

Educational Implication of Attention Deficit Hyperactivities Disorder Students at F.C.E. (SP.) Oyo.

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Abstract

This research work examined the Educational Implication of Students' with Attention Deficit Hyperactivities Disorder in F.C.E. (Sp.), Oyo. Attention Deficit Hyperactivity Disorder (ADHD) is the medical term used to describe a neurobiological condition that affects between 5 and 12 percent of children world wide with impairing levels of inattentive or hyperactive/impulsive behaviour as well as those with a formal diagnosis of ADHD (APA, 2000). Medical, educational and legal organization view ADHD as a behavioural disorder but they also recognize that many children with ADHD (as many as one in four) also have Learning Disabilities (LDS). Beyond difficulties- to-manage behavior, ADHD also include impairment in one or more process related to perceiving thinking, remembering, or learning. Therefore, it may be more useful to view ADHD as a learning disorder although one that differs from currently recognized reading or non-verbal LDS. Twenty (20) students at 200 level in the department of Computer Science, F.C.E. (Sp.), Oyo with G.P.A. between 0.00 to 1.50 were used for the study. A structured questionnaire was distributed to them and the data gotten were analysed using simple percentage and Chi-Square. The results revealed that students with Attention Deficit Hyperactivities; repeat class, achieve lower grade in Computer Science course, process information slower than their peers and could learn effectively through motivation. Finally, conclusion was drawn and recommendations given.

Keywords: *Intellectual Disability, Attention Deficit Hyperactivity Disorder (ADHD), Intellectuals Functioning, Adaptive Behavior and Six-Hour Retardation.*

1. Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is the medical term used to describe a neurobiological condition that affects between 5 and 12 percent of children world wide with impairing levels of inattentive or hyperactive/impulsive behaviour as well as those with a formal diagnosis of ADHD (APA, 2000). A diagnosis is based on developmentally inappropriate behavioural symptoms that begin in pre-school years and tend to persist through childhood adolescence and adulthood (APA, 2000). These symptoms include inattention hyperactivity and or impulsivity. Medical, educational and legal organization view ADHD as a behavioural disorder, but they also recognize that many children with ADHD (as many as one in four) also have Learning Disabilities (LDs) (APA, 2000). ADHD is associated with subtle but important structural and functional difference in the brain specifically those region that support critical psychological processes. These process, include execution function, memory, learning and speed of information processing

(Tannock, 2002; Shaw, et al, 2006).

Beyond difficulties- to- manage behavior, ADHD also include impairment in one or more process related to perceiving thinking, remembering, or learning. Therefore, it may be more useful to view ADHD as a learning disorder though one that differs from currently recognized reading or non-verbal LDS.

Many children with ADHD - not yet those with a Learning Disability (LD) are at high risk for academic under achievement or failure despite having or above average intellectual abilities (Curries & Stabile, 2006). It should be noted that while the term "mental retardation" is still widely used within education and government agencies, however, many advocacy groups feel that this label has too many negative connotations. The newer terms of "intellectual disability" or "developmental disability" are becoming far more accepted and prevalent with the field. Prevalence ratings for intellectual disabilities are consistent, highlighting the often hidden nature of intellectual disabilities within other disability classifications. The US Department of Education reports 5,971,495 student receiving special education services in the 2003-2004 school year of that Number 9.6% or 573,264 student received special education service based on classification of intellectually disabled (TCCD, 2008). The large majority of individuals considered intellectually disabled are in the mind range with an IQ of 50-70 (TCCD, 2008). For many of these individuals, there is no specific known cause of their developmental delays. The validity and reliability of the IQ tests used with these individuals are often in question. However, if a student is evaluated and scores an IQ of 70 or lower, he or she is considered to have an intellectual disability (TCCD, 2008). The problems with these Labels are that the guidelines can be altered as in the 1970's when eligibility guidelines shifted and thousand that were previously "mentally retarded" were miraculously cured by changing federal regulation.

The two characteristics shared in varying degree by all individuals with intellectual disabilities are limitations in *intellectuals functioning* and limitations in *adaptive behaviour*. Limitations in intellectual functioning often include difficulties with memory recall, task and skill generalization, and those students may demonstrate a tendency towards low motivation and learned helplessness (TCCD 2008). Issues in adaptive behaviour skills, social skill and practical skills are inherent in individuals with intellectual disabilities. Also they often exhibit deficits in self-determination skills, including skill areas such as choice making, problem solving and goal setting (TCCD, 2008). Students labeled as mildly intellectually disabled demonstrate delays in cognitive social and adaptive behaviour skill within typical classroom settings often when they are in different settings, the same individual function quite capability both socially and vocationally.

In their adult lives, these individuals can be independent and well adjusted in the world outside of school setting. It is only in the context of academic demands and intensive intellectual challenges that their abilities appear impaired. This type of school-based diagnosis has been referred to as *six-hour retardation*, reflecting the time the student is actually in the classroom and appears to be academically impaired (TCCD, 2008). The assertion that intellectual disability is a school-based diagnosis underlines the often arbitrary nature of eligibility requirement in this disability category for future adult services. A label of intellectual disabilities prior to age 18 is necessary for individual to receive specialized services beyond high school. Impact on learning with the appropriate supports in place, students with intellectual disabilities can achieve a high quality on life in many different aspects.

2. Statement of the Problem

Longitudinal epidemiological surveys in Canada and the United States shows that, childhood ADHD (and particularly childhood inattention) predict subsequent lower achievement scores in reading and mathematics - 8 to 10 percent lower (Tannock, 2007). These surveys also indicate an increased risk for grade repetition and high school incompleteness as well as under employment and poor workplace performance in adulthood (Currie, 2006; Spiral and Fischel, 2005; and Kassler, et

al, 2005 in Tannock, 2007). Cognitive research shows that individuals with ADHD process information more slowly than their peers and have difficulty with executive function, particularly working memory (Shanahan, Pennington, Yerys et al, 2006; and Martinussen, Hayden, HoggJohnson, Tannock; 2005 as cited by Tannock, 2007).

3. Significance of the Study

Students with disabilities have a set of unique characteristics that hinder their integration in school and consequently their learning. With this work, we intend to find out the effect of ADHD on students with intellectual disabilities.

4. Scope of the Study

This study was limited to the Federal College of Education (Sp.) Oyo, Oyo state. The researchers carried out the research work on the Educational Implication of Attention Deficit Hyperactivity Disorder on twenty (20) students of 200 Level in Department of Computer Science of Federal College of Education (Sp) Oyo, Oyo State.

5. Study Population

The target population of the study consisted of twenty (20) students in 200 level of Department of Computer Science whose GPA were between 0.00 - 1.50 at the end of their 200 level in Federal College of Education (Sp) Oyo, Oyo State.

6. Sampling Procedure

Purposive sampling method was used to select Students with Intellectual Disability in the Department of Computer Science of Federal College of Education (Sp.) Oyo. The students selected were those with Grade Point Average (GPA) between 0.00 -1.50 in their 200Level results.

7. Instrument for Data Collection

The data for this study were collected through a self-structured questionnaire. The instrument used was divided into the two sections: Section A and B. Section A deals with respondents Bio-Data, while Section B was used to obtain information on respondents' deposition to question items. A four-scale of Strongly Agreed (SA), Agreed (A), Strongly Disagreed (DS), and Disagreed (D) was used.

8. Validity of the Instrument

The survey instrument was validated using content validity with the help of expert which included lecturers from special education.

9. Pre-Test

The instrument was pre-tested by administering the questionnaire to five (5) respondents outside the study area.

10. Data Analysis

Data collected were subjected to descriptive statistics using frequency counts percentages

distribution and Chi-square to analysis the data collected.

11. Presentation and Interpretation of Findings

Table 1. Percentage and Chi-Square analysis of students with Intellectual Disability having difficulties in Conception, Social and Practical skills.

S/N	Item	SA	A	%A	SD	D	%D	Total	%Total
1.	Do students with intellectual disability having ADHD repeat class?	10	5	75	-	5	25	20	100
2.	Do students with intellectual disability having ADHD obtain low scores in Computer science courses?	8	5	65	4	3	35	20	100
3.	Do students with intellectual disability having ADHD process information slower than their peers?	12	-	60	5	3	40	20	100
4.	Do students with intellectual disability having ADHD exhibit deficits in self-determination such as choice making and goal setting?	6	7	65	3	4	35	20	100
5.	Do students with intellectual disability having ADHD have difficulties in conception, social and practical skills?	9	3	60	2	6	40	20	100
6.	X Responses	9	4	65	2.8	4.2	35	20	100

$$\alpha = 0.05, X^2_{tab} = 9.488, X^2_{cal} = 1.319$$

The above table indicates that 75% of the respondents from Item 1 agreed that students with intellectual disability students having ADHD repeat class, while 25% disagreed that they do not repeat class. Therefore, this implies that students with intellectual disability student repeat classes. This is in line with the finding of (Currie; 2006, Spira, and Fischel, 2005, and Kascler, et al 2005 in Tannock, 2007) which stated that “an increased risk for grade repetition and high school incompleteness as well as under employment and poor work place performance in adulthood”, are common among the Intellectual Disabled.

Item 2 shows that 65% of the respondents are of the opinion that the intellectual disabled students having ADHD achieve lower grade in computer science courses as a result of their low Intelligent Quotient, while 35% of the respondents disagreed with the statement. This implies that, students with intellectual disability having ADHD obtain lower marks in computer science courses. This is in agreement with Tannock (2007) which states that “children with ADHD obtain lower scores in mathematics and reading”.

From item 3 above, it was revealed that 60% of the respondents are of the opinion that intellectual disabilities students having ADHD process information slower than the peers. This implies that students with intellectual disability having ADHD process information slower than their peers. This is in agreement with the findings of (Shanahan, Pennington, Yer's, et al, 2006; and Martinussen, Hayden, HoggJohnson, Tannock, 2005) which stated that individual with ADHD process information more slowly than their peers and have difficulty with executive function particularly working memory”.

Item 4 indicate that 60% of the respondents agreed that students with intellectual disability learn effectively through motivation and reinforcement, while 40% of the respondents are of the opinion that students with intellectual disability do not learn through motivation. This shows that students with intellectual disability having ADHD could learn effectively through motivation. This disagreed with Texas Council for Developmental Disability (TCDD, 2008) which stated that, limitations in intellectual functioning, task and skill generalization, and those students may demonstrate tendency towards low motivation and learned helplessness”.

From the analysis on the item 5, it could be observed that students with intellectual disability having ADHD have difficulties in conceptual social and practical skills. The result shows that 70% of

respondents agreed that students with intellectual disability have difficulties in conceptual social and practical skills, while 30% are of the opinion that the intellectual disability does not have difficulties in conceptual social and practical skills.

Table 2: Percentage and Chi-Square analysis of students with Intellectual Disabilities demonstrating Delay in Cognitive and Adaptive Behaviour Skills within typical classroom setting.

S/N	Item	SA	A	%A	SD	D	%D	Total	%Total
1.	do Students with Intellectual Disabilities having ADHD demonstrate Delay in Cognitive and Adaptive Behaviour Skills within typical classroom setting	8	5	65	2	5	35	20	100
2.	Do students with intellectual disabilities have difficulties with memory recall?	9	3	60	3	5	40	20	100
3.	Do students with intellectual disabilities demonstrate limitations in intellectual functioning task and skill generalization?	9	5	70	3	3	30	20	100
4.	Students with intellectual disabilities do not demonstrate tendency towards low motivation?	9	4	65	2	5	35	20	100
5.	X Responses	8.75	4.25	65	2.5	4.5	35	20	100

$$\alpha = 0.05, X^2_{cal} = 0.44 < X^2_{tab} = 7.815$$

Responses to Item 1 showed that 65% of the respondents agreed that students with intellectual disability having ADHD demonstrate delays in cognitive and adaptive behaviour skill within typical classroom setting, while 35% disagreed. This is in line with Texas Council for Developmental Disabilities (2008), which stated, “students’ labeled as mildly intellectually disabled demonstrate delays in cognitive, social and adaptive behaviour skill within typical classroom setting”.

It was revealed in Item 2 that student with intellectual disability having ADHD have difficulties with memory recall and task. 60% agreed with the statement while 40% disagreed.

Result of analysis of item 3 showed that 70% of the respondents agreed, while 30% disagreed. This implied that students with intellectual disabilities having ADHD demonstrate limitations in intellectual functioning task and skill generalization.

Result of item 4 showed that 65% of the respondents agreed that students with intellectual disability having ADHD could learn effectively through motivation, while 35% of the respondents disagreed that students with intellectual disability cannot learn through motivation. This disagreed with (Tannock, 2005) which stated that, “limitation in intellectual functioning task and skill generalization and those students may demonstrate tendency towards low motivation and learned helplessness”.

12. Recommendations

In view of the outcome of the research work, the following recommendations were made:

1. All teacher preparation programs should ensure that the latest ADHD scientific evidence and most recent advances in education intervention are core component of their curricular.
2. Government should provide Assistive Technology to help them in their academic work.
3. School- based intervention where teacher modified their instructional practices and used behavioural management techniques should be encouraged.

13. Conclusion

In conclusion, we need to re-conceptualize individual with Attention Deficit Hyperactivity Disorder.

Researches into treatment of ADHD outcomes shows that medical and psychological interventions are generally effective in reducing disruptive and off-task behaviour in students with Attention Deficit Hyperactivity Disorder. (TCCD, 2008) These include medication, parental training, behaviour training, social skill training and multimodal approaches.

Students with ADHD will benefit from an inclusive educational model where teachers use latest teaching strategies. Indeed, these instructional practices could be considered best practices for all students in main stream classroom.

References

- American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorder. 4th edition text revision (DSMIV-TR). Washington, DC American Psychiatric Association.
- Dupaul, G.J., Weyandt, L.L (2006) School-based Intervention for Children with Attention Deficit/Hyperactivity Disorder: Effects on Academic, Social, and Behavioural Functioning. *International Journal of Disability Development and Education*, 53(2), 161-176
- Jensen, P.S., Hinshaw S.P., Swanson, J.M., et al (2001). Findings from the V/MH Multimodal Treatment, Study of ADHD (MTA): Implication and Applications for Primary Care Providers. *Journal of Development Behavioral Pediatric* 22(1): 60-73.
- Purdie, N., Hattie, J., & Carroll, A, (2002). A Review of the Research on Interventions for Attention Deficit Hyperactivity Disorder. *What Works Best? Review of Education Research*, 72(1), 61-69.
- Shanahan, M.A., Pennington, B.F., Years, B.E et al (2006). Processing Speed Deficit in Attention Deficit/Hyperactivity Disorder and Reading Disorder. *Journal of Abnormal Child Psychology* (Epub ahead of print, accessed July 19, 2006).
- Tannock, R. (2005). Language and Mental Health Disorders. The Case of ADHD. *Synergies. Interdisciplinary Communications 2004/2005*. W. Ostreng (ED). Gender for Advanced Study, Oslo / <http://www.cas.uio.no/publications/seminar/convergence,Tannock.pdf>
- Tannock, R. (2007). The Educational Implications of Attention Deficit Hyperactivity Disorder. *The Literacy and Numeracy Secretariat*. ISSN 1913-1100. *What Works? Research into Practice* (Online).
- Texas Council for Developmental Disabilities (2008). *Intellectual Disabilities* (TCDD, 2008).