

**ATTENTION DEFICIT HYPERACTIVITY DISORDER SYMPTOMS IN PRIMARY CHILDREN WITH POOR SCHOOL PERFORMANCE IN FCT**Dr. Uduak M. Offiong\*<sup>1</sup>, Isaac Ali<sup>2</sup> and Felicia Mairiga<sup>1</sup><sup>1</sup>Dept. of Paediatrics University of Abuja Teaching.<sup>2</sup>Dept. of Medicine, Clinical Psychology Unit.

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**ABSTRACT**

A sound education is essential to a good life. Being successful in their academic pursuits is the goal of every educational venture. Therefore persistent poor academic outcome should be considered a symptom of a larger problem and investigated. Children with poor school performance would be seen by healthcare providers. It is then important that the awareness of the burden of ADHD as a medical cause of school failure be created. This study aims to describe the symptoms of ADHD prevalent in symptoms in primary school children in the Gwagwalada Area Council who are failing in school. **Materials and Methods:** This study was carried out among primary school children with poor school performance who were assessed to have symptoms of ADHD using the DSM-IV school version adapted by Du-Paul. **Results:** Fifty (50) children were assessed to have ADHD. Thirty –one (62%) children were assessed to have inattentive subtype (IA) of ADHD, 16 (32%) had the combined subtype while only 3(6%) had the hyperactivity-impulsivity subtype (HA) of ADHD. The prevalence of symptoms was higher in the inattentive subset. **Discussion:** This study highlights the high prevalence of inattentive symptoms of ADHD in primary school children in the Gwagwalada area council who have poor academic performance; a finding which is in keeping with other studies. **Conclusion:** it does appear that there is a need for a larger study which will also incorporate the diagnosis of comorbid conditions which have been shown to exist with ADHD.

**KEYWORDS:** ADHD, Inattentiveness, school failure.**INTRODUCTION**

A sound education is essential to a good life. To achieve the benefits of education a child must be able to learn. Being successful in their academic pursuit is the goal of every educational venture. Therefore persistent poor academic outcomes should be considered a symptom of a larger problem and investigated.<sup>[1,2]</sup>

School failure is defined as school achievement below the expected for a given age; cognitive skill and schooling.<sup>[2]</sup> There are many reasons why children fail in school. These can be divided into pedagogical and diseases and associated disabilities.<sup>[2]</sup> While the pedagogical factors are extrinsic to the individual, such as sociocultural issues, diseases and disabilities have a direct impact on brain development and thus the ability of the individual to learn. While causes of poor school performance can be multifactorial and arise from either extrinsic or intrinsic causes, a child that presents with persistent school failure should have the benefit of a multi-sectoral assessment.

Attention deficit hyperactivity disorder (ADHD) is classified as a neurobehavioural disability which affects

about 6-15% of children worldwide.<sup>[3]</sup> The pervasiveness of symptoms of inattentiveness, hyperactivity and impulsivity, make it difficult for individuals to concentrate and control their behaviour both in school and social settings. This leads to maladaptive interpersonal interaction, poor academic performance and low self-esteem. The impact of this is not just experienced by the individual but the family and the society as a whole.

The diagnosis is based on the identification of symptoms in two or more settings. In the DSM IV<sup>[4]</sup> these symptoms have to be present before 7 years of age and have been persistent for more than 6 months. Early identification and diagnosis is important to prevent the negative consequences of the disorder.

Children with poor school performance would be seen by healthcare providers. It is then important that the awareness of the burden of ADHD as medical causes of school failure be created.

This study aims to describe The symptoms of ADHD prevalent in primary school children in the Gwagwalada Area Council who are failing in school.

## MATERIALS AND METHODS

This study was carried out among primary school children with poor school performance who were assessed to have symptoms of ADHD using the DSM-IV school version adapted by Du-Paul<sup>[5]</sup> from 6 government owned primary schools in Gwagwalada Area Council. Poor school performance was adjudged from the failure of the children to score 50% in the core subjects of Mathematics, Basic science and English language in the examinations of two consecutive terms. Children were drawn from primary 4-6. The assessment tool was completed by the form teacher.

The data were entered and analysed using SPSS version 18. Results are shown in prose and tables.

## RESULTS

Fifty (50) children from the 6 schools were assessed to have ADHD from a population of 103 children. Of these 33(66%) were males and 17 (34%) were females. There was a preponderance of males with a male to female ratio of 1.94:1 Table 1 shows the characteristics of the study population. Thirty –one (62%) children were assessed to have inattentive subtype (IA) of ADHD, 16 (32%) had the combined subtype while only 3(6%) had the hyperactivity-impulsivity subtype (HA) of ADHD. More than 50% of the children were in the age bracket of 10-12 years.

**Table 1: Age and Sex Distribution of Children with ADHD by Subsets.**

	Hyperactivity/Impulsivity	Inattentiveness	Combined	Total N=50
<b>Gender</b>				
Male	2(66.7%)	22(70.9%)	9(56.3%)	33(66%)
Female	1(33.3%)	9(29%)	7(43.7%)	17(34%)
<b>Total</b>	3	31	16	50
<b>Age</b>				
7-9	1(33.3%)	6(12.5%)	2(12.5%)	9(18%)
10-12	2(66.6%)	15(48.4%)	10(62.5%)	27(54%)
>13	0	10(32.3%)	4(25%)	14(28%)
<b>Total</b>	3	31	16	50

Table 2 shows the prevalence of symptoms of the subtypes of ADHD by gender. All odd numbered symptoms represent those of inattentiveness while the even numbered symptoms represent those of the hyperactivity-impulsivity subset. The prevalence of symptoms was higher in those of the inattentive subset with 'avoidance of task', 'easily distracted' and 'does not follow through on instructions and fails to finish work' being the most prevalent in this subset. In the hyperactivity-impulsivity subset, the most prevalent symptoms were; 'leaves seat in classroom or in other situation in which remaining seated is expected', 'has difficulty waiting turn' and 'interrupts or intrudes on others'.

Symptoms of inattentiveness were shown to be higher in both sexes. Both male and female had high prevalence of similar inattentive symptoms; 'avoids task (e.g. schoolwork, homework) that require sustained mental effort' and 'is easily distracted'. The prevalence of all symptoms was higher among males.

**Table 2: Prevalence of ADHD Symptoms by Gender.**

No.	Symptoms	Total	Male	Female	Pvalue
1	Fails to give close attention to details or makes careless mistakes in schoolwork	33(66%)	22(66.6%)	11(33.3%)	
2	Often fidgets with hands or feet or squirms in seat	27(54%)	19(70.4%)	8(29.6%)	
3	Has difficulty sustaining attention in tasks or play activities	36(72%)	23(63.9%)	13(36.1%)	
4	Leaves seat in classroom or in other situations in which remaining seated is expected	34(68%)	21(61.8%)	13	
5	Does not seem to listen when spoken to directly	37	25	12	
6	Runs about or climbs excessively in situations in which it is inappropriate	24	17	7	
7	Does not follow through on instructions and fails to finish work	42	28	14	
8	Has difficulty playing or engaging in leisure activities quietly	23	14	9	
9	Has difficulty organizing tasks and activities	41	27	14	
10	Is "on the go" or acts as if "driven by a motor"	20	11	9	
11	Avoids task (e.g., schoolwork, homework) that require sustained mental effort	47	31	16	
12	Talks excessively	26	16	10	
13	Losses things necessary for tasks or activities	39	26	13	
14	Blurts out answers before questions have been completed	20	13	7	
15	Is easily distracted	44	29	15	
16	Has difficulty waiting turn	33	21	11	
17	Is forgetful in daily activities	40	26	14	
18	Interrupts or intrudes on others	33	25	8	

Odd numbers are symptoms of Inattentiveness  
Even numbers are symptoms of Hyperactivity/  
Impulsivity

## DISCUSSION

The diagnosis of ADHD is based on the score of 2 or 3 in 6 or more in a range of symptoms which reflect either hyperactivity-impulsivity or inattention. Where six or more occur in both inattentiveness and hyperactivity-impulsivity, a diagnosis of combine type ADHD is made. The frequency of these symptoms has been shown to vary with age and sex. This study considered the prevalence of symptoms which are diagnostic for each subset of ADHD using only the teacher's assessment in children who are failing academically. Studies on prevalence of ADHD symptoms in children with poor school achievements are few.

The prevalence of symptoms were higher in those for the inattentive subtype, with "avoids task (e.g., schoolwork, homework) that require sustained mental effort" being assessed in more than 50% of the subjects. The least prevalent were "blurts out answers before questions have been completed" and "is on the go" or "acts as if driven by a motor"; both being symptoms in the hyperactivity subtype. Colomer et al<sup>[6]</sup> in their study on ADHD and learning behaviours demonstrated an inverse relationship between ADHD and learning behaviours. They particularly found that there was a strong association

between inattentive symptoms and learning behaviour. They went further to corroborate the findings of other studies on the association between inattentive symptoms and poor school performance. The individual inattentive symptoms in the current study which had high prevalence among these children are major components of learning behaviours.<sup>[6]</sup> Ndukuba et al<sup>[7]</sup> also, comparing symptoms of ADHD in two different settings, home and school found that teachers reported symptoms were more prevalent in the inattentive subset. Though the academic performance of these children was not part of their study they suggested that the negative impact of inattentive symptoms on classroom activities as against the home environment, could be the reason for inattentive subtype being more reported by teachers than parents.

Research has shown that the difficulties experienced by children with ADHD may span into adulthood, making employment and social acceptance a persistent problem. Though the symptoms reportedly reduce with age, as shown in the study by Ramtakker et al,<sup>[8]</sup> the early identification and treatment is crucial to prevent a life of long-term consequences.

This study highlights the high prevalence of inattentive symptoms of ADHD in primary school children in the Gwagwalada area council who have poor academic performance; a finding which is in keeping with other studies.<sup>[9]</sup> The male preponderance found in this study is

also seen in other studies. The study is however limited in that though the criteria used for ADHD were in keeping with DSM-IV, the age of onset and the appearance of symptoms in another setting were not used.

In conclusion, ADHD is symptomatology is prevalent among children with poor school performance. There is a need for that there is a need for a larger study which will also incorporate the diagnosis of comorbid conditions which have been shown to exist with ADHD.

## REFERENCES

1. Karande S, Kulkarni M. Poor school performance. *Indian J. Paed*, 2005; 72(11): 996-997.
2. Siqueira CM, Gurge-Giannetti J. Poor school performance: An updated review. *Rev Assoc Med Bras*, 2011; 51(1): 78-86
3. Biederman J, Faraone SV. Attention-deficit hyperactivity disorder. *Lancet*, 2005; 366: 237-248.
4. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders*. 4<sup>th</sup> ed. Washington DC. American Psychiatric association, 1993.
5. Du Paul GJ, Power TJ, Anastopoulos AD, Reid R. *ADHD Rating Scale-IV: Checklists, Norms, and Clinical Interpretation*. New York; the Guilford Press, 1998: 24.
6. Colomer C, Berenguer C, Roselló B, Baixauli I, Miranda A. The Impact of Inattention, Hyperactivity/Impulsivity Symptoms, and Executive Functions on Learning Behaviors of Children with ADHD. *Front. Psychol.* 8:540.doi: 10.3389/fpsyg.2017.00540.
7. Ndukuba AC, Ibekwe RC, Odinak PC, Muomah RC, Igwe MN et al. Symptoms of attention deficit hyperactivity disorder (ADHD) among rural primary school children in southeastern Nigeria: comparison of school and home settings. *Niger J Paed*, 2015; 42(4): 329-334.
8. Ramtekkar UP, Reiersen AM, Todorov AA, Todd RD. Sex and age differences in Attention deficit/Hyperactivity disorder symptoms and diagnoses: Implications for DSM-V and ICD-11. *J Am Acad Child Adolesc Psychiatry*, 2010; 49(3): 217-28, 1-3.
9. Zeeuw EL, van Beijsterve CEM, Ehli EA, de Geus E, Boomsma DI. Attention deficit hyperactivity disorder symptoms and low educational achievement: Evidence supporting a causal hypothesis. *Behav Genet*, 2017; 47(3): 278-289.