A REVIEW OF THE ACADEMIC PERFORMANCE OF MEDICAL STUDENTS IN GONDAR

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ABSTRACT: Academic performance result measured in CGPA and ESLCE score of medical students ofGondar College of Medical Sciences was reviewed. Out of 900 students admitted from 1979 to 1987, only 530 (58.9%) graduated. The reported attrition rate was 41.1%. Poor correlation (r = 0.32) was detected between ESLCE result and final CGPA. Difference in academic performance between males and females was observed during the early phases of medical education. The validity of the ESLCE result as a sole admission criteria is discussed. [Ethiop. J. Health Dev. 1994; 8(1):23-28]

INTRODUCTION

The fundamental goal of medical education is to produce competent medical practioners who are equipped with a spectrum of medical knowledge and able to apply them in problem solving, be it at an individual, family or community levels.

In Ethiopia, there is a serious concern among medical educators and policy makers about the poor quality of medical education. Among the various factors affecting the quality of medical education, the selection criteria used to admit students is an area that deserves serious attention.

For many years students have been admitted to medical schools on the bacsis of their Ethiopian School Leaving Certificate Examination (ESLCE) results. The examination is prepared centrally and and is controlled at the 'national level. Selection is done by a Committee set by the Commission for Higher Education. In the country there are three medical schools with a yearly intake of about 150 students. Admission is highly competitive.

Although different views are expressed, there is concern among medical educators that the ESLCE may not select those who are best Isliited for the practise of medicine in Ethiopia.

Thus, the purpose of this study is first to find out whether the ESLCE is a good predictor of academic performance or not. Second, to know if there is gender difference in academic performance and third, to assess the trend in attrition rate among medical students. Such information is useful in improving the learning process.

STUDY POPULATION AND METHODS

Examination records and ESLCE results of the medical students who graduated from Gondar Collage of Medical Sciences (GCMS) from 1983 to 1993 were reviewed. Medical study at the GCMS lasts for six years including internship. The I" year is Preparatory; the Zoo and the 3rd years are Preclinical; the 4d1 and the Sd1 years are Clinical. In this study, academic results of Internship grades were not included.

Academic achievement at the GCMS uses numerical gradings and is measured by Cumulative Grade point average (CGPA). The CGPA is determined as follows: Each hour of "A" yields four grade points; each hour of "8" yields three grade points; each hour of "C" yields two grade points;

each hour of "D" yields one grade point and each hour of "F" yields no credit and no grade point. The total grade points are divided by the number of credit hours. A student must achieve a CGPA of2.00 and above to graduate from the medical school

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A CGPA of 3.25 to 3.74 means distinction and a CGPA of 3.75 or above is great distinction (1).

Yearly grades of each student were collected; procedures such as mean, standard deviation and correlation were analysed using EPI INFO Version 5.01 computer software. Correlation was measured through Pearson
Product moment correlation coefficient (r). The ESLCE score which is the only admission criteria to the medical school was correlated with academic performance (CGPA). To avoid bias, the correlation coefficient for each year was added and a mean taken in addition; for comparison of groups of students, such as males
and females, the ordinary t-test was used. Out of the 530 students who graduated, data were collected from 510. The rest (20 students) were excluded because of incomplete records .

RESULTS

From 1978/79 to 1986/87 a total of 900 students were admitted; out of these 530(58.9%) graduated. The percentage of females among the graduates was 11 % .The overall attrition rate was 41.1%. The highest attrition rate (54.1%) was observed among those admitted in 1982/83 (Table 1); the percentage of females dismissed for academic reasons was higher than that of males (Table 2). In the result, a gender difference in
academic performance was noted; males performed better than females in the preparatory and preclinical years. However, performance between males and females was the same in the Clinical Years. The result also showed that the mean performance of females increased from CGPA of 2.33 in the preparatory to 2.49 in the
Clinical Years (Table 3).

Moreover, correlation of low magnitude was detected between ESLCE score and medical school performance. Correlation in particular between ESLCE and clinical performance was very low (r = 0.23, SD ::t 0.22) (Table 4). The result also showed high positive correlation (r = 0.73, SD .:I:. 0.05) between Clinical and Preclinical performances but, correlation between clinical and preparatory performances was moderate (r = 0.42, SD .:I:. 0.13). Table 5 shows students an average with ESLCE grade point of 2.8 performed academically better than those who scored 3.2 and 3.4

Table: 1. **Attrition Rate of Medical Students by Year of Admission.**

Year of Admission	No. Admitted	Academic Dismissals, Dropouts & Withdrawals	Attrition Rate %
1978/79	88	28	31.8
1979/80	116	54	46.6
1980/81	110	46	41.8
1981/82	92	42	45.6

1982/83	98	53	54.1
1983/84	108	35	32.4
1984/85	113	49	43.4
1985/86	89	25	28.1
1986/87	86	38	44.2
Total	900	370	41.1

Table 2**. Comparison of Attrition Rates Between male and Female Admitted Medical Students**

Academic status						
	Male		female		Total	
	No	%	No	%	No	%
Academic dismissal	221	28.2	42	36.2	263	29.2
Withdrawal	25	3.2	7	6.0	32	3.6
Dropouts	66	8.4	9	7.8	75	8.3
Graduates	472	60.2	58	50.0	530	58.9
Total	784	100.0	116	100.0	900	100.0

Table 3**. Comparison of perfomance Scores Between Males and Females in Different Phases of Medical Education**

	Preparatory		Preclinical		Clinical		Final Result	
Sex	X	SD	X	SD	X	SD	X	SD
Male	2.47	0.42	2.57	0.50	2.55	0.39	2.55	0.38
Female	2.33	0.34	2.40	0.42	2.49	0.34	2.46	0.33
P-Value	P< 0.05	-	P< 0.05	-	P< 0.05	-	P< 0.05	-

Males = 152
Females = 58

Table 4**. mean Correlation Coefficient Between ESLCE Score and Academic Performance**

Phases of Medical Education	ESLCE Performance	
	r	SD
Preparatory	0.46	0.16
Preclinical	0.29	0.16
Clinical	0.23	0.22
Final Result	0.32	0.21

Table 5. **Comparison Between ESLCE AND Final GPA**

Predictor	Performance of medical graduates		
ESLCE Score	No. Students	X Final GPA Same Students	SD
4.0	28	2.29	0.50
3.8	80	2.55	0.38
3.6	99	2.56	0.34
3.4	89	2.49	0.39
3.2	79	2.48	0.34
3.0	67	2.48	0.35
2.8	60	2.54	0.36
2.6	8	2.35	0.28

DISCUSSION

The study addresses the basic concern of those involved in medical education particularly the low correlation between clinical(including community health) performance and ESLCE is not uncommon. Similar results were reported from studies done in the Sudan and Saudi Arabia (2.3).

The weak positive association between ESLCE result and academic performance in the medical school indicates that the ESLCE may not a good predictor of performance. The fact. that students with 2.8 grade point on ESLCE performed better than those who scored 3.2 and 3.4 supports such an observation. Moreover, the attrition rate (41.1 %) underlines the problems of the ESLCE score as an admission criterion. Normally, an appropriate selection criterion must be able to select students who have the greatest. Potential of finishing their studies within the prescribed time (4).

In our opinion the admission policy practised in Ethiopia poses a significant problem. Although further study is needed, the use of the ESLCE result as a sole criterion for admission might also prevent potential students
from studying medicine. A study done at the VCMS showed 86% of the medical students tame from urban areas (5). Eventhough there are differing views, we suggest admission be based on multiple criteria such as interview, progressive assessment result during secondary school, and entrance examination. The interview needs to take into account place of origin, sex and other socially relevant characteristics such as empathy and position towards rural practice. This is true because medical competence is multidimensional whereby written, oral and practical tests are used to measure performance in cognitive, psychomotor and attitude domains. The high attrition rate reported in the study deserves particular attention since it reflects the amount of wastage interms of social investment. The reasons for the high attrition rate (Table 1) might be attributed to the characteristics of the student, teacher, the learning environment, the teaching-learning situation, the method used to assess students, admission procedures, and soon in order to improve the situation, (there is a need to bring changes in the entire educational system. In our study, gender difference in academic performance was seen during the Preparatory and Preclinical years. This finding is similar to that of a study done in the Su
(2). However, it is different from that of Saudi Arabia where female students excelled males in the Clinical Years (3). Although further study is needed, the difference in academic performance might be cause4 by social and psychological factors. Female students might have problems of adaptation and integration in the new educational environment. Moreover, previous study has shown that female students report more feelings of isolation and discomfort than their male peers (6). In our setup, female medical students are fewing, they are shy; this prevents effective interaction with students and faculty members. In our opinion there is a need
to support female. students during the early phase of medical education. Moreover, further study to identify adjustment problems is suggested.

Finally, the study recommends a full discussion of possible changes in the admission policy. Furthermore, the validity of the CGP A as an instrument for measuring academic performance in a medical school should also be investigated.

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