

Factors Associated with Student Performance at the Copperbelt University School of Medicine

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Abstract

Introduction: Higher education is seen as an important aspect for an individual, as it is imperative for getting good jobs, success and opportunities for better living. Academic performance of any student is a result of interactions of various factors, which could have an effect on a student's academic performance either positively or negatively. This research is a correlational study taking the quantitative approach that examines the association of various factors at play that would have an effect on student's academic performance.

Aim: The aim of the study was to find associations between the factors being studied which are stress, quality of sleep, time management, lifestyle and their effect on an individual's academic performance.

Methodology: The study was carried out at the Copperbelt university school of medicine, amongst those that have completed at least an academic year. A self-administered questionnaire was given to a total of 270 participants. The data was coded and analyzed with SPSS software.

Results: Out of 270 questionnaires given, a total of 262 were collected giving a response rate of 96.3%. 44.3% were in their 2nd year and 55.7% in 3rd year. Dominant programme of study was MBChB 67.6% and BDS 32.4%. Academic performance was measured using cGPA which was categorized as excellent with a frequency of 27.5%, average 53.8% and poor 18.7% according to GPA calculated. The study revealed significant associations between levels of stress and academic performance, time management as well as quality of sleep as the p -value < 0.001. Lifestyle which was subdivided into exercise, healthy diet and substance use had p -values of 0.006, 0.003 and 0.002 respectively, all indicating a significant association with academic performance as p -values were less than 0.05.

Conclusion: The study has given an insight on factors that affect student performance as all the factors investigated in this paper being stress, time management, quality of sleep and lifestyle were associated with student performance. It is recommended that time management and stress management as well as coping programs for university students be implemented, awareness of proper sleep hygiene be done amongst medical students and have authorities establish clubs, promote sports by having them frequently and during such, talks on healthy diets can be done as all this could contribute to success in academic achievement.

Keywords: Bachelor in dental surgery (BDS) • Grade Point Average (GPA) • Education • Gender • Development

Abbreviations: MBChB: Bachelor in Medicine and Surgery; BDS: Bachelor in Dental Surgery; PSQI: Pittsburgh Sleep Quality Index; PSS: Perceived Stress Scale

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Introduction

Background

Students make up a university and their education is one of the most important aspects of human resource development. Student performance plays an important role in being quality graduates who most likely develop into great leaders and increase man resources for the country thus responsible for their own country's development.

Academic performance is the assessment of the extent to which an individual, typically a student achieves a certain educational goal and its positive outcome has great influence when it comes to a student's self-esteem, motivation, and perseverance in higher education [1].

How well students are taught, how much they are able to learn and retain information both have an impact on their duration in school and can either motivate or demotivate them on regular attendance in class, therefore collective effort needs to be made by all stake holders *i.e.* the students, lecturers, administration if at all quality education is to be obtained [2].

A study carried out in Singapore showed that factors such as gender, nationality, co-curricular activities and interest in pursuing higher degrees affected scores of students [3]. Another research done in the United States was based on students profile and attained certain factors such as learning facilities and family stress to be reasons as to poor academic performance [4].

According to Khan a study was conducted regarding excessive internet usage leading to internet addiction as a factor under behavioral patterns of medical students. His findings were that internet addiction adversely affects the Students' academic performance.

Statement of the problem

According to the academic performance record, the Copperbelt university school of medicine has recorded an increase in the number of student drop outs, a large number of students having to sit for supplementary exams and as well as those made to repeat an academic year.

This outcome could be due to certain factors that are associated with poor student performance causing an individual to not attain their desired goal. This, for an educated person is not only to accomplish their desired goal but to render an efficient contribution towards well-being of the community [5].

A major challenge in education management is to uncover underlying factors that affect students' academic performance but according to literature, certain factors such as behavioral patterns and lifestyle of student's eg heavy intake of alcohol and drugs has been found to have a number of consequences related to academic performance [6].

Other factors such as poor quality of sleep has a negative impact on academic performance for adequate sleep is essential to refresh students every day and help them in learning and memory processing, as well as exposure to high amount of stress examples of stressors such as financial stress where a student would seem

overwhelmed regarding having enough money to sustain themselves or perhaps thoughts of how their tuition fees will be catered for, academic stressors, family and time management stressors [7].

Rationale

This study will benefit both the students and facilitators of learning for it will help the university administration to implement measures, designs and ways of which to improve students' performance and work on sustaining an exceptional student performance record. The study may also create a sense of responsibility to students regarding academic success, achievement and change their attitudes toward academic performance [8].

Literature Review

Studies regarding factors associated with student academic performance in various institutions and centers of learning have been carried out and identified. Some of these factors include personality traits, time management, and amount of sleep, behavioral factors and soon [9].

Exposure to high amount of stress with examples of stressors such as financial stress where a student would seem overwhelmed regarding having enough money to sustain themselves or perhaps thoughts of how their tuition fees will be catered for, academic stressors, family and time management stressors can have a negative impact on student performance. HN Lim stated that student's debt and financial situations are one of the leading causes of stress as financial stressors had been ranked as a second largest stressor among students following academic stress [10].

A study was done in a Midwestern university and the findings where those students who experienced high levels of financial stress reported academic distress, family distress as well as low grade point average [11].

According to research done by Gladys, time management is a predictor of academic performance because it involves goal setting and prioritization, control of the time available and planning. The research also indicated that people who engage more in time management behaviors end up having fewer psychological stress as well as physical stress compared to those who have a tendency of last minute preparations for an exam which would usually lead to poor academic performance.

Another research based on the relationship of time management and stress levels to academic performance by Alshutwi showed a statistically significant positive correlation between effectiveness of student's time management, stress levels and academic performance assessed using Grade Point Average (GPA) however, according to Sayari, the study had findings that stipulated the importance of prioritization and its relationship with students' academic performance.

Khan, states that every student should have time management ability comprising of setting goals and priorities, utilizing time management techniques and simply being organised in using time so that students do not lag behind. The study was done to analyse impact of time management on academic performance of students.

The findings of the study were that there is a relationship between time management and academic performance in that successful students are good time managers, as well as there being a significant high and positive relation between time planning, time management and academic performance while a low and positive relation between time consumers and poor academic achievement.

A study done determining the relationship between time management behaviours, gender and GPA found that most students possess a time management score at moderate level with respect to gender differences; it revealed that female students scored higher than males in time management behaviours such as listing, planning and programming [12].

According to research done by Mayes SD it was found that a large study suggested that sleep is minimally associated with academic knowledge, however inadequate sleep has been linked to difficulties with attention, impulse control, and behavior regulation.

Surani study findings established that daytime sleepiness amongst medical students which could be as a result of insufficient amount of sleep during the night leads to poor concentration, as well as lack of motivation and likely increases the level of stress which tends to then affect academic performance [13].

Another study was conducted by Almojali, regarding quality of sleep and its effect on academic performance, the results of the study showed that medical students deprive themselves of sleep in the name of having more study hours, due to multiple demands of the academic environment. The results were supported by a PSQI that the students answered. The same study revealed that GPA is a very important indicator of sleep quality supported by findings that showed that most students who had GPA less than 4.25 happened to be poor sleepers reflecting poor academic performance.

Gaultney, found that Students who are deprived of sleep have low academic performance. His findings included that students who considered themselves to be evening people had insufficient sleep during the week and so had inconsistent bed times which predicted and resulted into having lowered GPA.

A study done amongst Sudanese medical students assessed the association between sleep quality and academic performance, and a significant difference existed between excellent and average students by the findings which concluded that, there is a strong relationship between good sleep and high academic performance [14].

Lifestyle is about an individual's daily activities which encompass them to maintain and improve their health, prevent diseases through physical activities, healthy diets, and appropriate sleep, avoiding substances such as alcohol and smoking behavior. According to Heidari, on the correlation of lifestyle and academic performance, his results findings were that there is a positive and significant relationship between lifestyle and academic achievement.

Regarding healthy lifestyle, a study carried out by Torstveit included diet and physical activity. He found that in both genders, high academic achievement was associated with

regular consumption of breakfast, intake of fruits and physical activity level. He concluded that intake of healthy foods and being physically active were all associated with increased odds of high academic performance while the opposite resulted into decreased odds of high academic achievement. A study done by Ayala assessed alcohol and drug intake of medical students and the study showed that most medical students preferred taking drugs such as tobacco and marijuana at parties. The study reveals that the consequences of intake of alcohol and use of drugs were suicidal ideation, cognitive deficits as well as compromised academic performance. It was also found that the male students consumed more alcohol than their female peers.

Other factors that can be taken into consideration would be school resources and parental factors.

In a particular study by Hanushek, certain school resources were taken into consideration such as lecturer education and experience, lecturer-student ratio, financial resources such as administrative inputs and facilities. However the results showed that there was no strong or consistent relationship between school resources and student performance.

Parents and family are the primary platform in which learning begins and is nurtured, encouraged and developed, which later on transforms to the performance of students [15]. Engaging families and communities promotes student learning and strong partnership and relationships with family and community is fundamental for positive outcomes regarding student performance.

Objectives

General objective: To identify factors that has influence in poor and excellent performance of Students.

Specific objectives

- To investigate pattern of behaviors (lifestyle) that influence student performance.
- To explore the relationship between stress and academic performance.
- To investigate time management skills amongst students.
- To assess the quality of sleep amongst Students and its effect on student performance.

Statement of hypotheses

It is hypothesized that student academic performance is influenced by certain factors such as levels of stress, lifestyle, time management skills and quality of sleep.

Measurement

An ordinal scale will be used based on the answers given by the respondents (Table 1).

Variable	Definition	Indicator	Scale of measurement
Independent variables			

Stress	Physical, mental and emotional tension exerted on students	0=never 1=almost never 2=sometimes 3=always	Categorical
Amount of sleep	Quality of sleep	0=rarely 1=sometimes 2=often 3=almost always	Categorical
Time management	Ability to use one's time effectively and productively	2=always 1=sometimes 0=never	Categorical
Lifestyle	Students way of living		
Dependent variables			
Student performance	How well students do throughout the course of learning	Will be assessed by calculating grade point average with highest to be attained being a 4.0	Discrete

Table 1. The above table discuss about the variables.

Conceptual framework

The conceptual framework shows the relationship between various variables and student performance (Figure 1).

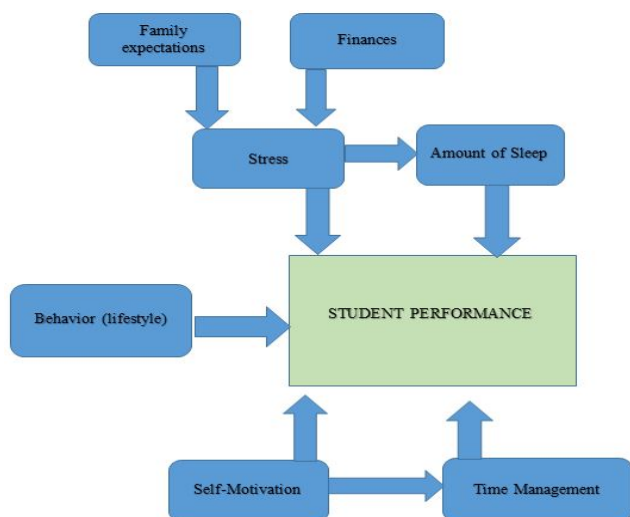


Figure 1. Conceptual framework.

Level of confidence measure	1.645 (at 90% confidence level)
Margin of Error	0.05
Proportion of successes	0.5

Table 2. Level of confidence measure.

Therefore n=270

Sampling procedure

The participants were selected using the simple random sampling technique as long as they met the inclusion criteria.

Inclusion criteria and exclusion criteria

The study focused on students that have completed atleast an academic year and are pursuing MBChB and BDS. The study

Study site

This study was done at the Michael Chilufya Sata School of Medicine (MCS SOM) Copperbelt university. The University has an estimated population of atleast 500 students.

Target population: The target population was students that have completed an academic year at the school of medicine and are currently pursuing MBChB and BDS.

Study design

The cross sectional study design was used to assess the factors stress, sleep, time management and lifestyle related to student performance.

Sample size

The sample size is determined by using the formulae below where; Z is the confidence level, E is the margin of error and P is the proportion of successes in the population (Table 2).

$$n = \frac{p(1-p)(Z/E)^2}{}$$

excluded lecturers and administrative staff and all participants unwilling to take part.

Data collection

Data was collected using a self-administered questionnaire assessing stress using the Perceived Stress Scale (PSS), sleep using a Sleep Quality Scale time management and lifestyle [16].

Data analysis

After the collection of data through the use of questionnaires, it was entered in the computer.

Questionnaires were checked for completeness and verified, before being coded and entered into a database. The obtained data was analyzed using the SPSS software [17].

Study limitation

The number of people willing to take part in the study thereby causing failure to meet all objectives and limitations could have risen from participants who may have not respond truthfully to the administered questionnaire [18].

Results

Introduction

This chapter represents the results obtained from the respondents who were the Copperbelt university michael Chilufya Sata school of

medicine preclinical students. Data was analyzed using the SPSS software. The expected sample size was 270 however a total of 262 responses were received from the participants giving a response rate of 96.3% [19].

Demographics: Demographics were presented in the table as; gender, year of study and programme of study.

Gender: From Table 3, it is shown that the dominant gender was males having a total of 145 giving percentage of 55.3% as compared to females having a total of 117 (44.7%).

Year of study and programme: 3rd year students was the dominant year 146 (55.7%) compared to 2nd year 116 (44.3%) where medicine and surgery programme had a number of 177 participants giving 67.6% compared to dental surgery at 85 giving 32.4%.

Variable		Frequency	Percent (%)
Gender	Male	145	55.3
	Female	117	44.7
	Total	262	100
Year of study	2	116	44.3
	3	146	55.7
	Total	262	100
Programme of study	MBChB	177	67.6
	BDS	85	32.4
	Total	262	100

Table 3. Demographic charecteristics.

Academic performance

From Table 4 and Figure 2, the obtained results show that out of 262 participants a total of 49 (18.7%) had poor Academic

Performance, 141 (53.8%) had an average performance and 72 (27.5) had an excellent academic performance [20].

Variable	Category	Frequency	Percentage (%)
Academic performance	Poor	49	18.7
	Average	141	53.8
	Excellent	72	27.5
	Total	262	100

Table 4. Distribution of participants by study variables.

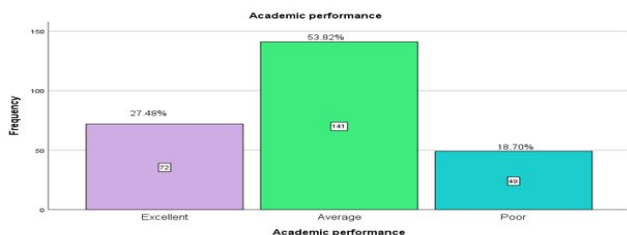


Figure 2. Academic performance.

Stress

Table 5 below shows a summary of the factor stress. The variable was divided into 3 being academic, financial and social stressors.

Academic stressors			
Questions	Answers	Frequency	Percent
Increased workload	Never	42	16
	Sometimes	64	24.4
	Always	156	59.5
	Total	262	100
Receiving a failing grade	Never	68	26
	Sometimes	84	32
	Always	110	42
	Total	262	100
Financial stressor			
Challenges in financial support for school	Never	165	63
	Sometimes	68	26
	Always	29	11
	Total	262	100
Social stressor			
Challenges with finding a balance between school and social life	Never	120	45.8
	Sometimes	76	29
	Always	66	25.2
	Total	262	100

Table 5. Frequency distribution of participants answers to stress questions.

Academic stressors: Divided into 2 being increased workload both from course material and lecturers with results obtained showing a total of 42 (16.0%) and receiving a failing grade 68 (26.0%) that were not academically stressed whereas 156 (59.5%) and 110 (42.0%) were academically stressed respectively.

Financial stressors: A total of 165 (63.0%) where not financially stressed and 29 (11.0%) encountered financial stressors being challenges with financial support either from being worried about losing sponsorship or borrowing money for tuition fees. **Social stressors:** A total of 120 (45.8%) from the results obtained were not socially stressed and a total of 66 recorded positively for being socially stressed.

Sleep

Results obtained in Table 6 under the factor sleep show that a total of 42 (16.0%) did not have difficulty in sleeping and a total of 68 (26.0%) did not have a poor quality of sleep compared to 156 (59.2%) that experienced difficulty sleeping as well as 110 (42.0%) that had poor quality of sleep affecting attentiveness (Figures 3 and 4).

Questions	Answers	Frequency	Percent
Difficulty sleeping	Rarely	42	16
	Sometimes	64	24.4
	Always	156	59.5
	Total	262	100
Poor sleep makes me lose interest in work and remain attentive	Rarely	68	26
	Sometimes	84	32

Always	110	42
Total	262	100

Table 6. Frequency distribution of participants answers to quality of sleep questions.

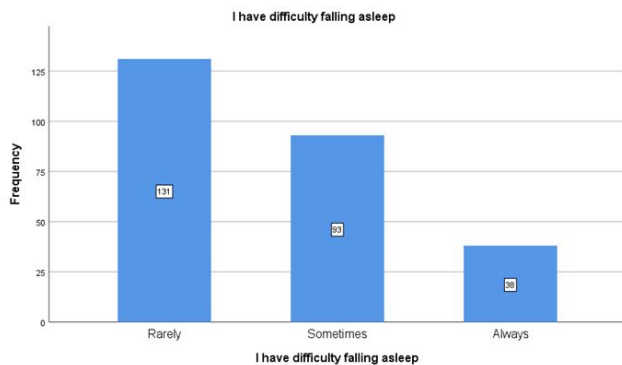


Figure 3. Difficulty sleeping.

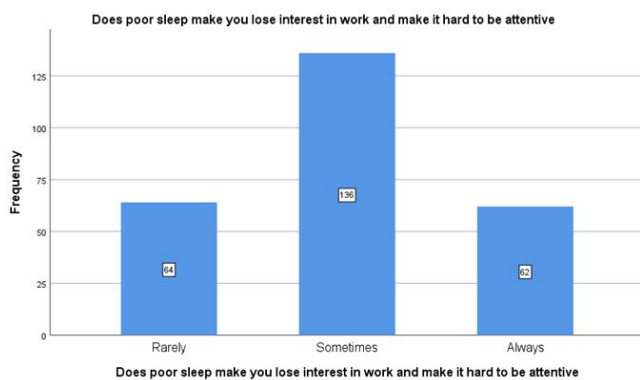


Figure 4. Poor sleep.

Time management

Table 7 below shows results obtained from questions asked to gauge time management. From the table it is shown that out of 262, 35 (13.4%) did not do things in order of priority and 118 (45.0%) did things in order of priority.

- A total of 84 (32.1%) accomplished things done in a day and 33 (12.6%) did not.
- A total of 111 (42.4%) got assignments done on time whereas 36 (13.7%) did not.
- 64 (24.8%) of the participants stated to use their time effectively whereas 32 (12.2%) stated to never do so.
- A total of 101 (38.5%) stated that they prepare daily to do lists and 43 (16.5%) did not do so.

Questions	Answers	Frequency	Percent
I do things in order of priority	Never	35	13.4
	Sometimes	109	41.6
	Always	118	45
	Total	262	100
	Never	33	12.6
I accomplish what needs to be done during the day	Sometimes	145	55.3
	Always	84	32.1
	Total	262	100
Always get my assignments done on time	Never	36	13.7
	Sometimes	115	43.9
	Always	111	42.4
	Total	262	100
Use my time effectively	Never	32	12.2
	Sometimes	166	63.4
	Always	64	24.8

	Total	262	100
Prepare daily or weekly to do lists	Never	43	16.5
	Sometimes	118	45
	Always	101	38.5
	Total	262	100

Table 7. Frequency distribution of participants answers to time management questions.

Lifestyle

Table 8 below and Figures 5 and 6 below shows the results of the different variables that were studied under lifestyle. Out of 262, 148

(56.9%) responded yes indicating being active in any form of exercising whereas 112 (43.1%) responded no.

Exercise	Yes	148	56.9
	No	112	43.1
	Total	262	100
Healthy Diet	Yes	123	47.3
	No	137	52.7
Substance use	Yes	25	9.6
	No	237	90.4
	Total	262	100

Table 8. Frequency distribution of participants answers to lifestyle.

Under healthy diet 123 (47.3%) have a healthy diet and 137 (52.7%) responded stating no. Substance use meant intake of alcohol or smoking and a total of 25 (9.6%) responded stating yes compared to a total of 237 (90.4%) having stating that they neither smoke nor take alcohol.

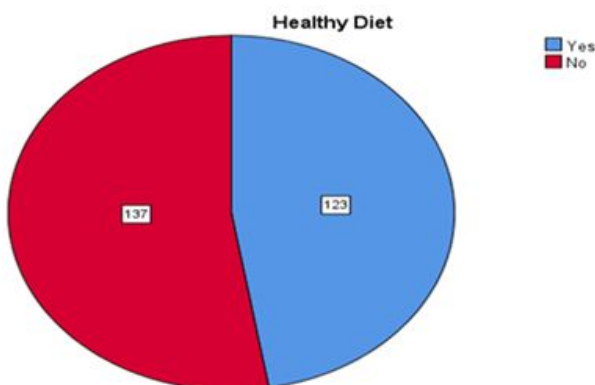


Figure 5. Healthy diet.

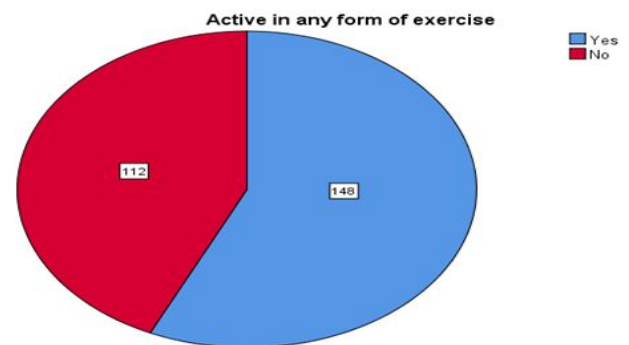


Figure 6. Exercise.

Factors associated with academic performance

The results are showing factors associated with student performance and the parameters studied being stress, time management, sleep quality and lifestyle. The Tables 9-12 gives a summary of the mentioned factors and the results obtained using a *Chi-square* to determine association.

Variable	Category	Frequency of academic performance			Chi-square (p value)
		Poor	Average	Excellent	

Academic stressors						
Increased workload	Never	Count	0	14	28	<0.001
		% within increased workload	0.00%	33.30%	66.70%	
	Sometimes	Count	16	39	9	
		% within increased workload	25.00%	60.90%	14.10%	
	Always	Count	33	88	35	
		% within increased workload	21.20%	56.40%	22.40%	
Receiving a failing grade	Never	Count	12	8	48	<0.001
		% within receiving a failing grade	17.60%	11.80%	70.60%	
	Sometimes	Count	16	59	9	
		% within receiving a failing grade	19.00%	70.20%	10.70%	
	Always	Count	21	74	15	
		% within receiving a failing grade	19.10%	67.30%	13.60%	
Financial stressor						
Challenges in financial support for school	Never	Count	17	90	58	<0.001
		% within challenges in financial support for school	10.30%	54.50%	35.20%	
	Sometimes	Count	21	38	9	
		% within challenges in financial support for school	30.90%	55.90%	13.20%	
	Always	Count	11	13	5	
		% within challenges in financial support for school	37.90%	44.80%	17.20%	
Social stressors						
Difficult finding a balance between school and social life	Never	Count	15	57	48	<0.001
		% within difficult finding a balance between school and social life	12.50%	47.50%	40.00%	
	Sometimes	Count	10	50	16	
		% within difficult finding a balance between school and social life	13.20%	65.80%	21.10%	
	Always	Count	24	34	8	
		% within difficult finding a balance between school and social life	36.40%	51.50%	12.10%	

Table 9. Stress associated with academic performance.

Variable	Category		Frequency of academic performance			Chi-square (p value)
			Poor	Average	Excellent	
Doing things in order of priority	Never	Count	12	16	7	<0.001
		% within doing things in order of priority	34.30%	45.70%	20.00%	
	Sometimes	Count	21	73	15	

		% within doing things in order of priority	19.30%	67.00%	13.80%	
	Always	Count	16	52	50	
		% within doing things in order of priority	13.60%	44.10%	42.40%	
Accomplishing what needs to be done in a day	Never	Count	12	21	0	<0.001
		% within accomplishing what needs to be done	36.40%	63.60%	0.00%	
	Sometimes	Count	35	87	23	
		% within accomplishing what needs to be done	24.10%	60.00%	15.90%	
	Always	Count	2	33	49	
		% within accomplishing what needs to be done	2.40%	39.30%	58.30%	
Getting assignments done on time	Never	Count	10	14	12	<0.001
		% within getting assignments done on time	27.80%	38.90%	33.30%	
	Sometimes	Count	21	79	15	
		% within getting assignments done on time	18.30%	68.70%	13.00%	
	Always	Count	18	48	45	
		% within getting assignments done on time	16.20%	43.20%	40.50%	
I use my time effectively	Never	Count	10	16	6	<0.001
		% within I use my time effectively	31.30%	50.00%	18.80%	
	Sometimes	Count	39	110	17	
		% within I use my time effectively	23.50%	66.30%	10.20%	
	Always	Count	0	15	49	
		% within I use my time effectively	0.00%	23.40%	76.60%	
Prepare daily or weekly to do lists	Never	Count	14	20	9	<0.001
		% within I prepare daily or weekly to do list	32.60%	46.50%	20.90%	
	Sometimes	Count	32	78	8	
		% within I prepare daily or weekly to do list	27.10%	66.10%	6.80%	
	Always	Count	3	43	55	
		% within I prepare daily or weekly to do list	3.00%	42.60%	54.50%	

Table 10. Time management and academic performance.

Variable	Category		Frequency of academic performance			Chi-square (p value)
			Poor	Average	Excellent	
Difficulty falling asleep	Rarely	Count	6	79	46	<0.001
		% within difficulty falling asleep	4.60%	60.30%	35.10%	
	Sometimes	Count	23	46	24	
		% within difficulty falling asleep	24.70%	49.50%	25.80%	
	Always	Count	20	16	2	
		% within difficulty falling asleep	52.60%	42.10%	5.30%	
Poor sleep makes me lose interest in work and attention	Rarely	Count	8	40	16	0.004
		% within accomplishing what needs to be done	12.50%	62.50%	250.00%	
	Sometimes	Count	27	71	38	
		% within accomplishing what needs to be done	19.90%	52.20%	27.9	
	Always	Count	14	30	18	
		% within accomplishing what needs to be done	22.60%	48.40%	29.00%	

Table 11. Sleep and academic performance.

Variable	Category		Frequency of academic performance			Chi-square (p value)
			Poor	Average	Excellent	
Healthy diet	Yes	Count	25	54	44	0.003
		% within healthy diet	20.30%	43.90%	35.80%	
	No	Count	24	87	28	
		% within healthy diet	17.30%	62.60%	20.10%	
Exercise	Yes	Count	21	75	52	0.006
		% within exercise	14.20%	50.70%	35.10%	
	No	Count	28	66	20	
		% within exercise	24.60%	57.90%	17.50%	
Substance use	Yes	Count	4	21	0	0.002
		% within substance use	16.00%	84.00%	0%	
	No	Count	45	120	72	
		% within substance use	19.00%	50.60%	30.40%	

Table 12. Lifestyle and academic performance.

The associated factors being stress, time management, sleep and lifestyle was dependent on the *Chi-square* p-value results (>0.05 means there is no association).

From the results, all factors have an association with academic performance. Therefore there is a positive correlation between levels of stress and academic performance, time management, lifestyle and

academic performance as well as quality of sleep and academic performance.

Discussion

This study was sought to assess the factors that affect student performance positively and negatively. This chapter discusses findings of the different factors studied such as levels of stress, time management, and quality of sleep as well as lifestyle.

Stress

In this study stress was broken down into stressors that students commonly face such as academic stressors, financial stressors and social stressors. Academic stress in this paper refers to increased workload from the lecturers as well as course load, greater academic demands. Financial stress is referred to challenges in financial support for school such as borrowing money, fear of losing support from government, as financial stress was mentioned as one of the leading cause of stress second largest following academic stress. Social stress was referred to as challenges with finding a balance between social life and school.

The study revealed that there is a significant association between levels of stress each student stressor brought and academic performance. Students with an excellent grade (66.7% academic stress, 35.2% for financial stressors and 40.0% social stress) had low levels of stress compared to those that had poor grades. These findings were consistent with a study done at a Midwestern university by Cadaret, whose findings where that higher level of financial stress is associated with academic distress and a lower GPA. Findings of another study done by Ross, whose findings showed that 37.7% of students that worried about financial situations and debt were ranked lower in their classes and findings of a study carried out by Khan on effect of perceived academic stress on student performance, the findings revealed a significant between the two as Students that had increased work load led to high levels of stress.

Time management

The study revealed that there is a positive correlation between time management and academic performance, findings show that students that had an excellent scores were good at time management skills such as prioritizing and planning 42.4% and 54.5% respectively compared to those with poor scores 13.6% and 3.0% respectively and the rest recorded an average score. The findings are similar to a study done in Pakistan by Khan, whose study revealed that time management is highly related to academic performance of university students, as successful students were good time managers and those that scored poor in academic achievement were poor in time management.

Quality of sleep

The study assessed the association between sleep quality and academic performance using some components of the PSQI and the data shows an association between quality of sleep and academic performance and these findings are in agreement with a study conducted amongst Sudanese medical students, whose findings revealed a strong relationship between good sleep quality and

academic performance p-value <0.001. Another study conducted by Gaultney, from his findings concluded that a low quality of sleep reflected low academic performance.

Lifestyle

Lifestyle in this study was broken down into exercise, healthy diet as well as Substance use which meant intake of either alcohol or smoking.

For each parameter it was found that there is an association between all three parameters and academic performance. Those that recorded positive for having a healthy diet, exercise as well as did not use any substances had better performance compared to those that did not have a healthy diet and were not active in any kind of sport or exercise. A study was done in Norwegian that revealed that an intake of healthy food, being physically active were all associated with increased odds of high academic performance, whereas the opposite was associated with decreased odds of high academic performance.

Conclusion

The study aimed to assess factors affecting academic performance amongst the Copperbelt university school of medicine students and the list of factors investigated in this study was not exhaustive as there are many other factors that affect academic performance. However, it can be concluded that from this study factors having been investigated being stress, time management, quality of sleep and lifestyle all are associated with academic performance. It is a necessity for educators to understand factors affecting student performance as this may help contribute to academic success. Further research is needed to investigate and explore other factors that could affect academic performance.

Limitations

The participants of this study were students from one university and so this restricts the extent to which these findings can be applied to other students from other universities. Some of the limitations in this study are that the study relied on self-report measures of the cGPA that was obtained through the questionnaire. The study used a correlational analysis in some aspects which does not prove causal relationships. Including more factors could help with obtaining a better result.

Recommendations

From the findings in this study, it is recommended that:

- In existing counseling points, varying problems confronting financial status of students should be tackled as this will help tackle student's general mental health.
- Counselors can provide time management and stress management and coping programs for university students.
- Medical students should be made more aware of benefits of proper sleep hygiene and rendered help or advice to help them structure their routines well in a manner that quality of sleep is achieved and does not affect their academic commitments.

- Majority of respondents rarely are active in any form of sport or exercise therefore it is recommended that authorities establish clubs, promote sports by having them frequently and during such, talks on healthy diets can be done.

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Ethical Consideration

Ethical approval was granted by Tropical Diseases Research Centre (TDRC) before beginning the study (attached at the end). Consent was obtained verbally from the participants who were willing to participate. Before the research, the participants were informed about the project and what was required of them. They were informed to withdrawal at any time they feel like. Confidentiality and respect was put into consideration.

References

- Almojali, Abdullah I, Sami A Almalki, Ali S Allothman, and Emad M Masuadi, et al. "The prevalence and association of stress with sleep quality among medical students." *J Epidemiol Glob Health* 7 (2017): 169-174.
- Alshutwi, Sitah, Haya Alkhanfari, and Norah Sweedan. "The influence of time management skills on stress and academic performance level among nursing students." *J Nurs Educ Pract* 10 (2019): 96-100.
- Arora, Nisha, and Neetu Singh. "Factors affecting the academic performance of college students." *J Educ Technol* 14 (2017): 47-53.
- Avdija AS. "College stress: Testing the unidimensionality of a standardized stress measuring inventory designed to assess stress among college students." *Child Teena* 1 (2018): 68-83.
- Ayala, Erin E, Destiny Roseman, Jeffrey S Winseman, and Hyacinth RC Mason, et al. "Prevalence, perceptions, and consequences of substance use in medical students." *Med Educ Online* 22 (2017): 1392824.
- Cadaret, Michael C, and Sara Rieder Bennett. "College students' reported financial stress and its relationship to psychological distress." *J Coll Couns* 22 (2019): 225-239.
- Cao, Yi, Jian GAO, Defu Lian, and Zhihai Rong, et al. "Orderliness predicts academic performance: Behavioural analysis on campus lifestyle." *J R Soc Interface* 15 (2018): 20180210.
- Beebe, Dean W. "Cognitive, behavioral, and functional consequences of inadequate sleep in children and adolescents." *Pediatr Clin North Am* 58 (2011): 649-665.
- Gaultney, Jane F. "The prevalence of sleep disorders in college students: Impact on academic performance." *J Am Coll Health* 59 (2010): 91-97.
- Lim, HanNa, Stuart Heckman, Catherine Phillips Montalto, and Jodi Letkiewicz, et al. "Financial stress, self-efficacy, and financial help-seeking behavior of college students." *J Financial Couns Plan* 25 (2014): 148-160.
- Hanushek, Eric A. "Assessing the effects of school resources on student performance: An update." *Educ Eval Policy Anal* 19 (1997): 141-164.
- Mirghani, Hyder Osman, Osama Salih Mohammed, Yahia Mohamed Almortadha, and Moneir Siddig Ahmed, et al. "Good sleep quality is associated with better academic performance among Sudanese medical students." *BMC Res Notes* 8 (2015): 1-5.
- Al Khatib, Ahmad Saleh. "Time Management and Its Relation to Students' Stress, Gender and Academic Achievement among Sample of Students at Al Ain University of Science and Technology, UAE." *Int J Bus Soc Res* 4 (2014): 47-58.
- Waseka, Elizabeth Luttah, and Enose MW Simatwa. "Student factors influencing academic performance of students in secondary education in Kenya: A case study of Kakamega County." *Educ Res* 7 (2016):072-087.
- Mushtaq, Irfan, and Shabana Nawaz Khan. "Factors Affecting Students' Academic Performance." *Glob J Manag Bus Res* 12 (2012):17-22.
- Ogunsola, Oladele K, Kazeem A Osuolale, and Akintayo O Ojo. "Parental and related factors affecting students' academic achievement in Oyo State, Nigeria." *Int J Educ Pedagog Sci* 8 (2015): 3137-3144.
- Olufemi, Oladebinu Tokunbo, Amos Adekunle Adediran, and WO Oyediran. "Factors affecting students' academic performance in colleges of education in Southwest, Nigeria." *Br J Educ* 6 (2018): 43-56.
- Pakseresht, Sedigheh, Komeil Rezaei, Afsaneh Pasha, and Ehsan KazemNejad Leili, et al. "Health promoting lifestyle among students at Guilan University of Medical Sciences." *J Holist Nurs Midwifery* 27 (2017): 19-26.
- Sevari K, and Mitra Kandy. "Time management skills impact on self-efficacy and academic performance." *J Am Sci* 7 (2011): 720-726.
- Singh, S., and D. Kamra. "Study of factors affecting academic achievement in medical students." *J Med Sci Clin Res* 4 (2016): 14968-14972.

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