed in this article.

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