

ATTENTION-DEFICIT HYPERACTIVITY DISORDER AND STUDY HABITS OF UNDERGRADUATE STUDENTS IN CROSS RIVER UNIVERSITY OF TECHNOLOGY CALABAR, NIGERIA

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ABSTRACT

This paper studied the influence of Attention deficit hyperactivity disorder ADHD and study habits of university undergraduate students in Cross River University of Technology. Attention deficit hyperactivity disorder is basically an attention problem, which the students experience difficulty in paying attention and being easily distracted, lack of stamina to study for a reasonable time, difficulty completing assignments. Students with this disorder are perceived to have problem with their approach to studying. The study had three specific objectives to determine influence of academic faculties, gender and Attention deficit hyperactivity disorder on study habit. The population of this study comprised all the undergraduate students in Cross River University of Technology from five Faculties in the Calabar Campus. A sample of 517 undergraduate students was selected using the stratified random sampling technique. Data collection instrument was a structured questionnaire. The major findings were that there were no significant differences found for both ADHD and study habit of students across academic faculties. Gender was found to influence both ADHD and study habit. The level of manifested ADHD among female students was higher than male students, while the male students had better study habits than the female. It was also found that Attention deficit disorder had a significant negative influence on study habits. The recommendations were that students with ADHD symptoms should present themselves for proper counseling, group discussion should be encouraged, proper time tabling for personal study and lecture attendance be emphasized.

KEYWORDS: *Attention Deficit Hyperactivity Disorder (ADHD), Gender, Study Habits, Study Strategies*

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INTRODUCTION

The strategies which a student adopts in studying count greatly, and to a very large extent determine his levels of academic performance. Many university undergraduate students in Nigeria have the required potentials to excel in academics, but do not adopt positive practices in studying and consequently perform below expectation. The common practice adopted by many students in Nigerian universities is studying a night before test or examination and sometimes taking drugs to stay awake in the process. This approach to study is bad and doesn't yield long lasting result. The pertinent questions this study seeks to answer are; why do many university undergraduate students choose to study at the verge of examination and or test? To what extent are they aware of effective study approaches? How does their attention span affect their study habits?

Studying effectively seems to be closely linked to the students' psychological well-being. A student with certain psychological dysfunctions like, Attention-deficit hyperactive disorder, depression, anxiety, stress etc. is not likely to adopt positive study habits. Centre for Psychiatric Rehabilitation (2017). Attention Deficit Disorder (ADHD), may interfere with our ability to function at school, thus the individual experiences attention problems inability to concentrate, difficulty settling down to study, easily distracted and lack of organization, lack of stamina to study or stay on task like examination, assignment, copying notes. The individual will experience difficulty handling time pressures and multiple tasks. This will affect his ability to set priorities, meet deadlines and will have trouble managing time.

Difficulty handling negative feedback, individual gets discouraged and tends to withdraw when the feedback is negatives. Difficulty studying and interacting with others is a psychological dysfunction, which affects the students study habit negatively. The student needs to interact with others get notes, participate in group assignment and possibly get involved in group discussions, learning in isolation is not completely the best approach.

Study habits according Mills (2018) "are regular practices, or strategies applied to learning or practices a student performs to maximize his productivity, efficiency and retention in preparing for an evaluation".

A person, who waits until the very last night before an exam and then stays up all night trying to cram-the information into his head is an example of someone with bad study habits. (Your Dictionary, 2018).

If you want to improve your grades, according to Grohol (2018) you need more effective study habits. The key to effective studying isn't cramming or study longer, but studying smarter. You can begin studying smarter in the following ways.

Approach your Study with a Positive Mindset

Being in the right mindset is important in order to study smarter. If you're distracted by relationship issue, depression and other pressing issues, then studying is just going to be an exercise in frustration.

Study in a Conducive Environment

Where you study is important. A place with a lot of distractions makes for poor study area. Choose a quiet place which can allow you to concentrate maximally.

Carefully put together all the materials you need for what you want to study. You don't need enemies of distractions.

Summarise main points and explain in your own words. This makes for easy and quick revision.

Use memory games (mnemonic devices)

memory games or mnemonic devices are methods of remembering pieces of information using a simple association of keywords to form a sentence or putting the first letters of every word together. This doesn't work for everybody. So if they don't work for you don't use them.

Practice what you studied by yourself or in a group. You can attempt to answer some past exam questions by yourself, but do no study to practice past exam questions. Otherwise you can discuss the topic with a friend or in a related group.

Good study habits summarized by Sylvan Learning (2018) are;

- Get organized
- Know the expectation
- Designate a study area
- Develop a study plan
- Think positively
- Create a study group
- Practice active listening
- Review Test-taking strategies
- Read actively-note main points
- Take a break during study

Studies by Simon-Dack, Rodriguez and Marcum (2016) revealed that undergraduate students in Indiana University South Bent USA with symptoms of Attention-deficit hyperactive disorder (ADHD) indicated surface approach to studying strategies. Studies by (Fleming and McMahon (2012), Frazier, Youngstorm Glutting and Watkins (2007). Adovkat and Lane (2011) quoted by Nuget, Smart and Murkett (2014) showed that Attention deficit hyperactive disorder (ADHD) self-reports of study habits indicate that compared with students without ADHD, students with ADHD take notes less frequently during lectures, and are worse at planning and completing class assignments, studying for exams, and avoiding distractions. Norvilitis, Sun and Zhang (2010). Opined that of the primary manifestation of ADHD, inattentiveness appears to be a key factor influencing achievement among students; this symptom is associated with decreased academic and social adjustment, poorer study skills and more depressive symptoms.

Ogar (2015) quoted by Naqvi, Chikwa, Meron, (2018) gender on the study skills of mathematics students in River State of Nigeria, found that female students have better study habits than males. Similarly Ossai (2012) and Salami (2013) also found female students possessing better study skills as compared to their male counterparts. Sekar and Rajendran (2015) did not find any difference in study skills of Humanities and Science Cohorts in an Indian University on the contrary, Helfand, (2017) found that students in engineering progames study five hours more than social sciences. Chitkara (2014) reported that 60% of Engineering students prefer to study daily as opposed to the mere 40% who like to study at the end.

Purpose of the Study

The main purpose of this study is to investigate the influence; an Attention deficit hyperactivity disorder (ADHD) on study habits of university undergraduate students in Cross River University of Technology, Calabar.

The specific objectives were to;

- Find out if academic faculties have a significant influence on study habits and ADHD among student in Cross River University of Technology.

- Determine the nature of the influence of academic faculty, gender and year of study on manifested ADHD and study habits.
- Determine influence of Attention deficit hyperactivity disorder on study habits among undergraduate students in Cross River University of Technology, Calabar

METHODOLOGY

The present study adopted the e-x-Post facto design, since the variables were not inherently manipulated by the researcher. Population of the study comprised all university undergraduate students in Cross River University of Technology, Calabar though with restriction to the faculties in the main campus at Calabar for economic reasons. These include Faculties of Education, Environmental Sciences, Engineering Communication Technology and Sciences. Stratified random sampling technique was used to select respondents from each faculty. A total of 517 respondents drawn from the listed faculties in Calabar Campus formed the sample for this study. The data collection instrument was a facts finding questionnaire titled Attention disorder and study habit questionnaire (ADSHQ) it was designed by the researcher and trail tested on undergraduate students in the University of Calabar. A reliability coefficient of 0.92 using the test-retest approach was obtained indicating that the instrument was reliable. The instrument consisted of two parts (A & B). Part A elicited information about their demography characteristics. Part B consisted of 9 & 11 items, built on a 4-point Likert scale and designed to measure ADHD and study habit, respectively. Their responses were scored for positive items; SA =4, A = 3, D = 2 and SD = 1 but reversed for negative items, the scores were summed up for each variable represent.

RESULTS

The data for this study were collected from a random sample of 517 undergraduates. Their demographic distribution is given in Table 1.

Table 1: Demographic Description of Study Sample

Demographic Variable	Category	N	%
Faculty	Communication Technology	110	21.3
	Education	110	21.3
	Engineering	201	38.9
	Science	96	18.5
	Total	517	100.0
Gender	Male	347	67.1
	Female	170	32.9
	Total	517	100.0
Year of study	Year one	139	20.9
	Year two	101	19.5
	Year three	134	25.9
	Year four	143	27.7
	Total	517	100.0

The results in Table 1 shows that, there was 110(21.3%), each from Faculty of Communication Technology and Education, 201(38.9%) from Faculty of Engineering and 96(18.5%) from Faculty of Science. By gender, 347(67.1%) were males and 170(32.9) females. In terms of year of study 139(20.9%) were from year one, 101(19.5%) year two, 134(25.9%) year three and 143(27.7%) year four. The sample was therefore considered heterogeneous enough for the study.

To find out if the levels of manifested ADHD and study habits are significantly higher than expected level, one-sample population t-test was applied. The results are shown in Table 2.

Table 2: One-Sample t-Test of Level of ADHD and Students against their Expected Level

Study Variable	N	Mean	Std. Dev.	Std. Error	Expected Mean	Mean Difference	t-Value	p-Value
ADHD	517	19.108	1.449	.064	22.5	-3.392	-53.209*	.000
Study habits	517	26.754	4.451	.200	27.5	-.746	-3.733*	.000

* Significant at .05 level $p < .05$.

The results in Table 2 show that the observed mean level of manifested ADHD (19.108) and study habits (26.754) are less than their corresponding expected mean level (22.5 & 27.5). The p-values (.000) associated with the computed t-values (-53.209 & -3.733) for ADHD and study habits respectively, are less than .05. This means that the mean levels of manifested ADHD and study habits are significantly less than expected level.

To find out if academic faculty has a significant influence ADHD and study habits, one-way analysis of variance (ANOVA) was carried out. The results are given in Table 3.

Table 3: One-Way ANOVA of ADHA and Study Habits by Academic Faculty

Study Available	Academic Faculty	N	Mean	Std. Dev.	Std. Error	Minimum	Maximum
ADHA	Comm. Tech.	110	19.200	1.476	.141	18	21
	Education	110	19.200	1.476	.141	18	21
	Engineering	201	19.000	1.418	.100	18	21
	Science	96	19.125	1.460	.149	18	21
	Total	517	19.108	1.449	.063	18	21
Study habits	Comm. Tech.	110	26.500	4.674	.446	21	32
	Education	110	26.600	4.564	.435	22	32
	Engineering	201	27.100	4.516	.319	22	32
	Science	96	26.500	4.439	.453	22	32
	Total	517	26.754	4.541	.200	21	32
Study Variable	Source of Variation	Sum of Squares	df	Mean Square	f-Value	p-Value	
ADHD	Between Groups	4.234	3	1.411	.671	.570	
	Within Groups	1079.700	513	2.105			
	Total	1083.934	516				
Study habit	Between Groups	39.893	3	13.298	.643	.587	
	Within Groups	10601.910	513	20.666			
	Total	10641.803	516				

From Table 3 and for ADHD, all the faculty based mean scores are approximately equal ($19.00 \leq \bar{x} \leq 19.2$). The same pattern was observed for study habits ($26.5 \leq \bar{x} \leq 27.1$). The differences for both ADHD and study habits were not significant (F.67r, p.570 & F.643. p.587) since the P-values (.570 & .587) associated with the computed f-values (.671 & .643) respectively, are all greater than .05 the chosen level of significance. This means that academic faculty has no significant influence on both ADHD and study habits.

To investigate the influence of gender on manifested ADHD and study habits, independent sample t-test was applied. The results are presented in Table 4.

Table 4: Independent t-Test for Gender Influence on Manifested ADHD and Study Habits

Study Variable	Student's Gender	N	Mean	Std. Dev.	Std. Error	Mean Difference	t-Value	p-Value
ADHD	Male	347	18.873	1.365	.073	.715	5.412*	.000
	Female	170	19.588	1.502	.115			
	Total	517	19.108	1.449	.064			
Study habits	Male	347	27.737	4.523	.243	2.990	7.391	.000
	Female	170	24.747	3.878	.297			
	Total	517	26.754	4.541	.200			

* Significant at .05 level. $p < .05$

The results in Table 4 show the level manifested ADHD among female students (19.589) is higher than that of male students (18.873). For study habits, male students (\bar{x} 27.737) are better than female students (\bar{x} = 24.747). These differences are all significant because the p-values (.000) associated with the computed t-values (5.412 & 7.391) are less than .05, the chosen level of significance. This means that gender has significant influence on their level of manifested ADHD and their study habits.

To find out the nature of the influence of year of study on level of manifested ADHD and study habits, one-way ANOVA was carried out with year of study as factor and level of ADHD and study habits as dependent variables, while f-ratio test was used to test for significance. Table 5 is a summary of the results obtained.

Table 5: One-Way ANOVA of Manifested ADHD and Study Habits by Year of Study

Study Variable	Year of Study	N	Mean	Std. Dev.	Std. Error	Minimum	Maximum
ADHD	Year one	139	19.014	1.424	.121	18	21
	Year two	101	19.337	1.499	.149	18	21
	Year three	134	18.739	1.297	.112	18	21
	Year four	143	19.385	1.501	1.26	18	21
	Total	517	19.103	1.449	.064	18	21
Study habit	Year one	139	28.014	4.724	.401	22	32
	Year two	101	23.555	1.646	.164	21	25
	Year three	134	28.336	4.445	.384	22	32
	Year four	143	26.308	4.630	.387	22	32
	Total	517	26.754	4.541	.200	21	32
Study Variable	Source of Variation	Sum of Square	df	Mean Square	f-Value	p-Value	
ADHD	Between Groups	35.704	3	11.901	5.825*	.001	
	Within Groups	1048.230	513	2.043			
	Total	1083.934	516				
Study habit	Between Groups	1618.531	3	537.510	30.673	.000	
	Within Groups	9023.271	513	17.589			
	Total	10641.803	516				
* significant at .05 level $p < .05$							

From Table 5 and for manifested ADHD, the mean level for year four (\bar{x} = 19.385) is highest, followed by year two (\bar{x} = 19.337) and the least are year three (\bar{x} = 18.739). In terms of study habits, year three had the highest mean (\bar{x} - 28.336), followed by year one (\bar{x} 28.014) while the least were students in year two (\bar{x} - 23.555). The p-value (.001 & .000) associated with the computed f-values (5.325 & 30.673) for ADHD and study habits are less than .05. This means that year

of study has significant influence on both level of manifested ADHD and study habits.

Simple linear regression analysis was carried out to determine the nature of the influence of ADHD on study habits. The f-ratio and t-tests were used to test for the significance of the overall influence model and the contribution of the regression constant and coefficients, to the prediction of study habits. The results are presented in Table 6.

Table 6: Regression of Study Habits on Manifested ADHD

Source of Variation	Sum of Squares	df	Mean Square	f-Value	p-Value
Regression	7013	1	7013.703	995.578*	.000
Residual	3628.100	515	7.045		
Total	10641.803	516			
Predictor Variable	Unstandardised Coefficient		Std. Coeff.	t-Value	p-Value
	B	Std. Error			
Constant	75.361	1.545		48.780*	.000
ADHD	-2.544	.081	-.812	-31.553	.000
* Significant at .05 level $p < .05$					
R – value = .812 adj. R-square = .658					
R – square = .659 std. error = 2.654					

The results in Table 6 show that, the R-value of .812 was obtained, giving an R-square value of .659. This means that about 65.9% of the total variation in study habit was accounted for by the variation in ADHD. The p-value (.000) associate with the computed f-value (995.578) is less than .05. This means that ADHD has a significant negative ($r = -.812$) influence on study habits. The p-values (.000) associated with the computed t-values (48.780 & -31.553) for the regression constant (75.361) and coefficient (-2.544), which represents the influence of ADHD, are less than .05. This means that both the regression constant and manifested ADHD contribute significantly to the prediction of study habits.

DISCUSSIONS

The first finding that there were no significant differences for both study habit and attention deficit hyperactivity disorder among students in Cross River University of Technology across various faculties indicates that both study habits and ADHD are not peculiar to any of the academic faculties. One would have hoped that students in the core sciences and engineering would make the difference in study habits. This finding corroborates Sekar and Rejendran (2015) who also did not find any difference in study skills of humanities and science cohorts in an Indian university. The studies of Chitkara (2014) and Helfand (2017) however contradict the finding that no difference was found in study habits of students across faculties in CRUTECH Calabar. They concluded in their study that students in engineering programmes study five hours more than social sciences. It is safe to conclude that academic faculties have no significant influence on study habit and ADHD of students.

The second finding is that, the gender has significance influences on the level of manifested ADHD and study habit. Precisely, the present study found that the level of manifested ADHD among female students was higher than that of male students. Male students had better study habits than female students. This finding is contrary to the findings of Ossai (2012) and Salami (2013) who found female students to possess better study skills than males. Generally one can feel that female students possess better study habits because the female appear to be more organized responsible and coordinated than their male counterparts. This may not really count as a parameter. Because study habits go beyond just being organized and coordinated, it includes note taking study strategies, group discussion etc.

The finding is that ADHD has a significant negative influence on study habits of undergraduate students in Cross River University of Technology Calabar. Corroborate studies by Simon-Dick, Rodriguez and Marcum (2016) who found that undergraduate students in Indiana University, Soth Bent, USA with symptoms of Attention deficit hyperactive disorder (ADHD) indicated surface approach to studying strategies. Other findings in consonance with the finding of this study include research findings by Fleming and McMahon (2012). Nelget, Smart and Market (2014), whose studies indicated that attention deficit disorder negatively, influenced students study.

CONCLUSIONS

Attention deficit hyperactivity disorder and study habit of students are both not influenced by their academic programmes. However, gender or sex of the student has influence on study habit and ADHD. Student, who manifest symptoms of Attention deficit hyperactivity disorder are found to have very serious ineffective study habits, as studying effectively requires a high degree of concentration and psychological stability.

RECOMMENDATIONS

The following are some recommendations from the inferences of this study:

- Students with Attention deficit hyperactivity disorder should require proper guidance on study strategies.
- Such students should be encouraged to participate in group study, rather than study in isolation.
- They should be encouraged to study in a serene environment to avoid distractions.

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