

Research Article

## PREVALENCE OF ADHD IN A RURAL INDIAN POPULATION

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### ARTICLE INFO

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### ABSTRACT

**Objective:** Attention Deficit Hyperactivity Disorder is a serious public health problem. In India there is very little systemic research in ADHD in children. The aim of this study was to identify ADHD among school going children in a part of rural India. **Method:** 1147 school students representing the rural population of India were screened by Vanderbilt Attention Deficit Hyperactive Diagnostic Teacher Rating Scale (VADTRS). **Results:** 3.66 % (n=42 students) of the sample had ADHD symptoms. **Conclusion:** To the best of our knowledge, this was one of the first studies to find out prevalence of ADHD in rural India. There is an important need for research on ADHD.

**Key words:** ADHD, Vanderbilt Attention Deficit Hyperactive Diagnostic Teacher Rating Scale, Rural India

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### INTRODUCTION

Education is one of the most important aspects of human resource development. Every child should have the opportunity to achieve his or her academic potential. It is generally noticed that at least 20% of children in a classroom get poor marks;-they are "scholastically backward". Poor school performance should be seen as a "symptom" reflecting a larger underlying problem in children. This symptom not only results in the child having a low self-esteem, but also can cause significant stress to the parents. It is essential that this symptom be scientifically analyzed to discover its underlying cause and find a remedy. Attention Deficit Hyperactivity Disorder is a reason for children to underperform at school. (Karande Sunil & Kulkarni Madhuri, 2005) Attention Deficit Hyperactivity Disorder "a serious public health problem," (Frances E.Kuo & Andrea Faber Taylor, 2004)

**METHOD-**The present study was conducted in the Department of Physiology, J.N.M.C, in coordination with Department of Paediatrics, Psychiatry, Psychology and three Schools.

A synopsis of the study protocol was submitted to the Institutional Ethical Committee of Datta Meghe Institute of Medical Sciences, Deemed University, Wardha and was approved by the same. Teachers were sensitized about ADHD and Vanderbilt Attention Deficit Hyperactive Diagnostic Teacher Rating Scale (VADTRS) (Malhi Prahbjot, Singhi Pratibha & Sindhu Manjit, 2008). They were asked to find out students who fulfilled the diagnostic criteria for ADHD i.e. DSM IV-TR (Michael B. First & Allan Tasman,2004) and to fill the VADTRS. Selected students were seen by Psychologist, Psychiatrist and Paediatrician for confirmation of diagnosis.

### RESULT

42 cases of ADHD were screened from 1147 school students.

**Table 1: Distribution of students according to gender, ADHD cases and types of ADHD**

	Percentage (%)
<b>Total Students-1147</b>	
Girls-648	56.50
Boys-499	43.50
<b>ADHD Cases-42</b>	3.66
ADHD Girls-14	33.33
ADHD Boys-28	66.67
<b>Types of ADHD</b>	
Predominantly Inattentive-16	38.10
Combined subtype-26	61.90

1147 school students surveyed. 56.50% (n= 648) were girls, and 43.50% (n=499) were boys were surveyed. 3.66 % (n=42) students of the sample found to have ADHD. Among them 33.33% (n=14) were girls and 66.67 % (n=28) were boys.

Among the 42 ADHD students 38.10 % (n= 16) were Predominantly Inattentive and 61.90 % (n= 26) were Combined subtype. Ages of the ADHD children range from 8 to 15 years. Mean age of the children was 11.24 ±1.82years.

### DISCUSSION

In India there is very little systemic research in ADHD in children. The few studies that are available report prevalence rates ranging from 10 to 20 %.( Malhi Prahbjot & Singhi Pratibha,2000) ADHD is one of the most common neurobehavioral disorders which affect 3% to 5% of school aged population. Children with ADHD represent a

heterogeneous population and display great variation in the degree and in the situational pervasiveness of their symptoms. (Malhi Prahbhjot, Singhi Pratibha & Sindhu Manjit,2008) ADHD is one of the most common childhood onset psychiatric disorders, affecting 5-12% of children worldwide.

The Centers for Disease Control and Prevention has labelled ADHD "a serious public health problem," citing the large estimated prevalence of the disorder, the significant impairment in the areas of school performance and socialization, the chronicity of the disorder, the limited effectiveness of current interventions to attend to all the impairments associated with ADHD and the inability to demonstrate that intervention provides substantial benefits for long-term outcomes.( Frances E.Kuo &Andrea Faber Taylor,2004)

ADHD is a costly public health concern since it can cause significant impairment in functioning that interferes with normal development and all areas of functioning in patients of all ages.

In preschoolers the hyperactive subtype is more common and the prevalence may vary from a low of 2% in primary care setting to a high of 59% in a child psychiatry clinic. (Lacramioara Spetie &Eugene L.Arnold, 2007)

The prevalence of childhood ADHD has been consistently reported to be higher in United States than in other countries. Traditionally, about 2% of child psychiatric outpatients in Great Britain have a diagnosis of ADHD versus 40% in United States. (Roberte Hales, Stuart C. Yudofsky & John A. Talbott, 1999) DSM-IV-TR estimates the prevalence rates for ADHD to range from 2 to 7% in school-age children, rates as high as 17.1% have been reported in community surveys. (Michael B. First & Allan Tasman, 2004) Abdulbari Bener, Razna Al Qahtani & Ibrahim Abdelaal( 2006) found 9.4% of ADHD among primary school students in Arabin Society of Qatar.

Marwan Al-Sharbati, Samir Al-Adawi, Shyam Ganguly, Salwa Al-Lawatiya & Faysal Al-Mshefri(2008) found 7.8% of ADHD in a sample of Omani schoolboys. Lynn G.Farah & John A. Fayyad (2009) concluded that ADHD rates in Arab populations were similar to those in other countries. Michel Lecendreuxl, Eric Konofall & Stephen V. Faraone(2011) found the prevalence of ADHD children between 3.5% to 5.6% in France.

Male to Female ratio was 2:1. The strong male predominance ranges from 3 to 10 boys for each girl. Girls are generally reported to constitute 10%--25% of children with ADHD.(Roberte Hales, Stuart C. Yudofsky & John A. Talbott, 1999)

In clinic settings, the ratio of boys to girls is about 9:1, but in community samples, this decreases to approximately 3:1. The combined type of ADHD is the most common subtype in both genders. (Vanshdeep Sharma, Jeffrey H. Newcorn, Kurt P. Schulz, Jaffrey M. Halperin, 2003) In the United States, approximately 10% of boys and 2% of girls have ADHD.(Roberte Hales, Stuart C. Yudofsky & John A. Talbott, 1999) Male to female ratio is about 2:1 in epidemiologically discerned samples. Females present more often with less disruptive symptoms, more attention

problems such as depression and anxiety, while boys present with more disruptive behaviour leading to clinical referral. (Lacramioara Spetie &Eugene L.Arnold, 2007)

The family transmission of ADHD is particularly prominent in males. Girls with ADHD generally have a stronger family history of ADHD than boys with ADHD, suggesting a higher genetic loading for ADHD girls and a higher "gene load" threshold. (Roberte Hales, Stuart C. Yudofsky & John A. Talbott, 1999)

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