Original Article

Screening Criteria of Post Basic BSc . at Jimma University (JU)

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ABSTRACT

The study was conducted in Jimma University main campus health areas to evaluate the screening criteria of the post basic BSc candidates, from 1993/94 to 1997/98. A total of 1,924 applicants were involved in this study of which 85.9% (1,653) were examinees and 25.3% (419) admitted. Four programs; Nursing, Environmental Health, Laboratory Technology and Public Health, have been under going through these recruiting processes to host the successful candidates.

Candidates were grouped into two according to the system that their grades were measured at diploma level. These groups were compared according their performances; at diploma level taken out of 30%, written exam out of 60% and interview 10%. The minimum points CGPA of 2.00 for the first group and 60% for the second, were taken as the cup off points.

The two groups had significant difference on their performance out of 30% taken from the diploma results added in the final point of screening. Though the first group, CGPA showed lower share out of 30%, they performed better in the written exam particularly in basic science areas. Consequently, they had a better success in admission which had been significant. Due to other factors, we cannot conclude one group is inferior to the other.

No sufficient data were found to compare the cut off points 2.00 and 60% of the two groups indicated above to support the complaint of inflation at these points.

The request to reduce the cut off points below 2.00 could be very difficult to accept since the rate 7.6% of graduates below 2.00 is negligible.

Rather, it was found that the opportunities for admission 15-30 candidates per program, except the public health program for health officers (50), were very little leading as a source of complaints and

recommended to increase the quota for the three programs accepting reasonable amount, considering teaching facilities. Adjustment is recommended for the descripancy of minimum service year requirement for screening observed (3 or 5). Besides, females involvement is found to be very little (19.3%) and needs to be reconsidered.

INTRODUCTION

Jimma University with its unique philosophy (community oriented trainings) is located 335 km South West of Addis Ababa in Jimma town with two major campuses, one the former JIHS campus (the main campus), the other Agriculture college; launched as a University in April 2000. It is a motherhood for Agriculture College established in 1954, JHHS in 1983, Business and Technology both in September 1997. The University currently encompasses faculties, college and teaching sites and health service areas. Faculty of Medical Sciences, Faculty of Public Health, Faculty of Business, Faculty of Technology, Faculty of Science and Teachers Education and the teaching hospital are found in the main campus whereby college of Agriculture found

in the second campus about 5 km from the main campus.

At the time of this study, the health area consisting two faculties has many programmes, Medicine (offering MD), Nursing (diploma and post basic BSc), Pharmacy (Diploma), Medical Laboratory Technology (diploma and post basic BSc), Environmental Health (diploma and post basic BSc), health Officer (post basic BSc) and currently the five programmes in Business and Technology Faculties at BA and BSc levels respectively.

Amongst these, the post basic BSc programmes were launched to the very interest of the Ministry of Health (MOH) based on the new health policy of the Ethiopian government. As indicated in the curriculum documents of the Institute, JIHS (1992, 1994, 1995), these post basic degree programs were gradually launched; in 1993 nursing, 1994 environmental health, 1995 both medical laboratory technology and public health.

These programmes were meant to partially fulfill the trained health man power need of the country and alleviate the problem created in line of career ladder development in mid level health workers.

These opportunities were opened to thousands of mid level health workers who have had no opportunity in higher learning for

many years and which has created high frustration to the extent of serving the health delivery to the people.

After the opening of these post basic BSc programmes there has been a very fierce and cut throat competition amongst the potential candidates for placement.

Though there was no study conducted on the selection criteria for the post basic BSc programmes in particular, several studies like, Zein (1985), Asmerom (1989), Melakebrehan (1994) and Kassahun (1996) discussed the issue of admission criteria in tertiary levels in Ethiopia in general. These studies tried to relate the need of selection criteria with students' performance, and the weaknesses reflected by the attrition.

Tefera (1986), for example, stated that attrition of students is affected by factors such as the standard of basic education and admission policy to the training schools; showing the effect of admission criteria on the cost of training thorough attrition. In line with this, Desta (9188) explained that the most widely used testing procedures assess primarily the ability to recall and produce fragments of information. Even essay and oral examinations, as they are usually graded, appear to reward content more than reasoning. He further suggested that although the

size of each entering class is more or less predetermined, means of involving the faculty in selection of students from the available pool has to be seriously considered. Additional criteria that may more closely match with the ultimate performance goal should be evaluated, for example by personal interviews, reports of pervious activities, influence, interest and capacity.

Almost all of the recruitments for tertiary levels in Ethiopia have been conducted by Higher Education Main Department (HEMD) through ESLCE performance. High demands and hot discussions were going on suggesting that tertiary levels to recruit their own trainees. Earlier, the nursing training centers under MOH were assumed to be the models but still the centers are not yet involved in the recruitment. They too are dependent basically on ESLCE results and other regional or zonal higher officials involvement. By the virtue of opening post basic BSc programmes for career structure of health professionals, Jimma University Health Sciences areas are currently practicing the recruitment of these programmes independently. The Gondar College of Medical Sciences also started this procedure on Public Health Programme recruitment recently.

Sister Mary Albert and John T.Cowel (1974) advised us that evaluation is closely related to the

motivation and progress of student learning, and improper grading may be a threat and thus a deterrent to learning. As a consequence, judgement must be made as to whether or not students in the failing category actually fall below minimum standards of acceptable performance. In making this judgement, it is necessary to look again at the requirement of the profession, the objective of courses, and the testing instruments used.

Similarly in our case, testing the fairness (the significance) of the equivalence of the different grading systems used from different diploma training centers but used as selection criteria for post basic requirement is not negligible. The flow of comments and suggestions from the possible candidates in Ethiopia for a better and fair minimum criteria is plausible. The Institute then, has to show its readiness to study the case and respond accordingly.

As indicated in facts and figures, JIHS (1998), the opportunity of joining post basic BSc programmes in JIHS has been very rare. Only 15 to 30 candidates were accepted for the programme from about 400 applicants per year and from over three thousand potential pool of mid level professionals.

Yet, the applicants were of different background, meaning that the different schools in which they have taken their basic training were

different with their grading systems. The basic training offering institutes and colleges across the country have had different types of evaluation and grading their students, viz weighted average out of 100% and cumulative grade point average (CGPA) computed out of 4. For example, almost all nursing schools hosted by MOH use the first system while those under higher education main department like JIHS and Gondar Health Science College in the second system. These differences have casted shadow on the screening and admission criteria of the programmes mentioned above.

So far, 75% and 2.5 CGPA at early stage, and subsequently 60% and 2.00 were taken as cut off points, whereby these grades were given a weighted average of 30% for admission, to be taken with the results of written exam (60%) and interview (10%) given during the recruitment. Yet these computations and cut off points have become point of grievance and compliance from the candidates earning CGPA arguing that percentage grades were highly inflated.

This study tried to assess the recruiting system of the post basic candidates such as, the screening criteria (i,e. age, service year, service post, etc), the academic performance of the two groups: those measured in CGPA (out of 4) and those measured in percentage (out of 100%), and the impact of this

system on female candidates. There were performances like, their previous diploma grade points, entrance exam results (written and interview) cut off points (the minimum points in the two cases) given as first screening criteria.

METHODOLOGY

The sources of data for this study were the post basic BSc recruited candidates of JU. Data of 1993/94 to 1997/98 academic years were used in this study. All total population (1924 applicants) who were involved in the recruiting process so far were used in this study and out of which 1653 were examinees.

The study was designed cross sectional, conducted from May 1997 to April 1998. This was mainly to include the data of the first year first semester performance of the last batch at JU. (i.e, entry 1997/98) in order to increase the size of data so that the decision on the cut off points could be estimated.

The data were collected from the document under the consent of registrar office without disclosing the names of the candidates, by using the codes given during the written examinations of the recruiting process. Variables: previous grades of ESLCE result and diploma performance, written exam results, interview results, working place, years of service, age, sex, type of schools/ programs involved were the major ones for this study.

Basic statistical methods like descriptive statistics, chi-square tests for associations, z-test for proportions and multivariate regression and correlation models were used for analysis through SPSS-PC soft ware package and some manual computations using calculators. The study was mainly a comparative study between the two groups of candidates: those with the diploma result based in CGPA out of 4, and the others measured in percent out of 100. As a result, the first group usually identified CGPA group and the second percent group as defined for this study. Particularly, the impact of age, sex and service year on the performances (out of 30%, 60% and interview) was controlled by logistic regression model. Besides, the following operational definitions(:=) were used in the study.

Diploma Level:= at least two academic years training of diploma at tertiary level

Academic performance:= academic grade points during the training

Academic Year:= a full session of a class for its level of training.

Semester:= half of one academic year usually 16 weeks.

Delay:= a repeat of some attachments in training given a second chance for weak trainees as a remedial session just after the time of graduation

CGPA:= cumulative grade point average computed out of 4

SGPA:= semester grade point average out of 4; where:= is a

mathematical symbol for the concept 'definition'.

For the first two years, the recruiting had been conducted in Addis Abeba particularly at MOH in collaboration with the concerned higher officials. All the records and computations were done manually and records were difficult to categorize by either basic science or professional areas.

RESULT

As the screening procedures went phase by phase, the first phase of screening was based on the required documents like transcript, diploma and other minimum requirements like service years, age, grades both in ESLCE and diploma training performance and like. Accordingly, a total of 1924 applicants were found recorded from 1993/94 – 1997/98 (1986-1990 E.C) of which 19.3% (371) were females. The highest 49.8% (958) of these applicants were nurses, the pioneering with 30% (289) of them females. Out of these applicants, 1,868 candidate results were found recorded either in CGPA or percent. The rest were those rejected due to incomplete document, lack of transcript, etc. Here 3 medical laboratory technician candidates had results in both groups (CGPA and Percent) and counted twice. This was because some laboratory diploma candidates should have to pass through junior (one and half years) and senior (one year) training for equivalent diploma performance.

As a result, junior may be measured in CGPA and the other in percent or Vice versa.

Of all the applicants, 85.9% (1653) sat for the entrance examinations (written examination) clearing the first phase of screening criteria. One and half of the quota for admission, 40.5% (670), were placed for the interview. Finally, 25.3% (419) of the total examinees passed and admitted to the institute. At this stage, 11.9% (50) female candidates found admitted so far.

The majority of the applicants 64.7% (1245) came from areas away from Addis Abeba, like provincial towns or districts. The working place of 17.3% (332) applicants were not found in the record due to negligence of the applicants to complete the application forms properly and some unknown reasons. Through the process, 79% (331) of those admitted came from the same remote areas. Besides, the average (mean) age of all the candidates was 29 ranging from 20 to 44 years old. 57.2% (946) of the examinees and 60.9% (255) of those admitted were below the age 30.

The minimum service year criteria for nursing and public health programs were 5 years whereas for environmental health and laboratory technology 3 years. This could go lower to 2 years service for those relatively

disadvantaged regions like Affar, Somaly, Gambella and Benishangul. Accordingly, the service year for the total applicants ranged from 1 to 36 with the average mean of 8.26. On the other hand, the range of service years for those admitted run from 2 to 22 years at an average mean 7.61.

Academic Performance

Mainly four different performance results of the candidates; ESLCE, diploma performance, written exam and interview were involved through the recruiting process and found to be positively correlated. In particular, comparing basic and professional areas in the written exam, the correlation showed r= 0.91. The logistic regression model showed that age, sex and service year had no impact on the three performance results diploma result out of 30%, exam result out of 60% and interview out of 10%.

Moreover, it showed that CGPA group had 62% advantage to pass the over all screening exams.

The ESLCE results of the majority applicants 77.5% (1489) lied below 3.0 while 2.4% (45) applicants were found below the minimum requirement and no ESLCE result record for some of them. Taking those candidates scored 2.5 and above in ESLCE, 75.3% (314) of them were successful and admitted.

Out of 1668 applicants whose records found either in CGPA or

percent, the large rate 61.13% (1142) had records in percent. From these categories, 649 of the CGPA and 1004 of those in percent sat for the written exam pf which, 32.05% (208) of the first, and 20.9% (210) of the second passed and admitted for the training. The z-test based on these proportions showed significant success for those in CGPA ($p<0.01$). In addition, the regression model showed that males had 95% chance to pass this written exam, while those with service year below 5 had three times advantage over those with service year above 20.

The diploma result of these 1868 applicants proportionally converted in both cases out of 30% to be counted for admission criteria indicated a total average mean performance of 23.96 ranging from 18 to 29.76. The record showed a majority rate 96.5% (1749) scoring 20 and above in general, but from the first group of candidates measured in CGPA, 91.24% (646) scored at least 20 out of 30% while from the second group measured in percent, 99.9% (1102) scored 20 and above which was relatively high involvement. The average mean scores of these two groups were found to be 23.52 and 24.24 respectively, where the difference was significant [Table-1]. Only one candidate scored below 20 in percent while 2 candidates from those in CGPA, negligible in both cases.

Table-1 Performance of the two groups; CGPA and PERCENT, During the Screening 1993/94 – 1997/98, (Post Basic BSc at JU)

Candidates' Performance	CGPA Group	Percent Group	Total	P-value
Diploma Result/30%				
#	708	1103	1811	
Mean	23.52	24.24	23.96	
St.Dev.	2.38	1.30	1.84	
Min.	18	19.79	18	
Max.	29.76	28.80	29.76	
Extrance Exam/60%				0.00000

#	649	1004	1653	
Mean	30.11	28.84	29.34	
St.Dev.	4.66	4.42	4.56	
Min.	15.24	6.56	6.56	
Max.	43.93	42.50	43.93	
				0.00000
Interview/10%				
#	286	384	470	
Mean	7.57	7.47	7.51	
St.Dev.	0.88	0.82	0.95	
Min.	5	5	5	
Max.	9.84	9.42	9.84	
				0.07720
Final Result/100%				
#	208	210	418	
Mean	66.73	65.59	66.16	
St.Dev.	4.47	4.01	4.27	
Min.	52.45	51.24	51.24	
Max.	81.10	75.64	81.10	
				0.00756

The entrance written exam converted out of 60% indicated that 55% (909) of the examinees scored below 30. The total scores ranged from 6.56 to 43.93 with average mean 29.34 showing no scores of 50 and above so far. From the first

group, CGPA, 48.2% (313) scored below 30 while 59.4% (596) of the percent group scored the same below 30. Moreover, the average mean score of these two groups (CGPA and Percent) were 30.11 and 28.84 respectively. This was found significantly different ($p<0.01$), showing that the CGPA group had upper hand in the share of the written exam.

In the written exam, taken out of 60% half of it (30%) was from basic science subjects and the other half from professional areas. Accordingly, only 1139 examinees' records were found under the items basic and professional areas. The rest were found recorded simply out of 60% as a whole sum which was the system at early years. The average mean scores for basic and professional parts were 13.24 and 16.19 (out of 30% each) respectively. Comparing the two groups (CGPA and Percent) in terms of basic and professional performances, the first group (CGPA) scored average means of 13.74 in basic and 16.52 in professional areas; while the second group scored average means of 12.81 in basic and 15.92 in professional. In this comparison of the two groups related the subject areas the values $p < 0.01$ in basic and $p > 0.05$ in professional showed that there existed significance difference in basic science

performance and but not in professional areas.

In general, comparing the two groups with respect to their diploma performance out of 30% versus the written examination performance out of 60%, there existed significant difference between the two performances in CGPA group ($p<0.01$) while no significant difference in percent group ($p>0.05$) as shown in [Table-2]. On the assumption to reduce the diploma result count from 30% to 20% and accordingly 60% raised to 70%, the CGPA group still had 62% advantage in any case, but its advantage of the written exam would be reduced from 34% down to 28% respectively.

Table-2 Comparison of Diploma Level and Written Exam Performances of the two Groups (CGPA and PERCENT) 1993/94 – 1997/98; JU

Diploma level Performance/30%	Written Exam Performance Level/60%							
	Less than 30		30-39.99		40-49.99		Total	
	#	%	#	%	#	%	#	%
CGPA Group								
15-19.99	2				-		3	1.4
20-24.99	5		86		5		96	46.2
25-29.99	14		84		11		109	52.4

Total	21	10.1	171	82.2	16	7.7	208	100.0
P = 0.00268								
Percent Group								
15-19.99	-		1		-		1	0.5
20-24.99	24		77		2		103	49.0
25-29.99	12		88		6		106	50.5
Total	36	17.1	166	79	8	3.8	210	100.0
P=0.13656								

A majority of the interviewed, 71.2% (477) scored between 7 and 8.9 (inclusive). Taken out of 10%, the range run from 5 to 9.84. Accordingly, 69.6% (199) from the CGPA group and 72.4% (278) from the percent group scored in this modal class (7-8.9). The average scores for these two groups were 7.57 for CGPA and 7.47 for percent group out of 10%, showing no significant difference in the comparison between the two groups ($p>0.05$).

Finally, even though 420 were found admitted, 419 were those local candidates passed through all the above screening phases. The other one was a candidate from abroad/Ereteria recruited through the standardized documents produced with out the entrance exams. Thus, from these admitted 419 candidates

the average mean score out of 100% was computed to be 66.61, the minimum 51.24 the maximum 81.10. Most of the admitted candidates 80% (335) scored between 60 and 69.99. The average scores from the two groups were 66.73 from CGPA and 65.59 from percent. Associating 419 admitted candidates with respect to their performance variables; ESLCE, diploma 30%, exam 60% and interview 10% were found positively correlated; r = 0.92. Particularly, the two major performances, diploma 30% and exam 60%, had good associations compared with the final result 100% where r = 0.5883 and r = 0.8947 respectively.

Only three batches of the admitted (189) went through all the records having or supposed to have the graduating semester result, the ones to be graduated so far. From these batches, 87.8% (166) graduated successfully of which 1.8%(3) were delayed for some few months, about a month or three.

The cut off points

The cut off points, the minimum criteria in the two categories scores found from their diploma transcripts were 2.00 for the CGPA group and 60% for the percent group recently. In this respect, there were only 3 applicants having the minimum criteria CGPA 2 while no one with percentage 60. Instead, investigating the data at about the boundary of the cut off points,

meaning, 2-2.5 from the first group and 60 -70 from the second, only 125 candidates from the first and 8 from the second were found. Here, 108 of the first group sat for the exam and 13% (14) passed for the interview where 6.5% (7) were successful. On the other hand, 6 of the second group sat for the written exam and 1 passed for the interview but not successful for admission [Table-3]. The two cut off points compared with respect to the above means had the z-values of -2.1 and -4.8 respectively computed at CGPA = 2 and Percent = 60, that is.

$Z_2 = -2.1$ and $Z_{60} = -4.8$.

Table-3 Comparison of the Two Groups at the Cut Off Points, 1993/94-1997/98

	CGPA Group n=726	Percent Group n=1142	Total n=1868

Characters	#	%	#	%	#	%
Candidates at the cut off points						
CGPA at 2.0	3	1.0	-		3	
Percent at 60%					-	
2-2.5	125	45.0	-		125	
60-70	--	---	8		8	1.0
Applicants' Total Performance						
Mean	2.84		80.76			
St.Dev.	0.40		4.33			
Min.	2		65.97			
Max.	4		95.10			
Z_j	Z_2=-2.1		Z_{60} = -4.8			
Examinees	649		1004			
2-2.5	108	17.0	-			
60-70	-		6	1.0		
Interviewees	286		384			
2-2.5	14	5.0	-			
60-70	-		1	0.26		
Admitted	208		210			
2-2.5	7		-			

60-70	-	0	0.0

The minimum graduating point 1.75 had been exercised at diploma level from the year 1984/85 – 1995/96 (1977 to 1988 E.C). at JIHS. As shown in [Table-4], 7.6% of the graduates in the years above graduated with grade points below 2.00. This included pharmacy Diploma students which had no Post Basic BSc program. As a result the rate of these graduates would be reduced down to 6.9%. Here, the highest was for the nursing school 9.7%.

Table-4 Diploma Students Graduated Below the Cumulative GPA 2.00, But not less than 1.75; 1993/94 – 1995/96

School	Graduates with in 1.75-1.99		Grand Total	Year of Establishment of the Programs/Sch. (E.C)
	#	%		
Nursing	63	9.7	650	1984/85 (1977)
Pharmacy*	9	3.6	248	1986/87 (1979)

Med.Lab.Tech.	6	4.2	144	1989/90 (1982)
Env't Health	11	8.3	133	1990/91 (1983)
Total	89	7.6	1175	

- Pharmacy diploma graduates have not been involved in the Post Basic BSc Competitions. As a result the total rate would be 80/1166 = 6.9

- No Health Officer Program at diploma level.

DISCUSSION

Candidates for post basic BSc programmes at JU have been flowing for competition since 1993. As the competition went on fierce year after year the demand for revision of evaluating the system had increased. The study showed 1924 applicants converged to the testing centers from every corner of Ethiopia; the majority (64.7%) from the provincial towns and districts. As the rate indicated female candidates were very few (19.3%) in this competition. Even more, the rate of female candidates as we look from the status of their application to the status of admission is constantly decreasing (17.3% - 11.9%) compared to that of the males quite

the contrary (80.7% - 88.1%) with a very high advantage to pass the exams.

By the virtue of Ministry of health (MOH) to extend the career structure of health professional in support of primary health care, the post basic program was ventured primarily by opening nursing, then environmental health followed by the other two, laboratory technology and health officer. Different screening criteria exercised for different programs, like, a minimum service year 3 or 5, the special considerations given to those relatively disadvantaged areas the minimum service years lowered to 2 years or so, and the wide range of age difference given up to 45 years, were reasonable actions, ample opportunities given to up grading. This was a sign of acknowledging their long service for the country at large eventhough the younger group below 5 year service had a triple advantage. The training for these programs have been a sort

of scholarship sponsored by MOH in general, releasing their full salaries through out the two and half years training. This golden opportunity by itself made the competition fierce followed by complaints the cause for this study. Particularly, it was only the nurse candidates who had the opportunity to compete for health officer as a second option. These opportunities to join two programs for nurses resulted complaints from the

other diploma health professionals, Environmental Health, Laboratory Technology and even Pharmacy. They claimed that they could also join health officer program reasoning that public health courses at diploma level had been common to all. Of course, community courses like, Biostatistics, Epidemiology, Health Education, etc and basic medical science courses like, Anatomy, Physiology,

Microbiology and Parasitology, others like; Psychology, Sociology, etc were some of the courses supporting the above claim as stated in the catalogue of the institute, IJHS (1995).

According to the national criteria to join tertiary level in Ethiopia, we could group these candidates into two, based on their ESLCE results. One group, those with acceptable ESLCE results placed by HEMD usually 3.0 and above, sometimes lowered to 2.6. The second could be those with ESLCE results less than the first ones, selected and placed by MOH. What ever the case might be, all of them have been treated equally in the competition for post basic BSc programs. This equal acceptance had been the very source of the complaints of the would be candidates specially those from the first group, placed by HEMD.

For example taking ESLCE result 2.5 and above, 78.6% in CGPA and 55.1% in percent implied their background difference from start. The majority of the applicants (77.5%) showed ESLCE performance below 3.0 which were about below the border of the Higher Education Main department (HEMD) requirement to join tertiary levels, 3.0 and above in most cases. Consequently, the success for admission was seen positively correlated as the performance in ESLCE increased. Meaning, 75.3% of those admitted had shown ESLCE grades of 2.5 and above.

As the study reflected, the written examination result made the argument strong as more than half of the candidates 55% scored weak points, below 30 out of 60. In addition to this, no grades were seen scored 50 and above through out all these years showing no extra ordinary candidate so far. On the other hand, the written examinations were targeted to help screening the fierce competition among candidates. Besides, it was meant to make candidates revise the basic science and professional subjects, the basis for the future advanced BSc courses that they would be supposed to take in the training. As the candidates were of the same age and of the same service year levels during their training at diploma section, inevitably, these variables

will not have impact on the performance of the two groups.

Again the study reflected the weakness not only in ESLCE and exam but deep in to basic sciences areas compared to the professionals. Here, the two groups (CGPA and percent), which were the core subjects of

this study, differed significantly in their basic science performance, the upper hand from the CGPA group ($p<0.01$). But equivalent performance of the two ($p>0.05$) in the professional indicated that the argument basic science courses have been loaded over the first group placed by HEMD resulted a support for a better success in admission, eventhough the main objective for the training was the professional, a success in general.

The previous diploma result counted out of 30% and the written exam out of 60% added up 90% made it ready for the third and last phase of screening, the interview allotted the rest 10%. As the competition went on fierce, the diploma performance counted out of 30 in this respect forced the candidates to appeal for the reduction of this rate suggesting that it was unfair. Here different

techniques were used to select those to sit for interview. Definitely all of them could not go through it since the maximum seats for admission

were 15-30, except public health 50. In principle, those who could come with in the 30th rank of the expected 10 points added to their score out of 90% ranked descending order, would be selected. This would determine the number of candidates for the interview. This system would give a lot of candidates for the interview and would waste time. Due to this reason, the second acceptable system, taking one and half candidates to compete for a seat would suffice the need for interview. This was taken as the usual option so far. Besides, there were special options given according to the need of the training institutions, two third (22 out of 30) chances were given for teaching staff candidates during the first year of recruiting process and more than one third chances (10 to 15 seats) were given to females in the second year of screening. And from the year where health officer (public health) program started special quota system have been given to the regions allocated by the MOH each year. This was to satisfy the urgent need of public health managers at the grass root level of health centers designed in the five years plan of health policy. In any of the above cases, one and half competitions of a seat for admission would be selected for the interview, the 90% grade point ranked for those with a minimum standard of 50%. The hard rule for this was one who scored below 50% would never go for admission what ever the quota

could be. Through these processes finally, only very few (25.3%) of the total examinees were successful to be admitted of

which incompatibly very few (11.9%) females. On the other hand, we noted no impact of interview to discriminate the two groups, CGPA and percent, with p>0.05 which was a good indicator of success. In this process, the majority young candidates (below 30) had a good share of the opportunity.

Based on the minimum cut off points (2 and 60%) given by MOH as the first screening criteria, grade points were equivalently converted out of 30% ready to be added to the written exam results. This was where the controversial issues were raised. One, the cut off points were not equivalent since the passing grade in CGPA had been 1.75 in most cases at early years. Two, as the corresponding measures were not the same, 30% to be counted for the final competition could be too much and unfair and would be in

favour of the second group as the CGPA group assigned by MOE with better ESLCE result. From the study then, the highest significant rate (61.1%) out of 1868 records was that of the second group, percent. This corresponded to the large number of training colleges under MOH usually following the second type of measuring grades. Nevertheless,

the first group, CGPA, success rate (32.2%) for admission found to be significantly higher than the second group rate (20.9%). On the other hand, relatively high rate was seen on the side of the second group out of the diploma performance measure 30% and the difference between the average mean scores of these two group (23.52 and 24.24 respectively) found significant might imply the request for the reduction of the count 30% which may affect its advantage on 60%.

In spite of these facts, one cannot conclude that one group of school is inferior to the other since the teaching methods, the grading systems, teaching facilities, teachers quality and the like of these different schools are to be investigated further. Rather, we could compare them by the written exam and interview, having seen CGPA at the upper hand in basic subjects helped them for a better admission. Even if the reduction was accepted, from 30% down to 20% the existence of the advantage on this part (22% to 34%) would be complemented by the disadvantage of the written exam equivalently raised to 70% (34% to 28%). In any way, there would not be any change of advantage on the general performance out of 100% (62% in both cases).

As the fierce competition went on due to the scarcity of space,

the minimum criteria 2 and 60% became questionable. The study encountered problem in finding sufficient data on the cut off points 2 and 60% respectively scored by the two groups so that we may compare and judge; only 3 candidates who scored 2 and no one in 60 were found. And these were not sufficient to give us hint to say about these points. Even in the class boundaries extended about these points, 2-2.5 in CGPA and 60-70 in percent data were not sufficient to compare them [**Table-2**]. The existence of only 8 candidates in the second group and 125 in the first, followed by 6.5% and 13% success respectively may be; either no large quantity of candidates scored in the range 60-70 all in all, which needed further investigation to check graduates result school to school, or there might be some more but did not want or have the chance to apply since their low grades might have frustrated them anticipating failure. If the first assumption followed true the hypothesis of those candidates claiming inflated percentile grades might be true. But one thing was obvious that these points have been fixed from the logic that the minimum passing points to graduate were standardized to be 2 and 60% respectively in both schools. This is currently true except some years ago 1.75 had been the minimum passing grade for the first group. Even then as shown in Table-3 the 7.6% graduates with the graduating CGPA

less than 2.00 could be negligible for such complaints about the cut off points reduced to 6.9% when pharmacy students' share excluded. Even more, the rate 6.9% will approach zero in the

future as the minimum point could still be 2.00 and the candidates in that domain increases, while 1.75

is no more active. One thing we can do here is comparing these two points depending on their respective z-values. In this respect therefore, the values Z_2 = -2.1 and Z_{60} = -4.8 could tell us that the cut off point 2 in CGPA had a greater weight as requested by the source of the issue. Further more, the equivalent conversion rule P = 20 (C-2) + 60

where P = out of 100 and

C = out of 4 could confirm the fairness of the conversion of both grades out of 100 and then after converted again out of 30%. As to the inflation of the grades given in the schools of the second category (percent) there is no ground to conclude this except to compare the two based on their standard scores as we have done when finding the z-value based on the statistical rules.

CONCLUSION AND RECOMMENDATION

Some of the criteria like minimum service years were not uniform and create discrepancies, 5 years for nurses and public health but 3 years

for environmental health and medical laboratory technology. This discrepancy has been one defect of the recruiting process. As a result, uniform and standard criteria are required for the same type of programmes to be recruited at the same BSc level. Furthermore, the opportunity to be the candidates for health officer, given for nurses only should be reconsidered to open it for the rest diploma health professionals taking the same common curses which could be prerequisites for advanced traing. But, it must be supported by further study regarding the detail

course work claimed to be exempted at this BSc level.

The average service year 8.26 ranging up to 36 and the remote area where the majority came from, implied that reasonable opportunities have been given for those who have given sufficient services to the community under the grass root level. This supported the need for the development of the career structure supported by MOH trying to solve the evacuation problem of health professionals from health centers where the majority came from, thus must be encouraged and should continue.

Even though we cannot conclude that the CGPA group is less advantaged in the competition in general, rather highly advantaged,

once they are in the competition, the Institute may reconsider to reduce count

30% from the diploma result based on the significant difference found in this particular domain at which both groups will have the same rate in any case, but the cut off point not less than 2.

In the written exam, 55% of the examinees scoring below 30 out of 60 implied that the exam had been appropriate for the purpose of screening the fierce competition. On the other hand, the result with no significant differences in performances of both groups in professional areas and interview imply equivalence professional training in the training centers of the two categories which is to be encouraged; of course, considerations have to be made for basic subjects.

The very few opportunities (25.3%) of admission due to

scarce space created the challenge for the competition and resulted complaints on the screening process, specially for those other than health officers. As a result, better opportunity must be though of to raise the number of candidates to be accepted for the training, specially for those accepting below 30 students per in take. This would be wise when related to the number of teaching staff and the facilities used

related to the number of teaching staff and the facilities used for a very small number of students per class, but laboratories equipments and sufficient space for both theoretical and practical works should be taken in to account.

No sufficient data were found on the two cut off points (2.00 and 60%) to comment on the complaints of unfairness. Since both points had been minimum

passing points for graduation in any of the school of the two categories, and is the standard of the national criteria [the first MoE and the second MOH] , it would be very difficult to accept the claim to reduce the minimum screening criteria for the

first group below 2.00. Inevitably, the request came from those graduated in the low range below 2.00 (1.75); whose rate 7.6% is actually negligible compared to the total graduates so far and still more to come in the future to dominate this rate, the limit approaching zero.

The very few female candidates, 19.3% out of the total applicants, implied attention to be given to the female candidates to be involved in the competition and further more to pass the screening for a good share in admission.

Further investigations must be done in line with the grading systems, teaching facilities, quality of teachers

of these widely sited different schools to compare their grading results which is the limitation of this study.

ACKNOWLEDGEMENT

First and for most we are grateful for the Research and Publication Office of JU in supporting us financially to conduct this study. We want also to forward our gratitude to Ato Fassil Tesema and Ato Sileshi Fanta for their consultation in the process of the analysis part, and the office of the registrar staff to avail the necessary data.

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