

Academic Achievement and Associated Factors Among Students In Mizan Aman College Of Health Science, Southwest Ethiopia

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Abstract

Background College students' academic performance plays an important role in producing the best quality graduates who was become great leaders and manpower for the country contributing to the nation's economic and social development . From our best knowledge there is information gap that shows students academic achievement and associated factors in study area.

Objective To assess college students academic achievement and associated factors among level 3 and 4 students at Mizan Aman College of health science Bench Maji Zone, South west Ethiopia.

Methods Institution based cross sectional study design was employed. 265 students were randomly selected from different departments of college. Interviewer administrated Structured questionnaires adopted from tools used by other studies was used to collect data. Ethical clearance was obtained from Ethical review committee of Mizan Aman College of health science research and publication office. Objective of the study explained to participants and informed consent was obtained before conducting interview.

Result: - From a total of 265 sample size, 250 were completed interview and giving 94% response rate. Student's academic performance which is measured based on whether the students have passed or not the center of competency examination in Mizan Aman collage of health science. Those who passed was found to be 53.3%. In multivariate logistic regression analysis three variables were statistically significant with low student's academic performance. Those who had habit of reading in library (AOR=3.13, 95% CI: 2.02, 9.27), Attending class regularly (AOR=2.20, 95% CI: 1.28-3.80) and having no history of substance use (AOR=4.14 95% CI 1.65, 22.79) were found to be significantly associated with students academic performance.

Conclusion and recommendation According to this study, student's academic achievement was low which needs further attention to work on reading habits of students, behavioral changes such as restraining from substance use. Regular class attendance is significant factor to influence students' academic achievement positively or negatively. Therefore, college deans department co-coordinators as well as instructors should focus on students class attendance regularly.

Background

Education was a social process and highly educated individuals can promote a society (1). In the era of globalization and technological revolutions, education plays a vital role in the development of human capital. Education ensures the acquisition of knowledge and skills that enable individuals to increase their productivity and improve their quality of life (2). In order to occupy a leading role in world's economy, the education system of a country must produce students who can compete in global job market (3) .The students' academic achievement plays an important role in producing the best quality graduates who was become great leaders and manpower for the country contributing to the nation's economic and social development (4)

There are many factors that affect the student's academic performance. These include but not exhaustive: student's motivation and individual characteristics, social, economic, cultural, and community characteristics, family background, institutional characteristics, gender and other demographic factors(5). This study fills limited information gap on magnitude of students academic performance and factors affecting students' academic achievement.

Methods And Materials

Study area and period

The study was conducted in Mizan Aman College of health science, Bench Maji zone, SNNPR from April 15 to May 15, 2018.

Study design

Institution based Cross-sectional study design was used to assess factors affecting academic performance of students at Mizan Aman college of health science.

Source Populations

All Mizan Aman college of health sciences students.

Study population

The study population included all randomly selected competency based exam exposed students in Mizan Aman College of health sciences.

Inclusion criteria

All Mizan Aman college of health sciences randomly selected students who exposed to competency based exam and voluntary to give their consent.

Exclusion criteria

Seriously sick students and non voluntary students to participate in the study were excluded.

Sample size determination

Sample size - Numbers of participants was be determined by using single population proportion formula. Since Proportion of factors affecting academic performance among health science college students was unknown by we took $p=50\%$

$$n = z^2_{\alpha/2}(pq)/d^2.$$

so p was taken as 50% to get large sample size

$$n = \frac{[(1.96)^2 (0.5 * 0.5)]}{(0.05)^2}$$

n= 384

n= 384 since the N < 10,000 finite population correction was used.

nf= **248**

Adding 5% non- response rate, final sample size was **265**

Sampling procedure and technique

Stratified sampling technique was used to reach final sample size. To get the representative sample; stratification was done by departments including comprehensive Clinical nursing, Midwifery, Medical laboratory and Health information technology .Then it was stratified by their level as level III and IV from each . Finally proportional number of study participants was selected from each level of study using simple random sampling technique.

Data collection tools and techniques

Structured questionnaires adopted from tools used by other studies (30) had used to assess factors affecting students' academic achievement ,(A) Socio demographic characteristics of students and their parents (B) Teaching learning factors (C), Institution related factors was used.

Dependent variable

Student's academic performance

Independent variable

- **Socioeconomic characteristics:-** Age, Sex, Student marital status, Parental education level, Family income, Student income
- **Teaching learning factors:-** presence of motivation to learn, Length of time spent for study, Learning methodology used, Interest to learn in chosen department, presence of student on class, Expectation from department, understanding of teaching language, Satisfaction to learn in Academic environment, Students class Attendance regularly ,Student admission criteria, Attitude to study subject matter, Library use ,Habit of Substance use , Living condition Distance away from college ,Subject matter understanding by teachers, teachers skill to Taught, instructors initiation to taught, Instructors assessment method, presence of guidance and tutorial

Quality assurance

The instruments was prepared in English language and translated back to Amharic and re- translated back to English to check consistency of the instrument. Moreover, the instruments used in the study were pre-tested on 5% of level 3 students on Aman polytechnic college. The 6 data collectors and 3 supervisors was trained, demonstrated, and practiced the data collection technique to be familiar with the tools. The data was checked by supervisors about their completeness and missed values.

Data analysis

Data was entered using Epi- Data version 3.1 and then exported to SPSS version 21 for analysis purpose. Before analysis, missing values checked and new categories were created as needed. Descriptive statistics (frequencies, percentage) was performed. Bivariate logistic regression analysis was employed to determine the crude association between dependent variable with each independent variable. Those exposure variables with p-value <0.25 were entered in to multivariable logistic regression analysis. Multivariable logistic regression analysis was employed to see each independent predictors variables by controlling confounders for the occurrence of postnatal depression; Adjusted odds ratio at 95% CI with p-value<0.05 was used to identify statistically significant association between dependent and independent variables.

Operational definition

Student's academic performance: good academic performance was measured by scoring 18 and above in theory and declared satisfactory in skill examination i.e competent otherwise non-competent.

Ethical considerations

Prior to data collection, ethical clearance was obtained from the research Ethical review board of Mizan Aman College of health science. The benefit and full right not to take part in the study as well right to withdraw during interview was clearly stated. Confidentiality was maintained by using anonymous questionnaire and privacy was assured during interview.

Data collectors asked Amharic version of questionnaires after obtaining informed verbal and written consent from each participant.

Limitations of the study

This study doesn't measure the continuous academic performance of the student since it measures one point of time performance of student.

Results

Socio demographic characteristics of the respondents

Out of 265 study participants, 250 students were completed interview giving response rate of 94.3%. Majority 227 (73.7%) respondents were female. The mean age of the respondents was 19.25 (\pm 2.00)

years. Nearly half 133(53.5%) were in the age group of 18-25 years old. Almost half 121(48.6%) of respondents were from comprehensive clinical department.

About 221 (84.7%) were single and 91 (36.5%) of respondents were orthodox religion followers. The higher percentages of the respondents 49(19.7%) were from Kaffa ethnic group regarding ethnic category.

Magnitude of Students academic performance among Mizan Aman collage of health science students in 2018.

The respondents who succeed or who respond as yes on competency examination were 133(53.2%) in 95 % CI (47.7, 59.9) respectively (see figure 1).

Figure 1: Students academic performance among Mizan Aman collage of health science students 2018.

Table 1: Bivariate and multivariate logistic regression analysis of factors associated with academic achievement students in Mizan Aman college of health science students, southwest Ethiopia, 2018 (n=250)

Independent predictors of academic achievement

Explanatory Variables with p-value less than 0.25 in the bivariate logistic regression was entered into the final multivariate logistic regression. So, habit of using a library (AOR=3.13, 95% CI: 2.02, 9.27), students regular class attendance (AOR=2.20, 95% CI: 1.28-3.80) and having no habit of substance use (AOR=4.14 95% CI 1.65, 22.79) were found to be significantly associated with academic achievement of student s .

Discussion

From 250 sampled students 133(53.3%) were identified competent in the study. This study result indicates low achievement despite the organization (college) planned to achieve 95% . This can be explained by from all admitted students to academic year in varied baches, only 5% of the expected to fail on competency exam but almost half were unable to be competent (47.3%) . Many studies were carried out to explore factors affecting college students' academic performance. Our study tried to show if there is any association of student academic performance in competency examination factors such as attendance in classes, time allocation for studies, parents' level of income, and families educational status. The research is based on student profile developed on the bases of information and data collected through survey from students.

The decreased awareness to use of library, a habit of substance use was a general truth which affects the academic student performance. A systematic review carried out to see students academic performance concluded that student performance depends on different socio-economic, psychological, environmental factors. The findings of studies focused that student performance is affected by different factors such as learning abilities because new paradigm about learning assumes that all students can and should learn at higher levels but it should not be considered as constraint because there are other factors like race, gender, sex that can affect student's performance(6).

A cross sectional study conducted in Pakistan and Saudi Arabia to assess nursing students' academic achievement and associated factors identified that gender of students was a significant factor of academic achievement; but our study showed no difference regarding gender of students and academic achievement(7, 10). Similarly, study conducted on academic performance on psychology course in Malasia identified that previous academic record, estimate of the mark and satisfaction were identified as determinants of student's academic performance. We also believe that basically students academic background can significant affect recent academic performance (8). Study finding showed that senior nursing student(3rd year) spent more time on study when compared with their juniors. This had again positive impact on their academic performance, which is in consistent with our study finding; students who spent more time on library had higher academic performance when compared with their counterfits (9, 11-12, 15) .

A study results imply that teachers play a great role in the academic life of the students. It further implies that the student respondents had a high regard on their teachers' craft in teaching, their mastery of lessons as well as their rapport with their students. Off course, teachers are all over regarding students academic performance, their direction, advice and encouragement can highly influence students' academic performance (10). Our study finding was also supported by a study conducted in Bangladesh which identified that students active class attendance was affecting factors for academic achievement (13). We believe that class attending student has strong potential to score higher grade than those who

are frequently missing class. So, instructors or teachers are expected to follow their students in each and every day activities based on taking class attendance consistently. An Ethiopian study conducted on Rift Valley University(Private university in Ethiopia) to examine what factors were affecting students academic performance regardless of department background concluded that both students and teachers or instructors positive opinions strongly associated with students academic performance(14).

Encouraging students to invest on reading individually as well as carry out group work which was initiated from instructors can positively influence students' academic performance while students' acceptance to what instructors said to work hardly is also playing great role for academic performance.

The discussion above suggests that academic performance of students is influenced by a combination of factors which includes use of library, class attendance and habit of substance use. Moreover; substance use is identified as reducing students' academic performance when compared with those who never used it in last 12 months (16).

Conclusions

Our study tried to show what factors are affecting students' academic performance. Since Ethiopia is one of the developing country, it requires educated individuals who are not only educated but also qualified on their academic performance, we believe that students should be supported from different direction such as families, schools or college communities, officials all should work in order to protect students from thing that may hinder them from attending classes. This cross sectional study has identified factors such as using library regularly, attending class consistently and using substance as influencing factors for academic achievement. Because of when students newly join to colleges and higher institutions, there are many issues that may force them to behave newly or unusually. So, we conclude based on the study fining habits such as using substances, not attending class as well as not reading in library should be discouraged.

Recommendations

A FOR SCHOOLS, COLLEGES AND UNIVERSITIES

Since students academic performance is the front issue in all the above mentioned institutions, we recommend that student are expected to read regularly in libraries for this reason Libraries should accommodate all necessarily reading materials for their updated status.

B FOR STUDENTS

It has been scientifically proved that those students regularly reading in library scored high level of academic performance; therefore, particularly for those reading hours on per day; students are encouraged to invest reading times in library.

Based on our study finding and other studies finding ; using substance has negative effect on academic achievement; therefore; we strongly recommend that read not by using any substances.

Therefore, due attention should be given for college students to attend class regularly, to improve a habit of using a library. It is also important to create awareness on a habit of using substance since it hinders academic students' performance.

Class attendance is such a powerful means to have remarkable academic achievement.

C FOR INSTRUCTORS OR TEACHERS

Studies have been identified there is always supportive and concerned teachers or instructors upon students academic performance. So, we strongly recommend that instructors should take students class attendance regularly and make sure that whether students are reading regularly or not by using close follow up or assessment tools.

D FOR COMMUNITY

Students' academic achievement issue is not only rendered to schools or colleges but it requires participations from community level. Misbehave of students such as using substance should be also discouraged at community level.

E FOR RESEARCHERS

Further studies should be carried out by using mixed study designs.

Declarations

Ethical consideration

Mizan Aman health science college research review committee approved this research

Consent to publish

The Consent to publish not applicable because there no audios and videos in data part. Availability of data and materials The data supporting the finding will be attached to editorial office if necessarily since it is avail in the corresponding author hand.

Competing interests

Authors declare that there is no competing interest.

Funding

No funding is required.

Author's contribution

The authors contributed for this study by originating the study concept, formulating study designing, controlling data quality and analyzing data .

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List of abbreviation

CCN: Comprehensive Clinical nursing

CGPA: Cumulative grade point average

EDC: Education development center

EGSECE: Ethiopian General Secondary Education Certificate Examination

HIT: Health Information technicians

MACOHS: Mizan Aman College of health science

MLT: medical laboratory technicians

MW: Midwifery

SES: Socioeconomic status

SNNPR: Southern Nations, Nationalities and Peoples Region

SPSS:-Statistical package for social science

TLCP: Teaching learning core process

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Tables

Table 1: Bivariate and multivariate logistic regression analysis of factors associated with academic achievement students in Mizan Aman college of health science students, southwest Ethiopia, 2018 (**n=250**)

	Students academic achievement					
	Yes		No		COR(95% CI)	AOR(95% CI)
	n	%	n	%		
Use of library	48	31.2%	106	68.8%	2.02(0.89-4.66)	3.13(1.5-6.49)*
	69	71.9	27	28.4%	1	1
understanding of teaching language	25	11.5%	22	24.4%	2.50(1.32-4.71)	2.8(0.96-3.75)
	140	88.5%	68	75.6%	1	1
Habit of Substance use	46	38.7%	73	61.3%	1	1
	70	53.8%	60	46.2%	2.70(1.60-4.58)	2.20(1.24-3.90)*
Instructors initiation to taught	12	5.5%	13	14.4%	2.89(1.26-6.62)	2.4(0.54-3.25)
	206	94.5%	77	85.6%	1	
Students class Attendance regularly	21	9.6%	31	21.1%	2.51(1.27-4.94)	2.29(1.04-5.04)*
	127	90.4%	71	78.9%	1	1
Instructors assessment methods	23	10.6%	20	22.2%	2.42(1.25-4.68)	2.21(0.65-3.20)
	195	89.4%	70	77.8%	1	

- * Statistical significant

Figures

student academic performance

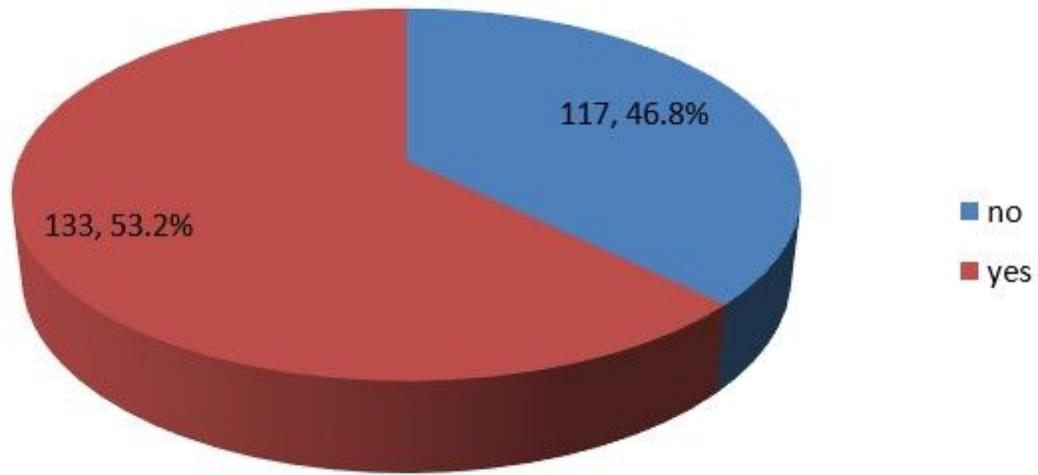


Figure 1

Students academic performance among Mizan Aman collage of health science students 2018.