Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

[1]Muhammad Adam, [2]Aminu Yusuf & [3]Zainab Aliyu Abubakar
[1,2]Department of Educational Foundations
[3]Department of Vocational and Technical Education
Abubakar Tafawa Balewa University, Bauchi.
E-mail: amuhammad2@atbu.edu.ng,
yusufaminu59@yahoo.com,aliyuzainabgiade@gmail.com

ABSTRACT

Determining the relationship between sleep quality and academic stress among under graduate students were among the objectives of this study. Correlational research design was adopted for this study. The population of the study constitutes 563 undergraduate Business Education students from the Faculty of Technology Education. A sample size of 217 students was drawn using proportionate stratified sampling techniques as participants in this study. A self designed questionnaire titled "Counselling Intervention for Psychological Adjustment Questionnaire (CIPAQ)" was used for data collection in this study. The scale has a coefficient reliability index of 0. 85. Hypothesis was formulated and tested at a 0.05 level of significance. The data was analysed using mean, standard deviation and independent sample t-test. Findings from the study showed that there is a significant difference (t-value= 45.3 as against t-critical = .000) between psychological adjustment and academic achievement of undergraduate students in educational research method .However recommendations offered a need to sensitize study skills and group discussion among the students; this will go a long way in assisting them to learn and understand the basic rudiments in educational research method.

Keywords: *Psychological Adjustment, Maladjustment , academic achievement, self-confidence.*

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

INTRODUCTION

Business education students at Abubakar Tafawa Balewa University (ATBU), Bauchi, need to determine the grade they want to have through hard work in their studies to avoid carrying over any course. This made students to spent most of their nights reading in order to pass their examinations (Hashnes & Chervin, 2014). Some of the students are likely to use caffeinated beverages to keep awake for a long time through the night to read. They sometimes end up sleeping for two to three hours a day. Usually any person who spent less than six hours sleep would have the tendency of accumulating sleep debt, which may lead to excessive daytime drowsiness. Heffron (2013) advised that you should have about eight hours sleep each night. Deprivation of sleep to less than six or seven hours per day can lead to serious impairment of cognitive and psychomotor functions, reduces concentrations, memory and thinking strategies that diminishes academic performance resulting to poor grade which may likely graduate to stress (Sano, 2016). Poor sleep quality is related to several negative consequences. According to Tutor Doctor (2014) believed that stress can disrupt and sleep loss can increase subsequent stress level.

Stress is defined by Sutton (2000) as a response to situation which a person perceived as threatening. Therefore, high level of stress had the ability to prevent students from being successful in their respective educational goals.

A healthy amount of stress is a powerful motivating force, which can prosper on students' success (Mallum, 2005). On the other hand, if stress level becomes too high, all positive stimulation is replaced by extreme weariness and affected victims begin to find it difficult to contend on (Baba, Adam & Abdulsalam, 2014). Akinade

(2007) sees stress as any stimulus that either raises your excitement or anxiety level beyond what you regard as above your usual or personal capabilities. It may jolt you to move to better activity or retard your ability to cope up with the event at hand. Obviously stress is common in the lives of individual regardless of race or cultural background. We should note that stress is too personal and distinctive that what may be comforting to one person may be stressful to another person.

Academic stress is defined by Uzoeshi (2012) as demands placed on students, which exceed their adaptive resources which make them take extra steps in order to cope with such situation. Academic stress therefore, falls in the category of performance which put pressure on the students to have high productivity and to meet time demands.

Academic stress has been found to be associated with time management, workload and sleep quality (Rehman, Syed & sheikh, 2013). It is therefore necessary for the undergraduate business education students to understand the relationship between these factors and try to manage their level of stress to work positively for their own advantages Mallum (2005) observed that the major challenges in stressful situation are to make the stress in our lives work for advantage instead of against us.

STATEMENT OF THE PROBLEM
The prevalence of academic stress among undergraduate business education students at ATBU have been a thing of concern for all and sundry. This could likely be attributed to the high demand placed by the department and the aspiration put forward by the students to see the excel in all courses they registered for the semester. These made must of the students spent less hours

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

sleeping at night in order to read their books. It is possible for sleep loss to degrade mood and lead to depression which may graduate to stress. Majority of the students obtained less than five hours sleep at night reading during continuous assessment week for fear of failing the courses they registered. Less sleep among students could lead to physical ailment, poor academic performance, and mental health behavioural issues (Tutor Doctor, 2014). The students spent long hours of the day receiving lectures and reading voluminous books at night and left with no enough time to have a qualitative sleep. This may likely lead them to develop academic stress. Some of the students take caffeinated beverages on the night to keep awake to read on the day prior to examination. This situation could likely lead the students to obtain lower grade, increase risk of accident, impaired mood, fatigue and lack concentration during lecture or examination. To this end the main thrust of this study is to correlate sleep quality and academic stress among undergraduate students, and then proffer counselling intervention.

OBJECTIVES OF THE STUDY

3 objectives were formulated to guide this study as thus;

1. To find out the relationship between sleep quality and academic stress among undergraduate students.
2. To determine the relationship between qualitative sleep and academic achievement among undergraduate students.
3. To assess the relationship between qualitative sleep and concentration in class work among male and female undergraduate students.

Research Questions

3 research questions were formulated to guide this study as thus;

1. What is the relationship between sleep quality and academic stress among undergraduate students?
2. What is the relationship between qualitative sleep and academic achievement among undergraduate students?
3. What is the relationship between qualitative sleep and concentration in class work among male and female undergraduate students?

Hypotheses

3 hypotheses were formulated to give a focus to this study as thus;

1. There is no significant relationship between sleep quality and academic stress among undergraduate students.
2. There is no significant relationship between sleep quality and academic achievement among undergraduate students.
3. There is no significant relationship between sleep quality and concentration in class work among male and female undergraduate students.

Research Design

Correlational research design was adopted for this study. Data were collected from different sample and were correlated in order to see the relationship between the variables. Awotunde and Ugodulunwa (2004) posited that the purpose for correlation is figure out which variables are connected. To achieve this five levels of under graduate business education students from ATBU were used. The justification for using correlational design for this study is to determine the level of strength and direction of the relationship of academic stress and sleep quality on academic achievement among the undergraduate students of business education at ATBU .

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

Population and Sample Size

The population of the study consisted of 563 undergraduate students from level 1 to level 5 studying business educations at ATBU, Bauchi. The sample size is 217 students drawn from the total population. This number was arrived at using the table for determining sample size from a give population (Research Advisor, 2006). Sample was proportionately selected using proportionate stratified random sampling techniques. The technique was employed in order to give a uniform sampling fraction from each of the five levels. To this end the sample was drawn based on population from the various five levels who participated in this study. This was used to determine the sample size as thus:

Table1: Population (n) and Sample Size (s) distribution of business education students

s/no	Variables		N	S	%
1	One	hundred	176	68	31
	level				
2	Two	hundred	157	61	28
	level				
3	Three	hundred	89	34	16
	level				
4	Four	hundred	76	29	13
	level				
5	Five	hundred	65	25	12
	level				
	Total		563	217	100

Field work 2017

The summary of the selected sample size presented on table 1, indicated the selection of the sample of the undergraduate students as they were drawn from the population. The 217 were drawn to respond to the questionnaire from the 5 levels as thus; 68 (31%) of the respondents were drawn from 100 level. 61 (28%) of the

students were drawn from 200 level, 34 (16%) were drawn from 300 level, 29 (13%) were drawn from 400 level and 25 (12%) were drawn from 500 level respectively.

Instrumentation

Two instruments were used for this study as thus; one Pittsburgh Sleep Quality Index developed by Buysse, Reynolds, Monk, Berman and Kupfer in 1989 was adopted for this study. It is a 9 items scale that measure global self-report of sleep quality. The scale is believed to be one-dimensional. All items were answered using a 5-point Likert scale. The instrument has a reliability coefficient index of 0.83. The rationale for adopting this instrument was it was the most widely used of global self-report on sleep quality. This instrument was used in measuring the sleep quality of the students while, the second instrument 'Caffeine and Academic Performance Inventory' (CAPI) was developed by the researchers and used in the study. The questionnaire was divided into two sections A and B respectively, while section A dealt with personal information of the respondents. Section B contained 20 items on modified four Likert type scale ranging from strongly agree to strongly disagree. Of the 20 items 3, 5, 7, 10, 11, 15, 18 and 20 were negative responses and the rest items were positive. While the maximum score is 80 marks, the minimum is 20 marks. The total score for each item was taken as the index assessment for relationship between stigma and utilization of HIV voluntary counselling centres. The mean score of 3(m=3) and above for each scored item indicated agreement or acceptance with the statement on the item, while mean score less than three (3) is disagreement or rejection of the statement on the item. A sample of 100 respondents was drawn and pilot tested from two tertiary schools within Bauchi LGA. Initially the questionnaire contained 30 items of which 10 items were

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

rejected during the validity. A reliability index of 0.80 was obtained using cronbach's alpha.

Procedure for Data Collection

The researchers along with 3 trained assistants distributed the questionnaire to 217 students selected from the 5 levels in the business education unit. Of which 200 (92%) questionnaire were returned and 17 (8%) were not returned. The returned questionnaire were marked and scored in order to determine the relationship between academic stress and sleep quality on undergraduate students' academic achievement.

Procedure for Data Analysis

The Pearson Product Moment Correlation Coefficient (PPMCC) was employed to analyse the hypotheses. The justification for the use of this statistics was that PPMCC is used to establish a relationship between the students' responses on sleep quality and academic stress, and then sleep quality and academic performance.

Results

The results of the research questions and hypotheses tested at the probability level of 0.05 levels are hereby presented below:

Ho1: There is no significant relationship between sleep quality and academic stress among undergraduate students.

The hypothesis was tested using Pearson Product Moment Correlation Coefficient. The result for the descriptive information analysis is presented as one (N=200(92%), M=62.44, SD=12.82, P<.0OO); two (N=200(92%), M=19.83, SD=12.16, P<.000).

The result presented the analysis of PPMCC on table 2.

Table2: PPMCC analysis of sleep quality and academic stress among undergraduate students.

Variables		Sleep quality	Academic stress
Sleep quality	Pearson correlation	1	.871**
	Sig (2 - tailed)		.000
	N	200	200
Academic stress	Pearson correlation	.871**	1
	Sig (2 - tailed)	.000	
	N	200	200

**correlation is significant at α=0.05 levels (2-tailed).

There was a positive high significant relationship between the two variables (r=.871**, n=200, p=<0.05), with high level of academic stress associated with low level of sleep quality. This means that changes in one variable are highly correlated to changes in the second variable. For this reason we can conclude that there is a high relationship between sleep quality and academic stress. Therefore, the alternative hypothesis is withheld.

Ho2: There is no significant relationship between qualitative sleep and academic achievement among undergraduate students.

The hypothesis was tested using Pearson Product Moment Correlation Coefficient. The result for the descriptive information analysis is presented as one (N=200(92%), M=61.43, SD=11.11, P<.0OO); two (N=200(92%), M=18.88, SD=10.95, P<.000).

The result presented the analysis of PPMCC on table 2.

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

Table3: PPMCC analysis of sleep quality and achievement among undergraduate students

Variables		Sleep quality	Academic stress
Sleep quality	Pearson correlation	1	.979**
	Sig (2 tailed)	-	.000
	N	200	200
Academic stress	Pearson correlation	.979**	1
	Sig (2 tailed)	- .000	
	N	200	200

**correlation is significant at ɑ=0.05 levels (2-tailed).

There was a positive high significant relationship between the two variables (r=.979**, n=200, p=<0.05), with high level of academic achievement associated with low level of sleep quality. This means that changes in one variable are highly correlated to changes in the second variable. For this reason we can conclude that there is a high relationship between sleep quality and low academic achievement. Therefore, the alternative hypothesis is withheld.

Ho3: There is no significant relationship between qualitative sleep and concentration in class work among male and female undergraduate students.

The hypothesis was tested using Pearson Product Moment Correlation Coefficient. The result for the descriptive information analysis is presented as one (N=200(92%), M=62.44, SD=12.82, P<.0OO); two (N=200(92%), M=25.14, SD=6.83, P<.000).

The result presented the analysis of PPMCC on table 2.

Table4: PPMCC analysis of sleep quality and concentration in class work among male and female undergraduate students

Variables		Sleep quality	Concentration in class work
Sleep quality	Pearson correlation	1	.581**
	Sig (2 - tailed)		.000
	N	200	200
Concentration in class work	Pearson correlation	.581**	1
	Sig (2 - tailed)	.000	
	N	200	200

**correlation is significant at α=0.05 levels (2-tailed).

There was a positive moderate significant relationship between the two variables (r=.581**, n=200, p=<0.05), with low level of sleep quality associated with moderate level of concentration in class work among male and female. This means that changes in one variable are highly correlated to changes in the second variable. For this reason we can conclude that there is a moderate relationship between sleep quality and concentration in class work among boys and girls. Therefore, the alternative hypothesis is withheld.

DISCUSSION

From the analysis of the data collected and the hypotheses tested, it was discovered in hypothesis one that there was significant high positive relationship existing between sleep quality and academic stress among business undergraduate students. However, students who had less time sleeping or experienced poor sleep quality (not less than seven hours sleep) developed academic stress than those who had qualitative sleep. In the same vein Ahrberg, Drester, Neidemeir, Steiger, and Genzel (2012) stressed that students who performed worse on their exams seem to be more stressed and suffer from sleep quality. Feld (2011) reported that high prevalence of harmful physical and psychological

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

correlates of stress and related unhealthy behavior such as widespread and chronic sleep deprivation.

Findings from hypothesis two showed there was a positive high significant relationship between academic achievement and sleep quality. This finding is similar to the findings of Mirghani, Mohammed, Almurtadha, and Ahmed (2015) who concluded that there is a significant difference between excellent and average groups was found over all sleep quality. In the same vein Zeek, Savoie, Song, Kennemur, Qian, Jungnickel and Westrick (2015) stressed that longer sleep duration the night prior to an examination was associated with high course grades and semester grade point average (GPAS). Hershnes & Chervin (2014) reported that sleep deprivation results in lower grade point, increase risk of academic failure, compromised learning, impaired mood and increase risk of vehicle accident.

Findings from hypothesis three showed a moderate positive relationship between sleep quality and concentration in class work between male and female students. It was discovered in this study that students who sleep for few hours go to the class exhausted. which affects their memory, poor judgments and moods. Sano (2016), reported that sleep quality has a significant influence on mental scores and morning alertness, happiness and energy scores which influence physical health measures. In a similar vein Sano (2016) reported that any prolong sleep deprivation will affect the mood, energy level and ability to focus and concentrate and learn.

Counselling Intervention
The counsellor is a psychological engineer, who has the knowledge of intervening between the client's normal and abnormal behaviour that destabilized him/her by

designing a therapeutic programme. Counselling is the best talking therapy, which is ideal for people who are basically healthy, but need to be helped with coping skills to reduce their current difficulty they are experiencing.

However the main concern of counselling is to make an individual think more positively about life and free him/her from unhelpful patterns behaviour caused by low self-esteem. This can be done by setting a goal for the client by his/her therapist. The client maybe asked to carry out some tasks that will help in reducing the feeling and thought of low self-esteem in him/her.

Obviously, intervention is emergence and temporary care given by the counsellor to the client because of an unusual behaviour due to low self-concept that rendered the client not to function normal. The priority of the intervention and counselling is to increase stabilization of the students in studying educational research method. The intervention is given in form individual or group counselling.

CONCLUSION
Conclusion drawn from this study indicated the relationship between sleep quality, academic achievement, concentration and academic stress among undergraduate students. Structured interview were used to obtain the data for the study. Sample of 217 students were used. Findings from the study revealed that, there was significant relationship between sleep quality and academic stress, academic achievement and sleep quality and concentration and sleep quality among business education undergraduate students in studying educational research method among undergraduate students. Although the study was limited to only business education unit in the Faculty, there is a need for similar

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

study with other departments and faculties in the university.

RECOMMENDATIONS

Based on the findings of this study, the following recommendations were put forward:

1 .   There is a need to sensitize study skills and group discussion among the students; this will go a long way to assist them to learn and understand the basic rudiments in educational research method.

REFERENCE

Akinade, E. A. (2007). Stress understanding and managing it. Lagos: Pumark publishers limited

Ahrberg, K.; Drester, M.; Nudermaier, S.; Steiger, A. & Ganzel, L. (2012). The interaction between sleep quality and academic performance. Journal of psychiatric research 46 (12): 1618 – 1622.

Awoyunde, P. O. & Ugodulunwa, C. A. (2014). Research methods in education. Jos. Feb Anieh (Nig) Ltd.

Baba, M. M.; Adam, M. & Abdulsalam, I. (2014). Perceived influence of stress and counselling interventions on long vocation training undergraduate students of technology education in north eastern Nigeria. ATBU Journal of science technology and education 3 (1): 151 – 157.

Feld, L. D. (2011). Student stress in high pressure college preparatory schools. Unpublished B.A. project: Wesleyan University.

Heffron, T. M. (2013). Sleep and caffeine. http://sleepeducation.org/news/2013/08/01sleep

-and-caffeine. Retrieved on 23/1/2018.

Hershness, S. D. & Chervin, R. D. (2014). Causes and consequences of sleepiness among College students https://www.nchi.ncbi.nih.gov/pmc/articles/pmc4075951/. Retrieved on on 2/11/2017.

Mallum, Y. A. (2005). Guidance and counselling of special population. Jos: Deka publishers.

Mirghani, H. O.; Mohammed, O. S.; Almutadha, Y. M. & Ahmed, M. S. (2015). Good sleep quality is associated with better performance among Sudanese medical students https://doi.org/101186/s13104-015-1712-9. retrieved on 20/1/2018.

Rehman, R.; Syed, S. & Shaikh, S. (2013). Health and spiritually walk along in wellness journey Of medical students. www.jpma.org.pk. Retrieved on 20/1/2018.

Research Advisor (2006). Required sample size table. http://research-advisors.com/tools/ samplesize.htm. retrieved on 12/3/2018.

Sano, A.(2016). Measuring college students' sleep, stress, mental health and well being with wearable sensors and mobile phones institute of technology

Sutton, J. (2000). Thrive on stress. United Kingdom: customer services dept. phymbridge house east over road.

Tutor Doctor (2014). Lack of sleep leads to poor academic performance.

http://www.tutordoctor.com/blog/2014/november/lack-of-sleep-leads-to-poor- academic-performance. Retrieved on 7/11/2018.

Uzoeshi, K. (2012). Counselling as panacea for stress management among students in tertiary institutions. Journal of issues in the role of counselling in nation

Academic Stress, Achievement and Concentration as Correlate Sleep Quality among Undergraduate Business Students: Counselling Intervention

Aminu Yusuf et al.,

building curbing the manace of child abuse 1 (1): 37 – 42.

Zeek, M. L.; Savoie, M. J.; Song, M. & Kannemur, L. M. (2015).