Correlation between ADHD Children and their Parents History of Substance Abuse

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Contents

List of Abbreviations

Abbreviation	The Meaning
ADHD	Attention Deficit Hyperactivity Disorder
AIA	National Abandoned Infants Assistance Resource Center
CNS	Center nervous system
DAT1	Dopamine transporter
DNA	deoxyribonucleic acid
DR	Dopamine receptor
DSM IV TR	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision
DSM V	Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
FASD	Fetal alcohol spectrum disorders
FDA	Food and Drug Administration
GABA	Gamma amino-butyric acid
Glu	Glutamate

Abbreviation	The Meaning
HKD	Hyperkinetic disorder
HTTLPR	Serotonin transporter gene
ICD-10	nternational Classification of Diseases 10
IQ	*Intelligence quotient*
MINI-KID	Mini International Neuropsychiatric Interview for Children and Adolescent
NAChRs	Nicotinic acetylcholine receptors
NACOA	National Association for Children of Alcoholics
NE	Norepinephrine
ODD	Oppositional Defiant Disorder
OPC	Outpatient Clinics
OR	Odd ratio
PTE	Prenatal Tobacco Exposure
SCID-I	Structured Clinical Interview for DSM-IV Axis I Disorder
Ser	Serotonin

Abbreviation	The Meaning
SIDS	Sudden infant death syndrome
SNAP-25	Synaptosomal-associated protein 25 gene
SPSS	Statistical Package for Social Sciences
SUD	Substance Use Disorder
UNODC	United Nations Office on Drugs and Crime
WHO	World Health Organization

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Introduction

Nowadays there is an increase in substance abuse rates including nicotine, cannabis, tramadol or alcohol that have serious consequences for children who live in homes with addicted parents. The way parents with substance use disorders behave and interact with their children can have a multifaceted impact on the children. It can affect parenting, prenatal, early childhood and adolescent development**(Hedden et al., 2015;NACOA, 2016; Ornoy et al., 2016).**

Children of addicted parents (aged 6-17 years) exhibit symptoms of depression and anxiety more than do children from non-addicted families. They are at high risk for elevated rates of psychiatric and psychosocial dysfunction and they had elevated rates of ADHD (Attention Deficit Hyperactivity Disorder) and ODD (Oppositional Defiant Disorder) .According to a study on a sample of children hospitalized for psychiatric disorders more than 50% children hospitalized for psychiatric disorders were children of addicted parents **(Earls, 1998; NACOA, 2016).**

Attention-deficit/hyperactivity disorder (ADHD) is neuro-developmental disorder of inattention and distractibility, with or without accompanying hyperactivity that has a

childhood onset but has long-term impact throughout the lifespan**.** There are three basic forms of ADHD: inattentive; hyperactive-impulsive; and combined **(Moffitt et al., 2015).**

ADHDis affecting children of all agesand approximately 5 percent of children worldwide, most commonly identified and treated in elementary school (age 7 to 9) but can begin before children enter school **(John, 2012).**

The specific cause of ADHD is not known, but many studies on ADHD have suggested it to be mostly heritable. An adoption study designed to examine ADHD in the first-degree adoptive relatives of 25 adopted probands with ADHD and 50 nonadopted probands without ADHD and supported the hypothesis that ADHD has a genetic component **(Nordstrom, 2015).**

Even though ADHD has been suggested to be mostly heritable, it has nevertheless shown mixed results in terms of heritable and non-inherited factors. A systematic review of environmental risk factors concluded that associations between ADHD and various early risk factors might exist. Such factors were maternal smoking and alcohol use during pregnancy, prenatal viral illness,prenatal substance exposures, heavy metal and chemical exposures, nutritional

factors, and lifestyle psychosocial factors. Maternal stress and anxiety, low birth weight, pregnancy and early childhood complications, parental stress and parenting styles in childhood, early deprivation, adoption, and separation **(Froehlich et al., 2011; Motlagh et al., 2011; Latimer et al., 2012).**

In addition to genetic factors and environmental factors, other studies found neurobiological factors either involving brain structure (deformations in the basal ganglia nuclei (caudate, putamen, globus pallidus) or neurotransmitter **(**dopamine, norepinephrine, serotonin and cholinergic pathways) **(Sobel et al., 2010; Castellanos and Proal, 2012; Cortese, 2012)**.

Rationale of the Study

- Substance abuse by parents has serious consequences for children, either by genetic mutation , neurobiological alteration or even environmental consequence , that may result in increased incidence of Attention Deficit Hyperactivity disorder in children
- The rationale of the study is to assess correlationbetween Attention Deficit Hyperactivity Disorder in children and history of substance abuse by their parents.

Hypothesis

There is an association between ADHD in children and their parents' history of substance abuse.