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Association between Lifestyle and Higher Learning Students' Academic Performance in Tanzania

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Abstract: This study sought to establish the correlation between students' lifestyles and academic performance through a cross-sectional design. The study involved a diverse student population, employing a questionnaire. Data analysis took place through descriptive and thematic approach. The study concludes that marital status, sexual activity and alcoholism did not have significant associations with academic performance. Spending more than two hours on the internet for socialization was associated with decreased likelihood of high academic performance. Neither living environment nor job status showed significant associations with high academic performance. Based on the conclusions, students need a balanced internet usage. There is a need for students to regulate the time used for internet. Students have to use the internet for both academic and social purposes. While lifestyle components such as marital status, sexual activity, alcoholism and engagement in recreational activities do not have significant associations with academic performance, it is still essential for students to be aware of how their lifestyle choices may affect their academic achievement and social overall well-being. Finally, there is a need to create students' awareness of recreational activities and academic success.

Keywords: Lifestyle components; academic performance; higher learning students; correlation and regression.

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Introduction

Over the past fifty years, the higher education system has experienced several changes for the advantage of maturing of young adults with higher education backgrounds and skills required in the labor market (Mkude et al., 2003). In 1999, the higher education policy (HEP) of Tanzania highlighted a need to increase the enrolment of students in higher learning institutions (HLIs), being responsive to society and preparing graduates who can compete internationally (United Republic of Tanzania, 1999). These initiatives resulted into increase in students joining HLIs.

According to the Tanzania Commission for Universities (TCU) report, the number of students enrolled in Bachelor's Degree programs rose from 44,715 in 2012/13 to 69,539 in the 2016/17 academic year (Tanzania Commission for Universities, 2019). Most of these students are fresh from secondary schools and are aged 18 years and older. The transition from adolescence to adulthood makes them a vulnerable group as the lifestyle they choose at college may affect the later days of their study life.

Several studies have investigated the association between lifestyle and academic performance among higher learning students. A study by Shafie et al. (2022) in Malaysia aimed to identify the association between students' lifestyle-related behaviors (such as physical activity, diet, and sleep) and academic performance. The study found a significant association between lifestyle-related behaviors and academic performance among students. Other studies Sundarasen et al (2020) and Shafie et al. (2022) during the COVID-19 pandemic in Malaysia, found a low negative correlation between lifestyle and academic performance among students. Given the unique circumstances of the COVID-19 pandemic, it was deemed important to replicate this study in Tanzania to establish any potential effects of the pandemic on the findings.

In Kuwait, Al-Haifi et al. (2023) investigated the association between academic performance indicators and lifestyle behaviors among college students. The study concluded that lifestyle behaviors did not appear to affect students' academic performance. Replicating this study in Tanzania could provide valuable insights and contribute to the development of tailored solutions.

Students choose particular lifestyles for various reasons. Reasons for drinking, as noted by Cahill and Byrne (2010), included sociability, enjoyment and relaxation. Others may drink due to feelings of loneliness or depression. Conversely, good grades are influenced by numerous factors, including socio-economic status, psychological factors, environmental influences, family income, parental education levels, study habits and class attendance, as highlighted by Casanova et al. (2018). Hasan and Fatima (2018) observed that students' lifestyles often depend on the peers they associate with.

Research by Wechsler et al. (1995) identified both positive and negative links between diet, drinking habits and academic performance. The study revealed that students who drink alcohol are more likely to engage in other risky behaviors, such as substance use and risky sexual activities.

Chiasson and Aubé (2008) emphasized the significant impact of lifestyle components on individuals' physical and psychological well-being. They highlighted the intricate connection between lifestyle choices and various aspects of academic performance, including attention, class attendance, vigilance, and overall learning capabilities. Lifestyle factors play a crucial role in shaping students' cognitive and behavioral aspects, potentially influencing their educational experiences and outcomes (Alshammari et al.; 2017).

As observed above, academic research has delved into understanding the impact of lifestyle factors on academic performance. These studies have illuminated the profound influence of lifestyle on scholastic achievements. However, findings vary across contexts, emphasizing the need for localized investigations to establish specific influence of lifestyle on academic success. Cahill and Byrne (2010) stressed the importance of conducting studies in localized settings to capture unique contextual variations and their effects on educational outcomes.

Association between lifestyle and academic performance among higher learning students continues to be a topic of significant interest. While some studies like that of Bou-Hamad (2020) have identified a correlation between lifestyle and academic performance, others have found no significant connection as seen above. Nonetheless, a consensus suggests a positive association between

physical activity, healthy eating habits and academic performance. Therefore, this study related specific lifestyle behaviors with academic achievement among higher learning students in Tanzania.

Methodology

Design

This study adopted the cross-sectional research design. Cross-sectional studies entail gathering data from a diverse participant pool at a single time point, offering researchers the opportunity to analyse associations between variables without longitudinal tracking. This design proves particularly advantageous when assessing the prevalence of specific traits or behaviours within a population and when aiming to uncover potential correlations among different factors. Thus, the selection of the cross-sectional approach for this study enables efficient and resource-conscious exploration of variable relationships.

Population and Sampling

This study focused on the student body at Jordan University College in Tanzania, including current students, alumni who graduated in 2017 and 2018 and caretakers. The inclusion of graduates is vital, offering valuable retrospective insights crucial for the institutional improvement. The study included 267 participants, comprising 229 current students, 18 alumni and 20 caretakers. Among the current students, 12 chose not to disclose their performance. Of the 18 initially selected alumni, the researchers reached 12. The selection of both current and former students from the population employed a random sampling technique.

Validity and Reliability

The researchers enlisted subject matter experts to review the questionnaire, affirming its relevance and comprehensiveness for content validity. Furthermore, through the administration of the same test to a consistent group of participants on two occasions, spaced one week apart and utilizing the Pearson correlation coefficient (r), the researchers gauged the strength and direction of the relationship between scores. The resulting correlation coefficient, r=0.90 signifies robust test-retest reliability in our measurements. Table 1 summarizes the findings of this analysis.

Table 1: Summary of Reliability Analysis Results

Participants	1	2	3	4	5	6	7	8
1st time score = x	133	127	104	140	110	143	119	132
2nd time scores = y	140	113	108	132	112	129	125	133
$x - \bar{x}$	7	1	-22	14	-16	17	-7	6
$y - \bar{y}$	16	-11	-16	8	-12	5	1	9

$\bar{x}$ =126, $\bar{y} = 124$, $r = \sum(x - \bar{x})(y - \bar{y})/(\sum(x - \bar{x})^2 . \sum(y - \bar{y})^2) = 0.90$

Statistical Analysis of Data

The researchers structured the dataset using Microsoft Excel (2010). They categorized the dependent variable, academic performance, into two groups: low performance (LP) for an overall grade average point (GPA) below 3.5, and high performance (HP) otherwise. Generalized Linear Models (GLMs) were employed using the glm() function in R to explore the relationship between the binary outcome variable and a predictor variable with multiple levels. A significance level of 0.05 was applied, considering any p-value below this threshold as statistically significant. When p-values were not explicitly provided, the significance of the odds ratio was assessed by highlighting the exclusion of 1 from the confidence interval, following the approach suggested by Bulmer (1979).

Ethical consideration

The permission of conducting the study was obtained from the relevant institution and government authorities, including the Deputy Principal of Academic Affairs at Jordan University College, aligning with institutional guidelines and policies. Before data collection, each student participant was informed on study's objectives and procedures. Informed consent was obtained from all students who were willing to participate. Participants were informed that their involvement is voluntary, and they had the right to withdraw from the study at any time. Data were handled with strict confidentiality to ensure the privacy and confidentiality of participants. Personal identifiers were not collected to maintain anonymity. Participants were assured that their responses would be kept confidential and would not affect their academic, social and university experience. Collected data were stored in compliance with data protection regulations to maintain data security. These measures meant to ensure the ethical

conduct of the study and the protection of respondents' rights and well-being.

Results and Discussion

This section unveils the outcomes of the study, shedding light on the relationship between lifestyle and academic performance. It begins by presenting the demographic attributes of the participants, extensively outlined in Table 2.

According to Table 2, the study encompassed 217 respondents. Among them, 106 (53.4%) were males while 100 (46.1%) were female and 1 (0.5%) student did not specify gender. In terms of age distribution, 105 (48%) of the students fell within the 18-35 years range, 98 (43%) were between 26-30 years old and only 19 (9%) were aged 36 years and above. Regarding university entry qualifications, 21 (10%), 118 (54.4%), and 73 (33.6%) achieved first class, second class, and third class, respectively.

Table 2: Student's Demographic Characteristics (N=217)

Age in years	**Frequency**	**Percentage**
18-25	105	48.3
26-35	93	42.9
36 and above	19	80.8
Total	217	100
Gender	**Frequency**	**Percentage**
Male	116	53.4
Female	106	46.1
Total	216	99.5
Previous schooling	**Frequency**	**Percentage**
Boarding scholars	110	50.7
Day scholar	68	31.3
University affiliate residence	23	10.6
Non-university affiliate residence	15	07.0
Total	216	99.6
Entry qualifications	**Frequency**	**Percentage**
First class	21	10.0
Second class	118	54.4
Third class	73	33.6
Total	212	98.0
Year of study	**Frequency**	**Percentage**
First year		
Second year	134	61.8
Third year	62	28.6
Fourth year	21	09.6
Total	217	100
Degree Programs	**Frequency**	**Percentage**
BAEC	06	02.0
BAED	79	36.4
BAERS	28	12.9
BAF	11	05.1
BATH	19	08.7
LLB	31	14.3
PSY	31	14.3
Total	205	93.7

In terms of academic years, 134 (61.8%) were in their second year of study, 62 (28.6%) were third-year students, and 21 (9.6%) were in the fourth year of their study. Prior to enrolling in the university, 110 students (50.7%) were alumni of boarding schools, 68 students (31.3%) had previous attendance at day schools, 23 students (10.6%) attended college while residing in university affiliate residences, and 15 students (7.0%) lived in residences not affiliated with the university.

Analysis of Research Questions

In this section, the researchers delineated the primary inquiries directing the study's focus. Each question centered on the influence of different

lifestyle components on the achievement of academic performance.

In Table 3, the analysis indicates no significant correlation between marital status and academic performance (OR: 1.18, 95% CI: 0.54-2.45, p = 0.6644). This is consistent with findings reported by Alshammari et al. (2017). Similarly, engaging in sexual practices and experiencing alcoholism did not demonstrate a notable difference in high academic performance (OR: 1.91, 95% CI: 0.82-4.39, p = 0.1235; OR: 1.14, 95% CI: 0.46-3.28, p = 0.7790, respectively). These findings align with previous research by Miller et al. (2007), which indicates that students who engaged in binge drinking were more prone to reporting lower academic performance and participation in risky health behaviours.

Table 3: Differences in Academic Performance (HP) among Lifestyle Components

Coefficients of [a]

Levels of the predictor	n of HP	E (Log-odds)	Standard Error	P-value	Odds-Ratio (95% CI range)
Marital Status					
Married	37	**1.1260**[b]	Reference		
Unmarried	131	0.1657	0.3818	0.6644	1.18(0.54-2.45)
Sexual practice (for unmarried group)					
No	36	**1.0186**[b]	Reference		
Yes	85	0.6515	0.4230	0.1235	1.91(0.82-4.39)
Alcoholism					
No	126	**1.4023**[b]	Reference		
Yes	28	0.1382	0.4925	0.7790	1.14(0.46-3.28)
Use of Internet					
Academic only	42	**0.8473**[b]	Reference		
Socialization only	5	0.7621	1.1311	0.5004	2.14(0.31-42.6)
Academic & Socialization	113	0.7890	0.3656	0.0309	2.20(1.06-4.51)
Living Environment					
Off campus	117	**1.0186**[b]	Reference		
On campus	29	0.3961	0.4090	0.3380	0.68(0.31-1.55)
Job status					
No	127	**1.2066**[b]	Reference		
Yes	39	0.1544	0.3998	0.6990	1.17(0.55-2.67)
Go for recreation					
Not at all	21	**1.0986**[b]	Reference		
Very rarely	21	0.5596	0.6986	0.4231	1.75(0.46-7.53)
Rarely	55	0.5108	0.5473	0.3507	1.67(0.55-4.83)
Often	38	-0.1690	0.5324	0.7508	0.84(0.28-2.35)
Very often	23	0.0909	0.6138	0.8822	1.10(0.32-3.71)

n=frequency, E= Values for predicting the dependent variable from the independent variable, CI=Confidence interval.
a: *Dependent variable*: *High performance* ***b***: *Intercept value found to be statistically significant.*

The estimate of 0.7890 suggests that those individuals who utilized the internet for both academic and social purposes had a higher log-odds of achieving high performance (2.2 OR and p-value=0.0309) compared to those who used it solely for academic reasons.

The study found no significant association between living environment (on campus vs off campus) or job status and high academic performance (OR: 0.68, 95% CI: 0.31-1.55, p = 0.3380; OR: 1.17, 95% CI: 0.55-2.67, p = 0.6990. The log-odds of academic performance decrease as the frequency of engaging in recreational activities increases, but none of these differences are statistically significant (all p-values > 0.05).On the contrary, the study by Derous and Ryan (2008) reported that participating in extracurricular activities outside of school can positively impact students' academic achievements and their readiness for the job market, particularly when these activities are perceived as pertinent to their academic pursuits and are undertaken with autonomy and balance.

In Figure 1, the activity with the highest frequency count done "very often" is research academic articles or books, with 101 individuals reporting doing this activity very often. The implication of this

preference is a strong inclination towards academic pursuits and self-education among the individuals surveyed. The study of Baturay and Yukselturk (2015) suggested that internet users among students exhibit higher levels of educational achievement and motivation compared to non-users. Moreover, GhR (2015) highlighted a positive correlation between students' preferences for distance education and their achievement scores, as evidenced by their final test scores.

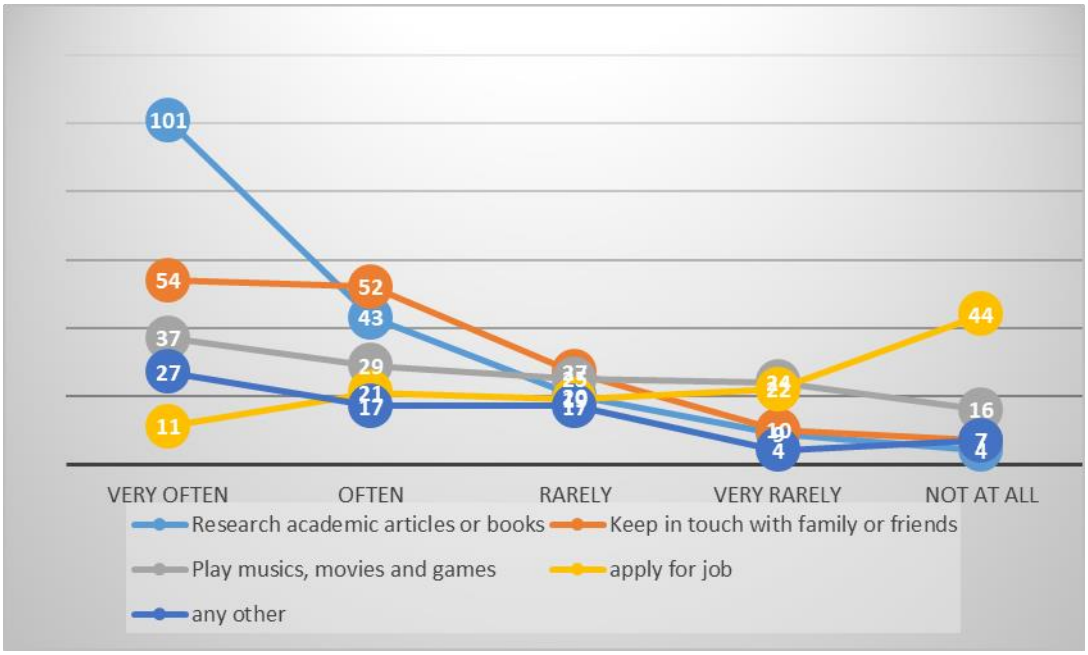

Figure 1: Illustrates the frequency distribution of internet activity engagement

The next preferred activity "often" is "Keep in touch with family or friends" with 52 individuals reporting engaging in this activity. The implication is, maintaining connections with family and friends is a significant and frequent activity. This suggests that students valued interpersonal relationships and prioritized staying connected with their loved ones alongside their academic pursuits.

From Figure 1, the activity with the highest frequency count done "Very often" is research academic articles or books, with 101 individuals reporting doing this activity very often. The implication of this preference is a strong inclination towards academic pursuits and self-education among the individuals surveyed. This finding suggests a proactive approach to learning, reflecting a commitment to academic excellence, intellectual curiosity and continuous self-development. The next preferred activity "often" is "Keep in touch with family or friends" with 52 individuals reporting engaging in this activity. The implication is, maintaining connections with family and friends is a significant and frequent activity. This suggests that students valued interpersonal relationships and prioritized staying connected with their loved ones alongside their academic pursuits.

Table 4: Time Spent on Internet for Socialization and Academic Performance

More / often use internet for socialization purpose=Yes			
	Performance		
Time spends on the Internet per day	High	Low	Total
<2 hours	47	23	70
>2 hours	116	21	137
Total	163	44	207
OR = 0.26, 95% CI = 0.08-0.75, p = 0.0129			

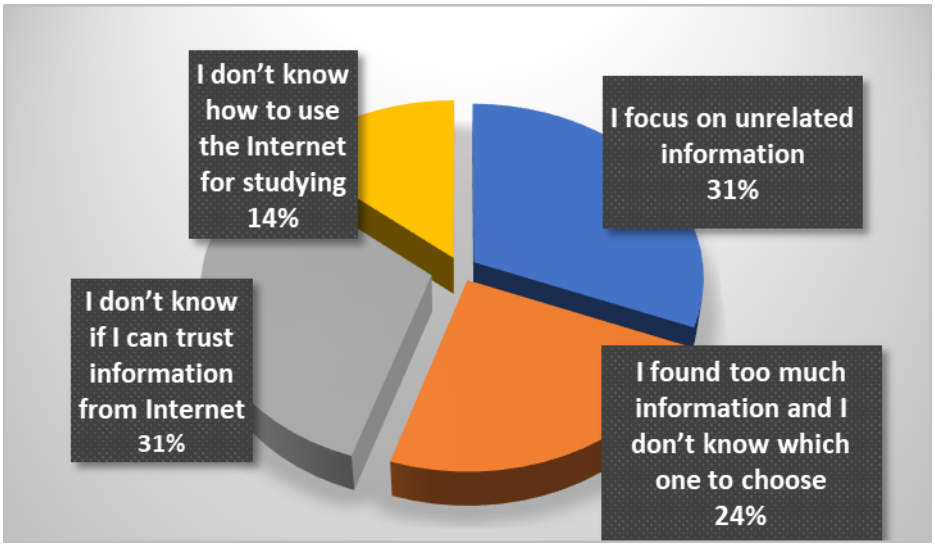

Figure 2: Experience when using the internet for academic purpose

Table 4 presents the distribution of academic performance ("High" and "Low") among individuals based on their internet usage for socialization purposes, categorized by the time spent on the internet per day. The study established that the odds ratio (OR) for individuals spending more than 2 hours on the internet for socialization compared to those spending less than 2 hours indicates a significant difference in the odds of achieving high academic performance. Specifically, individuals spending more than 2 hours on the internet for socialization purposes have significantly lower odds of high academic performance (OR: 0.26, 95% CI: 0.08-0.75, p = 0.0129). This finding suggests that spending more than 2 hours on the internet for socialization purposes is associated with a decreased likelihood of high academic performance compared to spending less than 2 hours on the internet for the same purpose. This finding is consistent with the results by Derous and Ryan (2008), which indicated that excessive engagement in leisure activities, including prolonged internet use inversely related to academic success among undergraduate students.

Figure 2 provides a detailed exploration of students' experiences with internet use for academic purposes. The findings highlight some challenges and concerns that students faced in utilizing online resources for their studies. The figure shows that 14% did not know how to use the internet for studying. This suggests a potential need for educational interventions to enhance students' digital literacy skills. Providing workshops or resources on effective internet searching and study techniques could be beneficial. Furthermore, 31% did not know if they could trust the information from the internet. This reflects concerns about the reliability of online information. It emphasizes the importance of enhancing critical thinking skills and how to evaluate the credibility of sources. Encouraging the use of reputable academic databases and sources may address this concern. Next, 24% found too much information on the internet and did not know which one to choose. This highlights the challenge of information overload. Providing guidance on information filtering and source evaluation can help students navigate the vast amount of information available online. Finally, 31% did not know if they could trust information from the internet.

Conclusion

The study concludes that marital status, sexual activity and alcoholism did not have significant associations with academic performance. Therefore, lifestyle components may not be determinants of academic success in the studied population. Individuals who utilized the internet for academic purposes demonstrated higher odds of achieving high academic performance compared to those who used it solely for academic reasons.

Moreover, spending more than two hours on the internet for socialization was associated with decreased likelihood of high academic performance. This highlights the importance of a balanced approach to internet usage and the potential consequences of excessive socialization online. Neither living environment nor job status showed significant associations with high academic performance. Therefore, where students reside or

whether they are employed or not did not influence their academic success in the context examined.

While there was a trend of decreasing log-odds of high academic performance as the frequency of engaging in recreational activities increased, none of these differences reached statistical significance. This implies that recreational activities alone may not strongly influence academic success among students in the studied population.

Recommendations

Based on the conclusions, the following recommendations are made:

Students need a balanced internet usage. There is a need for students to regulate the time used for internet. They have to use it for both academic and social purposes. There is a need to develop students' awareness of lifestyle Choices: While lifestyle components such as marital status, sexual activity, alcoholism and engagement in recreational activities do not have significant associations with academic performance, it is still essential for students to be aware of how their lifestyle choices may affect their academic achievement and social overall well-being. Finally, there is a need to create students' awareness of recreational activities and academic success.

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