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THE INFLUENCE OF AVAILABILITY OF COLLEGE HOSTEL ACCOMODATION FACILITIES ON STUDENTS' ACADEMIC PERFORMANCE IN KENYA MEDICAL TRAINING COLLEGES IN WESTERN KENYA REGION

Dr. Kelly Oluoch, Dr. Miriam M. Ndunge and Alloys W. Musuya

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^{1*}Dr. Kelly Oluoch

¹Ag. Deputy Director, Administration and Finance: Kenya Medical Training College
oluochkelly@yahoo.com

²Dr. Miriam M. Ndunge

Corporation Secretary: Kenya Medical Training College
mmuthoka95@gmail.com

³Alloys W. Musuya

Lecturer: Kenya Medical Training College

Abstract

Purpose: The purpose of this was to determine the influence of availability of hostel accommodation facilities on academic performance in Kenya Medical Training Campuses in West Kenya Region.

Methods: The study adopted a descriptive cross-sectional survey research design. This involved all KMTC Campuses in western Kenya. The study relied on both primary and secondary data. Questionnaires were used as data collection technique. Raw data was processed through data editing and coding and analyzed using the SPSS software. Permission and approval was sought from the Kenya Medical Training College Director's office, the Ethical Review Committee based at Kenya Medical College Headquarters and the Principals of the various campuses in Western Kenya Region. Informed consent was also sought from the study participants.

Results: The study found that accommodation facilities were inadequate. There was no significant difference in academic performance of students who lived within the college and those who lived outside the college. It was found that there was a significant effect of adequacy of accommodation facilities on academic performance of students. The study supports the social climate theory

Unique Contribution to Theory, Practice and Policy: The study recommends that the board needs as a matter of urgency to prepare a policy paper on engagement of private hostel providers. The study also recommends that the public private partnership (PPP) should have agreements with developers to construct hostels within the college where they will obtain rent for a given period of time to recoup their costs of investments and profits

Key Words: *Hostel Accommodation, Academic Performance, KMTC*

1.0 INTRODUCTION

The need for manpower development and the benefits of education has led Kenya to invest heavily in Education. Kenya has recorded a rapid increase in enrolment at all levels of education, from primary to tertiary levels. The increased enrolment has had a direct effect on financing tertiary education. Mwinzi (2002) for example, observes that the government's full responsibility of financing university education ended in 1974. To increase access to tertiary education, Sessional paper number I of 2005 de-linked management of students accommodation and catering from the academic programmes. While the enrollment rate in tertiary educational institutions has risen drastically, this has not been matched with corresponding infrastructural development leading to a large proportion of students not being accommodated within the training institutions. The effect of varied accommodation arrangements on student performance needs to be investigated (Mwinzi, 2002).

The theoretical framework for this paper was based on the social climate theory by Moore (1976). The social climate theory states that the learning outcome is affected by the environment where studies take place. Some behavioral attributes of students such as study habit can therefore be applied to practical problems that occur in the hostels. Mark (2014) emphasized that learning process of students might be enhanced or interrupted by the types of their hostel's environment. Social interaction and effective academic study according to Ubong (2007) are considered instrumental in fostering a successful university experience.

Studies about how hostel accommodations affect students' academic performance abound world over. In the USA for example, a study by Sirgy, Grzeskowiak and Rahtz (2015) in three universities allude to the fact that students' perception about adequacy of facilities in college hostel accommodation influences their performance. In Nigeria, Agbola *et al* (2001) decries the adequacy of college provided accommodation. Ndung'u (2015) argues that the lack of adequate hostel accommodation at Kenyatta University has a negative effect on students' performance.

1.1 Statement problem

The decision by the college to de-link students' accommodation and catering from academic programmes and introduction of module II programmes was one of the greatest steps towards the increase in the number of students getting enrolled into the institution. Before de-linking admissions from accommodation *vide* Ministry of Health circular number MMS/ADM/1/1/18VOL.VIII(51) of 2013, it was the prerogative of the college to allocate halls of residence to the students. Students who were allocated rooms were also expected to get their meals from the college. There was thus an established standard for accommodation facilities and college authority was held responsible for this. The increase in diploma student enrolment has not been commensurate with the growth of the accommodation facilities both within and outside the college.

Access to college accommodation is thus quite limited and KMTC does not have control over the private hostels. The demand for accommodation is higher than the supply thus the need to investigate the adequacy of accommodation hostels for college students. This raises the question, how do students' on or off-campus accommodation choices affect their academic performance?

2.0 LITERATURE REVIEW

2.1 Theoretical Foundation

The Social climate theory was developed by Moos (1976). The theory states that the way an individual perceives their environment affects their interaction with it (Moos, 1976). Moos (1979) developed a five point scale of evaluating class room climate as a contributor to a student's performance. The three basic thematic areas of the theory are students' level of involvement, affiliation and lecturer support. Moos (1987) explains that the aspirations, achievements, morale, and well-being of an individual may be impacted as a result of their social climate. For example, students who perceive their learning environment as supportive are likely to work hard as a reciprocal reaction and hence excel in their academic performance. Conversely, if students perceive their environment as non-supportive, they are likely to regress in their academic performance (Beatty *et al*, 2010). Social climate theory can be used to explain the academic performance difference of students subjected to varying environment of hostel accommodation.

The theory helps to establish the relationship between a student's performance and his or her environment. It explains that a student's performance is contributed by their study environment. It however has failed to consider some vital factors which are key to excellence in academics for example student's inherent aptitude and pre-disposition of some students to work harder than others. It also fails to explain why students subjected to similar environment register varying levels of academic performance (Beatty *et al*, 2010).

Adequacy of students' accommodation facilities

Housing is both a basic human need and a fundamental human right. Studies involving adequacy of students' hostel accommodation in the face of increasing student population in tertiary educational institutions have been done in various countries.

Sirgy, Grzeskowiak and Rahtz (2005) study on the quality of college life of students in three universities in the USA found that quality of college life may be influenced by satisfaction with college facilities. Of importance to the students is the quality of housing, maintenance, security, location and dorm activities. Most residential halls are much closer to campus than private housing such as apartment buildings. This convenience is a major factor in the choice of where to live since living physically closer to classrooms is often preferred. Agbola *et al*, (2001) for example, points out the wanting nature of students' accommodation in Nigerian polytechnics. This is explained by the upsurge in student numbers and inability of various institutions to keep pace of infrastructure development with ever increasing student population. This situation has been aggravated by the scarcity of affordable and safe alternative housing in the neighbourhoods surrounding the institution.

The works of Adegbile (1987) and Adelaja (1992) indicate that, on the average, the occupancy ratio of on-campus accommodation compared to hostels facilities in Nigerian colleges has increased by 300 per cent, that is, fourteen persons are occupying rooms designed for four persons. Adelaja (1992) stated further that some of the existing furniture has been removed in order to provide space for additional double bunks.

The situation is not any different in Kenyan tertiary institutions of learning. Ndung'u (2015) assessed the adequacy of private accommodation for Kenyatta University undergraduate students and found that most of the private accommodation facilities were not adequate. Ndung'u (2015) point out that the adequacy of housing is not only determined by the shelter and facilities but also by the entire system of supportive and facilitative infrastructure and services, including accessibility to workplace and social facilities and amenities.

H₁: Adequacy of Hostel accommodation facilities has a significant effect on Student's academic performance

Effect of students' accommodation arrangements on academic performance

Mamman (2011) carried out a comparative study of the effect of on-campus and off campus accommodation and other facilities on students' academic performance. The study identifies some advantages of on-campus accommodation. These include: easy accessibility to the classes, libraries and other university facilities hence saving on time. The findings revealed that a significant relationship exists between the type of accommodation and the students' academic performance. The diet, health, amount of sleep, comfortable shelter and sense of security a student has directly affects his ability to function at his full potential. Sicat and Panganiban (2009) appreciate that adequate housing in schools gives rise to comprehension and encourages positive learning outcomes.

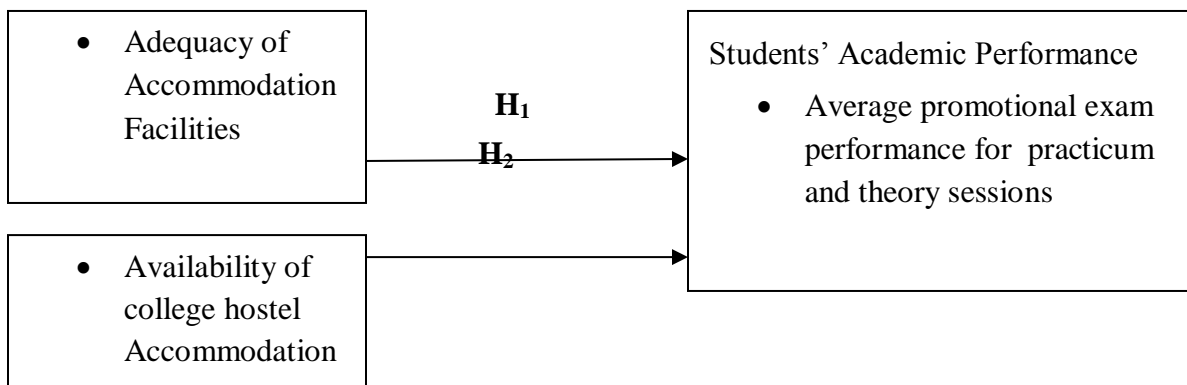
Lyizoba (2009) argues that the results of an enquiry into reasons why Nigerian students fail to perform well revealed that the chief cause of poor academic performance was attributable to facilities and conditions prevalent in the universities. The study concluded by positing that hostels are in dire need of attention blaming inadequate accommodation for the present day mediocre educational standards, deplorable academic performance, and poor moral behaviour which have become synonymous with the average Nigerian student.

H₂: On or Off-campus hostel accommodation has significant effect on students' academic performance

Figure 1: Conceptual Model

Independent Variables

Dependent Variable



The figure above is a conceptual model showing the effect of facilities and on or off-campus accommodation on student performance.

3.0 METHODOLOGY

The study adopted a descriptive cross-sectional survey research design. The study entailed all KMTC campuses in western Kenya. KMTC offers post-secondary education with the main intention of awarding a certificate or a diploma in medical and related courses. The study focused on all the 17 KMTC campuses in western Kenya region. The study relied on both primary and secondary data. Questionnaires were used as data collection technique. Raw data was processed through data editing and coding and analyzed using the SPSS software. The major statistical measure of the relationship was simple regression. The results were presented in form of tables and graphs. Permission and approval was sought from the Kenya Medical Training College Director's office, the Ethical Review Committee based at Kenya Medical College Headquarters and the Principals of the various campuses in Western Kenya Region. Informed consent was also sought from the study participants.

4.0 RESULTS

4.1 Demographics of Respondents

4.1.1 Gender Respondents

Among the respondents, 141 were males representing 43.8 % while 181 were females, representing 56.2% of respondents. As is evidenced by the data, majority of respondents were female students. Table 1 shows the distribution of data in terms of respondents.

Table 1: Distribution of Respondents by Gender

Gender	Frequency	Percent	Cumulative Percent
Valid male	141	43.8	43.8
Valid female	181	56.2	100.0
Total	322	100.0	

Source: Research Data, 2017

Table 1 above shows the distribution of respondents by gender. Female respondents were more than the male respondents.

4.1.2 Age Respondents

Majority of the respondents were within the age bracket of 20 to 25 years. 5% are in the age bracket of below 20 years while 6.5% are between the ages of 26 to 30 years. Table 2 shows the distribution of respondents by ages.

Table 2: Distribution of Respondents by Age

Age	Frequency	Percent	Cumulative Percent
below 20	18	5.6	5.6
20-25	280	87.0	92.5
Valid 26-30	21	6.5	99.1
over 30	3	.9	100.0
Total	322	100.0	

Source: Research Data, 2017

Table 2 above shows the distribution of respondents by age. Most respondents are between the age bracket of 20 and 25 years.

4.1.3 Status of Accommodation of Students

Respondents were asked to indicate if they were accommodated within or outside their colleges. Majority of students were not accommodated within the campuses. From the results of data analysis, less than half of the students' i.e 45.3% were accommodated within the college. Majority of students (54.3%) were accommodated outside the campuses of KMTC. Table 4.3 shows the pattern of student accommodation.

Table 3: Accommodation Preferences

Accommodation	Frequency	Percent	Cumulative Percent
within college	146	45.3	45.3
Valid Outside	175	54.3	99.7
4	1	.3	100.0
Total	322	100.0	

Source: Research Data, 2017

Table 3 shows the pattern of students' accommodation. Majority of students live outside the campus.

4.1.4 Funding for Accommodation

Financing of student accommodation is critical to their performance. Respondents were asked how they managed to finance their accommodation. An overwhelming majority of respondents source their accommodation monies from their parents (86.3%). Other sources of accommodation funds were own savings (1.9%), other organizations (1.6%) and fund raising activities (3.1%). Table 4 presents respondents' responses on how they fund their accommodation.

Table 4: Funding for Accommodation

Financing		Frequency	Percent	Cumulative Percent
Valid	HELB Organizations	23	7.1	7.1
	Parent	5	1.6	8.7
	Own Savings	278	86.3	95.0
	Harambee	6	1.9	96.9
	Total	10	3.1	100.0
	Total	322	100.0	

Source: Research Data, 2017

Table 4 shows the financing arrangements for students' accommodation. Majority of students are financed by their parents to access accommodation. Very few finance their own accommodation from personal savings.

4.1.4 Satisfaction with Accommodation

Respondents were asked to indicate if they were satisfied with their accommodation facilities. Majority of respondents were not satisfied with accommodation, signifying 56.4%. Those respondents indicating satisfaction with accommodation facilities was 43.6%. Table 5 shows the response on the level of satisfaction with accommodation provided both within and out of the campuses. From the table, majority of respondents were not satisfied with accommodation.

Table 5 Satisfaction with Accommodation

Satisfaction with accommodation		Frequency	Percent	Cumulative Percent
Valid	Yes	140	43.5	43.6
	No	181	56.2	100.0
	Total	321	99.7	
Missing	System	1	.3	
Total		322	100.0	

Source: Research Data, 2017

Table 5 shows the percentage satisfaction with accommodation. Majority of respondents were not satisfied with accommodation.

4.1.5 Satisfaction with Accommodation

Majority of respondents reported that two students were staying in a single room (44.1%). Respondents seemed to indicate more than four students staying in a single room (30.9%). A few respondents (12.8%) indicated that 4 students shared a room. Three was the least number per room. This could be because the double decker beds can accommodate two students. Table 6 shows the number of students respondents suggested should occupy a hostel room.

Table 6: Number of Students per Room

	Number of students per room	Frequency	Percent	Cumulative Percent
Valid	alone	20	6.2	6.3
	2	141	43.8	50.3
	3	19	5.9	56.3
	4	41	12.7	69.1
	More than 4	99	30.7	100.0
	Total	320	99.4	
Missing	System	2	.6	
	Total	322	100.0	

Source: Research Data, 2017

Table 6 shows the number of students respondents who occupy a hostel room. Majority most rooms either accommodated two, four or more students.

4.1.6 Ideal Number per room

Respondents were asked what they felt as the ideal number of students who should occupy a hostel room. Majority suggested that two students should occupy a room (46.4%). This was followed by those who felt that each student should have his or her room (35.7%). Very few respondents favored more than four students staying in a single room (1.4%). Table 7 is a summary of what respondents felt as the ideal number of occupants of a hostel room.

Table 7: Ideal Number per room

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	114	35.4	35.7
	2	148	46.0	46.4
	3	8	2.5	2.5
	4	45	14.0	14.1
	more than 4	4	1.2	1.3
	Total	319	99.1	100.0
Missing	System	3	.9	
	Total	322	100.0	

Source: Research Data, 2017

Table 7 shows the number of students respondents indicate should occupy a hostel room. From the table, most respondents favored two students occupying a single room.

4.2 Performance of Students Staying within the College and Those Staying Outside

Institutions of higher learning have invested heavily on hostel accommodation with the view that it offers a conducive environment for students to study and excel academically. KMTC is one of the institutions which have for a long time admitted students based on hostel capacity. With swelling demand for tertiary education, colleges and universities have had to admit students

beyond hostel capacity. This study focused on determining whether there was performance difference between those students accommodated within the college and those accommodated outside the college.

To achieve this objective, an independent t-test was done to determine the academic performance of students staying within and those staying outside the college. The choice to use this analysis method was based on the fact that the two groups are unrelated. For this test to be done, the following conditions were met: Independent variables consist of two independent groups i.e students staying outside the college hostels and those staying within. Secondly, the dependent variable is of an interval scale, thirdly, the dependent variable is normally distributed and finally, there were similar variances between the two groups. Table 8 illustrates the results of analysis on the academic performance of those staying within and those staying outside the college.

Table 8: Academic Performance of Students Staying In College Hostels and those Staying Outside

		Independent Samples Test								
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2- tailed)	Mean Difference	Std. Error Differenc e	95% Confidence Interval of the Difference Lower Upper	
Performance	Equal variances assumed	1.938	.165	-.216	298	.829	-.01884	.08739	.19082	.15314
	Equal variances not assumed			-.214	276.259	.831	-.01884	.08825	.19256	.15488

Source: Research Data, 2017

Table 8 shows the performance of students staying in college hostels and those staying outside the college. Independent sample t-test was used to analyze the data. From the table, the variances are equal in both groups since the P-Value in the Levene's test for equality of variance column is greater than 0.05. I.e, The P value is 0.165. The researchers therefore used equal variance assumed column to determine if there was significant difference in performance. From the column on sig. (2-tailed), the P value is greater than 0.05 hence there was no performance difference between students staying outside and those accommodated in the college hostel.

4.3 Adequacy of Accommodation Facilities in Hostels

In order for learning to take place, a student needs provision of supportive infrastructure. These may include electricity, water, furniture bed, sanitation facilities, garbage disposal facilities, safety provision like fire extinguishers, and regular maintenance of rooms. Respondents were asked to indicate their levels of satisfaction with adequacy of accommodation facilities and management. Responses were rated in a Likert scale of between 1 and 5 as; 1- Very inadequate,

2- Inadequate, 3-Fairly adequate, 4- Adequate and 5- Very adequate. One sample t-test was done to determine the mean, variance, co-variance and significance levels of items. Table 4.10 illustrates a qualitative analysis of responses.

Table 9: Adequacy of Accommodation Facilities

Item	N	Mean	Std. Deviation	Covariance	t	Sig. (2-tailed)
Electricity	314	3.15	1.203	0.381	46.333	.000
Privacy	315	2.65	1.288	0.486	36.558	.000
Security	313	3.10	1.190	0.384	46.068	.000
Furniture	317	2.91	1.247	0.429	41.492	.000
Ventilation	312	3.16	1.214	0.384	46.012	.000
Sanitary Facilities	314	2.47	1.272	0.515	34.434	.000
Water Supply	312	2.72	1.331	0.489	36.119	.000
Garbage disposal	317	2.92	1.271	0.435	40.976	.000
Maintenance	314	2.76	1.133	0.411	43.145	.000
Fire Safety	316	3.09	1.286	0.416	42.660	.000
Minor Repairs	315	2.55	1.229	0.482	36.775	.000
Complaints	313	2.42	1.284	0.531	33.370	.000
Complaint box	319	2.46	1.359	0.552	32.303	.000

Source: Research Data, 2017

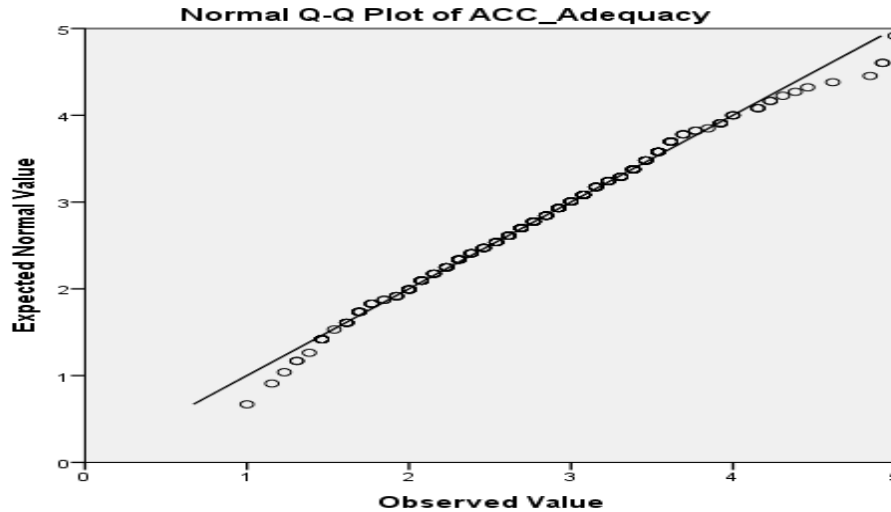
From table 9, the item with the highest mean was that of ventilation which was 3.16 followed by electricity (3.15) and security (3.10). The lowest mean was that of complaint handling which was 2.42 and usage of complaint box (2.46). Highest variability was found in the item of usage of complaints box with 55.2% of variance followed by complaints handling at 53.1%. The high level of variability shows that respondents widely disagreed on how complaints were handled by the campuses. Lowest variability was on the item of electricity with 38.1%. Responses on all the items were significant at P-Values of 0.05.

4.4 Preliminary Tests for Regression

4.4.1 Test of Normality

In parametric tests, it is assumed that data is normally distributed hence mean is used as a measure of central tendency. There are several ways to test for normality. These include Shapiro wilk's test and multicollinearity test. Normal Q-Q tests represent graphical of observed values against expected normal values. The normal Q-Q test was done to determine distribution of responses along the line of fit for adequacy of accommodation and on performance. Figure 4.1 illustrates normal Q-Q plot for observed values against normal values for adequacy of accommodation facilities. The observed values were shown to coalesce around the line of best fit. This implies that the data was normally distributed.

Figure 2: Normal Q-Q plot of Adequacy of Accommodation Facilities

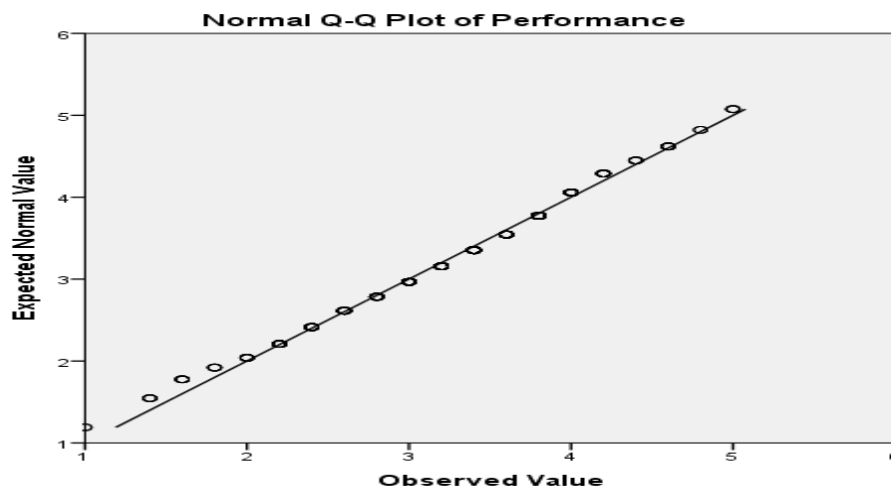


Source: Research Data, 2017

Figure 2 illustrates the Q-Q plot of adequacy of accommodation facilities. The figure illustrates that the observed values coalesce around the line of best fit. The values entered for adequacy of accommodation were therefore deemed to be normally distributed.

Figure 3 illustrates the normal Q-Q plot for performance. Observed values are plotted against expected values. From the table, the observed values coalesce around the line of best fit. This shows the data on performance was normally distributed.

Figure 3: Normal Q-Q plot for Students' Performance



Source: Research Data, 2017

Figure 3 shows the normal Q-Q plot for students' performance. From the figure, the data on performance is shown to be normally distributed.

4.4.1 Effect of Adequacy of Accommodation Facilities on Organizational Performance

To determine the effect of adequacy of accommodation facilities on student performance, a regression analysis was performed. The variable of adequacy of accommodation was regressed on student performance. Table 10 below illustrates the result of regression of adequacy of students' accommodation on performance.

Table 10: Effect of Adequacy of Students' Accommodation on Performance

Model Summary ^b										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics F	df1	df2	Sig. F Change	Durbin-Watson
1	.202 ^a	.041	.037	.72428	.041	10.984	1	257	.001	1.890

a. Predictors: (Constant), ACC_Adequacy
b. Dependent Variable: Performance

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.762	1	5.762	10.984	.001 ^b
	Residual	134.819	257	.525		
	Total	140.581	258			

a. Dependent Variable: Performance
b. Predictors: (Constant), ACC_Adequacy

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.791	.174		21.793	.000
	ACC_Adequacy	-.200	.060	-.202	-3.314	.001

a. Dependent Variable: Performance

Source: Research Data, 2017

There is a weak correlation between accommodation adequacy and students' performance ($r=.202, p=.001$). The R^2 indicates how much of the dependent variable, students' performance can be explained by the independent variable, adequacy of students' accommodation. In this case, 41% ($R^2 = .41$) can be explained.

The ANOVA table indicates that the regression model predicts the outcome variable significantly well. The table shows that there was statistically significant difference between the means of adequacy of accommodation and students' performance ($F(1) = 10.984, p = 0.001$).

Since the P –value is less than the significance level (0.05), the alternative hypothesis is not rejected. Thus there was significance difference between the means of adequacy of students’ accommodation and overall students’ performance. From the coefficient table, the equation on students performance can be expressed as: Performance= 3.791-.202(Adequacy of accommodation)

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The finding of the first hypothesis was that there was no significant difference in academic performance of students who lived within the college and those who lived outside the college. The finding of the second objective was that there was a significant effect of adequacy of accommodation facilities on academic performance of students. It was further established that various accommodation facilities had different levels of effects on performance.

5.2 Conclusion

The study concluded that availability of adequate accommodation facilities have an effect on academic performance of students. Adequacy of facilities range from the number of students who stay in each room, infrastructure of the hostels in terms of basic facilities like maintenance, electricity, water, security to whether students perceive these facilities as supportive to learning. When students perceive accommodation facilities as supportive, it influences their use of these facilities positively and this translates to adequate performance. The study further concluded that students who stay outside the college hostels perform as well as those who stay within the college. This conclusion emanates from the fact that the hostel accommodation does not provide superior facilities compared to those hostels outside the college. The only reasons students preferred college hostel accommodation was their proximity to classrooms and their affordability.

5.3 Recommendations

The study recommends that the management has the option to partner with the institution to offer accommodation therefore, to be strategic in the use of its resources, the college can improve on the classroom learning environment while the partner through PPP can focus on building hostels which meet students’ expectations in terms of utilities, safety, customer care and public health demands. The study further recommends that there is need for outsourcing of accommodation to external providers. The board needs as a matter of urgency to prepare a policy paper on engagement of private hostel providers. The study also recommends that public private partnership (PPP) should have agreements with developers to construct hostels within the college where they will obtain rent for a given period of time to recoup their costs of investments and profits.

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