

Assessment of the Impact of Attention Deficit Hyperactivity Disorder on Students' Academic Achievement in Yenagoa Education LGA of Bayelsa State

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ABSTRACT

The study examined attention deficit and hyperactivity disorder of secondary school students in academic achievement in Yenagoa Education Zone of Bayelsa State and the evaluator's role. An analytic descriptive research design was adopted in this study. The population of the study comprised all 14,387 senior secondary school students in the 40 public secondary schools in Yenagoa LGA of Bayelsa State. A sample of eighty (80) students, 40 males and 40 females, was used in the study. The instrument of the study was a closed-ended questionnaire designed by the researchers titled "Attention Deficit Hyperactivity Disorder of Students' Academic Achievement questionnaire (ADHDSAAQ) and validated by experts. A reliability index of 0.89 was established using the Cronbach coefficient Alpha formula. The mean and standard deviation were used to answer the research questions, while the independent t-test was used to test the hypotheses at a 0.05 level of significance. Findings revealed that students with ADHD lack concentration and suffer academic failure and that there exists no significant difference between male and female students on attention deficit and hyperactivity disorder in students' academic achievement of secondary school students in Yenagoa LGA of Bayelsa State. The study, therefore, recommends, among others, that teachers, evaluators, parents, and stakeholders should identify students with "attention deficit, hyperactivity disorder and manage them appropriately for them to have equal rights to functional education and that students be encouraged by the educational evaluator to manage their attention by using the appropriate tools for learning. Also, teachers should avoid lengthy and difficult tasks that have high demand on students with ADHD.

1. Introduction

Education is a veritable tool for individual change and national development that maximizes the potential and skills of learning. This is contained in the National Policy on Education (2004). As important as education is, there are some deficiencies impeding these goals. One of which is attention deficit hyperactivity disorder (ADHD). ADHD is a mental disorder commonly affecting children, and this comes in the act of moving in haste without planning (indecision), not being focused, that is, having difficulties in attending to important matters or issues, and lack of self-control, among others. Attention disorder can be defined as the inability to listen with a keen focus on any given task. Being attentive results in understanding, and it is one of the fruits of learning. It has been observed by various researchers that ADHD makes it difficult for students to focus or listen well in any given instruction, although ADHD

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is also present in adulthood when not properly handled. People with ADHD are more easily distracted with little or no concentration, which results in a lack of understanding and retention of information. Macconnell (2012) averred that attention is the ability to check and focus students put on an assigned task.

According to Learner (2009), attention refers to sitting and working with concentration on a given task for a given period of time. Osuorji (2019) and Lazarus (2017) noted that attention is necessary for a meaningful learning outcome for students, but most students cannot benefit from it because of ADHD. Also, Hunts and Marshall (2015) revealed that attention is the ability of an individual to attend to instruction, which requires a level of motor faculty based on repetition for retention. Students with ADHD are faced with various challenges in their learning activities, like students with special needs; most times, they are not being identified by teachers as students with special needs. In identifying students with ADHD, one should look out for some characteristics, which include excessive movement in the classroom during instruction, excessive talking when not necessary, inability to sit for a long time, acting without thinking, interrupting during teaching and learning, impulsiveness, making careless mistakes, losing things, constantly fidgeting, not sensitive to danger, etc. For a student to exhibit these characteristics, it must be a frequent act to avoid misconception. As cited in the diagnostic & statistical manual of mental disorders by the American Psychiatric Association (2005), the above-mentioned characteristics should be persistent and frequently observed as compared to others in normal circumstances.

In agreement with the American Psychiatric Association (2005), Smith et al. (2011) established the following characteristics of students with ADHD:

1. Inattention
 - a. Lack of focus on details in class-related tasks
 - b. Not sustaining attention in class activities
 - c. Do not follow instructions
 - d. Difficulties in organizing given tasks
 - e. Dislike tasks that require sustained mental efforts
2. Hyperactivity
 - a. Talk excessively
 - b. Have difficulties engaging in social activities
 - c. Leaving seat in class without any reason
 - d. Fidgeting with hands, feet or squirm in seat.
 - e. Being active when not necessary
3. Impulsiveness
 - a. Answers to questions before the question is completed or asked
 - b. Difficulties in writing in line
 - c. Always interrupting other person conversions
 - d. Always losing things used for class work
 - e. Easily distracted, not interested

Smith et al. (2005) concluded by averring that not all these characteristics must be present in a student before identifying students with ADHD; most of the above must be persistent and frequent. Students with ADHD generally lack the ability to cope because they are easily distracted and spend less time on their academic work (Duhaney 2003). These flaws in the students obviously can lead to low grades, underachievement, and other social activities. Morell and Boelter (2017), Bryan 2017, and Olemaca Thomas and Daris (2013) are of the opinion that students with ADHD are often rejected by their peers and teachers because of their behavior. This could be a possible reason why they are unable to make friends or belong to social groups in and out of school. Some of these students are said to be aggressive, which is a form of self-defense mechanism, making their peers avoid them.

Honos-Webb (2015) opined that guidance counselors, parents, evaluators, and teachers should look beyond the negative traits of the students and closely monitor them to discover some positive traits like emotional awareness, intuitiveness, and creativity. Students with ADHD should not be written off but be helped academically and socially.

1.1 Statement of the Problem

The student's ability to earn high scores or good grades is associated with meaningful learning through high concentration and academic achievement at any level of education, and this can only be achieved through student attentiveness to the instruction given by the teacher. When students cannot organize themselves during teaching and learning progress, it becomes difficult for them to perform more, especially when they exhibit some character traits which, most of the time, lead to withdrawal and lack of interest in academic activities and drop out of school. Different researchers have, in their various studies, associated poor academic achievement with variables like teachers' characteristics, parents' characteristics, teaching methods, and lack of instructional materials. No parent, teacher, or educational institution will be comfortable with the poor achievement of their children, wards, and students, as this will certainly be of great concern to the institution and society at large. Against this backdrop, this study seeks to examine attention deficit, hyperactivity disorder, and students' academic achievement in senior secondary schools in Yenagoa LGA of Bayelsa State as related to student characteristics.

1.2 Study Goals and Objectives

The study assessed the impact of attention deficit hyperactivity disorder on students' academic achievement in Yenagoa Education LGA of Bayelsa State. Specifically, the study achieved:

1. To evaluate the impact of attention deficit on the academic achievement of students in Yenagoa Education LGA of Bayelsa State.
2. To assess the influence of hyperactivity disorder on the academic performance of students in Yenagoa Education LGA of Bayelsa State.
3. To determine the effect of impulsivity on the academic achievement of students in Yenagoa Education LGA of Bayelsa State.

1.3 Research Questions

The following research questions guided the study:

1. What is the extent of students' attention deficit and its impact on academic achievement among students in Yenagoa Education LGA of Bayelsa State?
2. To what extent does hyperactivity disorder affect the academic achievement of students in Yenagoa Education LGA of Bayelsa State?
3. To what extent does impulsivity impact the academic achievement of students in Yenagoa Education LGA of Bayelsa State?

1.4 Hypotheses

The following hypotheses were formulated and tested at a .05 level of significance:

Ho1: There is no significant difference between male and female students in attention deficit and its effect on academic achievement among students in Yenagoa Education LGA of Bayelsa State.

Ho2: There is no significant difference between male and female students with hyperactivity disorder and its impact on academic achievement among students in Yenagoa Education LGA of Bayelsa State.

Ho3: There is no significant difference between male and female students in impulsivity and its effect on academic achievement among students in Yenagoa Education LGA of Bayelsa State.

2. Methods

This research study adopted a descriptive research design. A study in which there is a group of people or objects that we are studying, and we go out and collect data from a few persons who represent the population through a questionnaire (Ali, 2006). The study population was 14,387 senior public secondary school students in Yenagoa LGA

of Bayelsa State, as obtained from the Bayelsa State Post Primary Schools Board during the period of study. A purposive sampling technique was adopted due to the specificity of the study. A multi-sampling technique design was adopted to make provision for 10 senior secondary schools that were randomly sampled from the entire 40 public secondary schools in the Yenagoa education zone of Bayelsa State, and (15) students were purposively selected from the randomly selected 10 schools. The authors and two research assistants completed the administration of 150 copies of the instrument over a period of four days. Data were analyzed through the mean and standard deviation of the research questions, while hypotheses were tested using a t-test.

The Data Collection Instrument was “Attention Deficit Hyperactivity Disorder in Students Academic Achievement Questionnaire (ADHDSAAQ)” developed by the researchers. The questionnaire instrument comprised 15 items, structured in closed-ended form with a 4-point rating scale of Very high extent (VHE)=4 Points, High extent (HE)=3 Points, Low extent (LE)= 2 Points, and very Low extent (VLE) = 1 Point hence minimum score of one to maximum score of four. A criterion mean value equal or above > the decision level if the mean value score is 2.50 and above, it inclusive high extent below this level indicates a low extent. The face and content validity of the instrument was ascertained by experts in measurement and evaluation. Cronbach alpha formula was used to establish the reliability of the instrument, and a coefficient of 0.89 was obtained.

3. Results

Research Question 1: What is the extent of students' attention deficit and its impact on academic achievement among students in Yenagoa Education LGA of Bayelsa State?

Table 1: Descriptive statistics of responses of male and female students on attention deficit in their academic achievement in secondary schools in Yenagoa LGA of Bayelsa state.

S/N	Item Statements	Male			Female		
		$\bar{X}$	SD	Remark	$\bar{X}$	SD	Remark
1	failed to give attention to detailed careless mistakes in given task	3.05	1.05	HE	2.94	1.18	HE
2.	Has difficulty in sustaining attention in class activities	3.04	0.87	HE	3.00	1.11	HE
3	Does not follow instruction and fail to complete academic work	3.00	0.92	HE	2.94	0.98	HE
4	Difficulty in organizing given tasks	3.09	0.89	HE	3.03	0.90	HE
5	Easily distracted, not interested	3.17	0.89	HE	3.03	0.77	HE
	Grand mean	3.07			2.98		

The results in Table 1 above show the responses of male and female students to the extent of attention deficit in academic achievement among secondary school students in Bayelsa State. The mean scores of all items (item 1: 3.05; item 2: 3.04; item 3: 3.00; item 4: 3.09 and grand mean score of all junctions combined in male students were obtained as $\bar{X} = \text{GM} = 3.09$). This, therefore, implies that male and female students here both agree that student's failure to give close attention to careless mistakes in the task given, difficulty in sustaining attention in class activities, not following instructions and failure to complete academic work; difficulty organizing task given them easily gets distracted are the forms of attention deficit in the classroom that affect students up severity point high on academic achievement among students get sub-dividing into Bayelsa state.

Research Question 2: To what extent does hyperactivity disorder affect the academic achievement of students in Yenagoa Education LGA of Bayelsa State?

Table 2: Mean and standard deviation of extent to which hyperactivity disorder affects academic achievement of senior secondary schools' students in Yenagoa LGA of Bayelsa State.

S/N	Item Statements	Male			Female		
		$\bar{X}$	SD	Remark	$\bar{X}$	SD	Remark
6	Talk excessively	3.02	0.85	HE	2.53	0.51	HE
7.	Difficulty engaging in social activities	3.14	0.87	HE	2.63	0.63	HE
8	Leaving seat without reason	3.02	0.90	HE	3.06	0.92	HE
9	Fidgeting with head and squirming in seat	2.62	1.70	HE	1.41	0.61	LE
10	Active when not necessary	3.05	0.89	HE	3.00	0.95	HE
	Grand mean	2.96			2.53		

Results from Table 2. above Unveiled the mean and standard deviation of responses of male and female students' on the impact of hyperactivity disorder on students' academic achievement in Yenagoa LGA, Bayelsa State. Mean responses of male students are reported to be 3.02, 3.14, 3.02, 2.62, and 3.05, respectively, for the same items with a standard deviation of .85, .87, .90, 1.70, and .89 while the criterion mean is lower than all obtained scales; as compared to this, female students reported low responses of item response, i.e., Female student's response for items 6, 7, 8 & 10 are., (2..53), (2..63), (3...06) with S.D.'s (.51), (.63), & (.92). The first research question grand mean of 2.96 and 2.53 falls above the criterion mean of 2.50 It, therefore, indicates that both male and female student consider fidget and agitation when one is not obliged to move around during a lecture; talking too much in class; hardship with participating at the social level -e., leave the seat without permission while working often get up) as belonging to the causes of hyperactivity disorder that significantly contributes to its impact on academic achievement amongst SSC 2 students.

Research question 3: To what extent does impulsivity impact the academic achievement of students in Yenagoa Education LGA of Bayelsa State?

Table 3: Mean and Standard Deviation of the responses of male and female students on the extent to which Impulsivity deficit affects students' academic achievement in Yenagoa LGA of Bayelsa State.

S/N	Item Statements	Male			Female		
		$\bar{X}$	SD	Remark	$\bar{X}$	SD	Remark
11	Answers questions before question is completed	2.91	0.94	HE	2.91	1.03	HE
12.	Have difficulties in writing	2.77	1.03	HE	3.00	0.95	HE
13	Interrupt on others conversation	2.74	1.11	HE	3.06	0.92	HE
14	Easily withdraw from socialization	2.11	0.79	LE	2.24	0.65	LE
15	Always losing things used in classwork	2.08	0.89	LE	2.21	0.64	LE
	Grand mean	2.52			2.68		

Results from Table 3 above show the Mean and Standard Deviation of the responses of male and female students on the extent to which Impulsivity deficit affects students' academic achievement in Yenagoa LGA of Bayelsa State. The male students' mean scores for items 11, 12, and 13 are 2.91, 2.77, and 2.74, and that of the female are 2.91, 3.00, and 3.06, respectively, which are above the criterion mean of 2.50. Moreover, both male and female mean scores for items 14 and 15 are 2.11, 2.08, 2.24, and 2.21, with a standard deviation of 0.79, 0.89, 0.65, and 0.65, respectively, which are less than the criterion mean of 2.50. However, grand mean scores for both males and females were 2.52 and 2.68, which implies that both male and female students agree that to a high extent, before the question is completed answer question, having difficulty in writing and interrupting others' conversion negatively affects students' academic achievement among secondary school students in Yenagoa education zone of Bayelsa State. Easily withdrawn from socialization and always losing things used in the classroom are disagreed by both male and female students, with a grand mean of 2.52 and 2.68 of male and female students, respectively, implying that impulsivity causes a high distrust among secondary school students.

3.1 Testing Hypotheses

Ho1: There is no significant difference between male and female students in attention deficit and its effect on academic achievement among students in Yenagoa Education LGA of Bayelsa State.

Table 4: t-Test Analysis of difference between male and female students on their attention as it relates to their academic achievement in secondary schools in Yenagoa education zone of Bayelsa State.

Designation	N	$\bar{X}$	SD	df	T	P-value or sig	Alpha level	Decision
Male	40	15.35	3.85	78	0.56	0.57	0.05	Not sig.
Female	40	14.94	4.38					

Results stated in Table 4 indicated t= test or difference in response of male and female students on Attention deficit among secondary school in Yenagoa LGA of Bayelsa State. From the table, the p-value or sig of the level observed = 0.57, which is less than ($>$) alpha chosen = 0.05 — $t(78) = 0.56$, $P > 0.05$). The null hypothesis that states, “There is no significant difference in mean responses of male and female students on the impact of attention disorder among secondary school students in Yenagoa LGA of Bayelsa State,” is not rejected.

Ho2: There is no significant difference between male and female students in hyperactivity disorder and its impact on academic achievement among students in Yenagoa LGA of Bayelsa State.

Table 5: T-test analysis of the difference in mean responses of male and female students on how their hyperactivity disorder affects academic achievement of students in Yenagoa education zone of Bayelsa State.

Designation	N	$\bar{X}$	SD	df	T	P-value or sig	Alpha level	Decision
Male	40	14.86	3.52	78	3.60	0.00	0.05	sig.
Female	40	12.62	2.12					

Table 5 above revealed a t-test analysis of the difference in mean responses for male and female students regarding the impact of hyperactivity disorder on the academic achievement of students in Yenagoa LGA of Bayelsa. The calculated t-value is 3.60, and the p-value or sig is 0.00 ($p < 0.05$). Since the p-value is less than the chosen alpha level, the hypothesis of “There is no significant difference between male and female students in hyperactivity disorder and its impact on academic achievement among students in Yenagoa LGA of Bayelsa State” is rejected.

Ho3: There is no significant difference between male and female students in impulsivity and its effect on academic achievement among students in Yenagoa Education LGA of Bayelsa State.

Table 6: T-Test Analysis of difference on mean responses of male and female students on impulsivity disorder among secondary school students in Yenagoa education zone in Bayelsa State.

Designation	N	$\bar{X}$	SD	Df	T	P-value or sig	Alpha level	Decision
Male	40	12.61	4.75	78	-1.53	0.12	0.05	Not sig.
Female	40	13.47	4.19					

Table 6 indicates the t-test analysis of the difference in mean responses on how impulsivity deficit affects academic achievement among secondary school students by male and female students in the Yenagoa education zone of Bayelsa State. From the table, it is visible that the probability value obtained (p-value or sig) is 0.12, which is larger than the selected alpha level of 0.05 $t(78) = -1.53$, $p > 0$. P-value is more than the level of significance, and the null hypothesis is accepted. This implies that there is no significant difference between male and female students in impulsivity and its effect on academic achievement among students in Yenagoa LGA of Bayelsa State.

4. Discussion of Findings

Results from the study reveal that both male and female students lack attention in class, fail to give close attention in class, and make careless mistakes in given tasks; they also have difficulties in sustaining attention in class activities and do not follow instructions, other activities are failure to complete academic work, lack of organization, losing things used for classwork and are always distracted and loss interest in class work and this to a high extent affects student's academic achievement and eventually loss interest in academic activities leading to drop out from school. This study agrees with Dunhaney (2013), who described students with ADHD as having low grades, sloppy, and careless with problems of poor self-concept and low self-esteem and that most of them eventually drop out of school.

The study further showed that both male and female students upheld how hyperactivity disorder affects their class work, and this can, in no time, attract teachers' dislike for students, as there is no significance in their academic achievement. This is in consonant with Iherell & Boelter (2017), who opined that hyperactivity disorder causes students to be rejected by their fellow students and are often disliked by their teachers because of some aggressive behavior exhibited by some of the students, and also there is no significance difference between male and female students on how impulsivity affects their academic achievement as they all agreed to items such as answer questions before the question is completed, having difficulties in writing, interrupt on others conversation and easily withdraw from social activities. Hunt and Mashall (2015), Bryan (2017), and Olmeda Thomas and Davies (2013) established the fact that such students suffer a form of neurological condition that affects students' response to general well-being, which automatically affects students' academic achievement of which students from Yenagoa education zone are of no exemption.

The role of the evaluator is needful at this point in time to collect relevant data about students to appraise, review, analyze, and give feedback for valid judgement on ways to improve students with ADHD learning activities so that they don't lose out on society. This also buttresses Honos-Webb (2015), who opined that guidance's, parents, evaluators, and teachers should look beyond the negative traits of the students and closely monitor the students to discover some positive traits like emotional awareness, intuitiveness, and creativity as Students with ADHD should not be written off but be helped academically and socially to fit into society.

5. Conclusion

This study has highly revealed that students with Attention deficit, hyperactivity disorder, and Impulsiveness affect students' academic achievement. It is expected that students are attentive in class to attain high grades in their studies, but the deficit and disorder associated with achievement have a great effect on their academic achievement, considering that students have the right to functional education, which is an instrument of personal and national development. It is concluded that teachers, specialists, stakeholders, and especially the educational evaluator should adopt attention strategies for students to benefit from inclusive education.

5.1 Study Limitation

While this study provides valuable insights into the effects of hyperactivity disorder and attention-related difficulties on students' academic achievement, there are several limitations that should be acknowledged. First, the study's sample may not fully represent the broader student population, as it was limited to a specific region or school setting. This could impact the generalizability of the findings to other areas or different educational contexts. The study relied on self-reported data from students regarding their attention and academic behaviors, which may introduce bias or inaccuracies. Students may not always accurately perceive or report their own difficulties, or they might underreport symptoms due to social desirability bias. Another limitation is the cross-sectional nature of the study, which provides a snapshot of student behaviors at one point in time. As a result, it does not account for long-term academic outcomes or the evolving nature of hyperactivity disorder and attention-related challenges over time. Lastly, external factors such as socioeconomic status, family dynamics, and teacher-student relationships were not fully controlled, which may have influenced the observed results and interpretations.

5.2 Suggestions for Future Research

Future research should consider a more diverse and larger sample to enhance the generalizability of the findings. Longitudinal studies would be particularly valuable in understanding the long-term impact of attention difficulties on academic achievement and how these challenges evolve as students progress through their educational journey.

Further research could explore the role of teacher interventions and classroom strategies in addressing hyperactivity and attention problems, examining which approaches are most effective in improving student engagement and academic performance.

Exploring the interplay between environmental factors, such as family support and socioeconomic status, and academic outcomes for students with attention difficulties could provide a more comprehensive understanding of the challenges faced by these students.

Finally, future studies could investigate the use of digital tools, such as AI-based learning platforms, in supporting students with attention difficulties, offering new approaches to help them stay engaged and overcome distractions in the classroom.

5.3 Recommendations

Based on the study, the following were recommended:

1. Teachers should liaise with evaluators to identify students with ADHD so as to assist them.
2. Lengthy and difficult tasks that demand too much from students should be avoided by the teacher.
3. The use of different methods of teaching should be employed to suit the student's peculiarity.
4. Teachers should adopt the use of updated functional behavior and assessment records that form the basis of behavioral plans and instruction.
5. Teachers and all stakeholders should employ attention strategies for ADHD children so that they benefit from the teaching instruction.
6. Rearranging the classroom to pay more attention to students with ADHD.

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