

Relationship between students' performance in aptitude test at recruitment time and actual progressive performance during training at one of the Nursing Schools in Zambia

Article by Himoonga Mulenga
Universe, PhD student, MScN, RTN, RN
Email: uniemulenga@yahoo.com

Abstract

General Nursing Council recruitment and selection guidelines requires passing of an aptitude test by candidates wishing to train as nurses, a prerequisite that has been received with mixed feelings due to the high failure rate inherent with the test. The investigator therefore undertook the study to determine if there was any relationship with passing of the aptitude test and the performance of students during training.

A purposive, retrospective review of records was done and IBM SPSS statistical package, version 20 was used to analyze data.

The findings revealed that passing the aptitude test, was not indicative of definite subsequent passing of the nursing courses by students. In conclusion passing aptitude test was not a determinant of ability of student to pass their nursing examinations.

Keywords: *Aptitude, performance, nursing education, regulation.*

Introduction

Nursing Regulation in Zambia started with the registration of nurses and midwives under the hospice of Northern Rhodesia Nurses Association in 1955 (M, C, Zyongwe and N, M Zyongwe 2010). At the time, the legal and constitutional stance was that the training of nurses in Northern Rhodesia (Zambia) could not be recognized by either General Nursing Council of England or Wales (the colonial masters) or the Medical Council of Southern Rhodesia (Zimbabwe) because the standards of training did not meet their requirements. Professional nurses then, were being trained in England and South Africa. Training of professional Nurses in Zambia started in 1964 after gaining independence at Kitwe (former Llewellyn) school of Nursing and this caused strong agitation for self regulation by the Nursing Association of Zambia, which led to the enactment of the Nurses and Midwives Act No 55 of 1970. This Act was repealed and replaced by the Nurses and Midwives Act No 31 of 1997, which extended the Scope of practice for nurses and midwives in Zambia. This Act outlined the functions of the Council to include, regulation of nursing and midwifery practice, as well as registration of nursing and midwifery colleges. On this bases, a number of standards have been set by the Council to provide guidance and standardization of activities in Nursing Colleges.

The recruitment and selection guidelines are one of the standards developed by General Nursing Council to guide Colleges when recruiting candidates to undertaking the nursing training. One of the requirements in these guidelines is that the candidates should pass an aptitude test which is administered by the Labour and Social Security government Department. This particular test has almost become the single determinant of who gets recruited into the system and because of the high failure rate inherent with the same test; it has been received with mixed feelings. Many educationists and stakeholders have condemned the test and there has been strong agitation to get rid of this particular requirement from the guidelines. The public whom the Council is mandated to protect by putting in place systems that ensures objectivity in the recruitment and selection process has condemned the particular criteria. The need for adopting the aptitude test was necessitated as a result of increasing number of individuals applying to undertake nursing courses but competing for very few places. This stimulated the need for an objective way of administering a competitive

recruitment assessment system. An independent administrator of this test was thought of to enhance transparency, standardization, and objectivity of the system. American Association of colleges of Nursing, (2011), experienced a surge of applicants into the Baccalaureate course, and 39.5% raise in enrolment was reported. This report further pointed that more than 75,000 qualified applicants could not be given places to train. This simply highlights the need for putting in place convincing justifications why individuals have to be left out in such a competitive recruitment process.

However, it is worth noting that regulation of student entry into training colleges was not only peculiar to Zambia, Kevern J., et al (1999) reports high likelihood of completing training for those candidates that were well qualified. Kansas Medical University (2015), conducts Nurse Anaesthesia course and candidates recruited into this program are expected to possess over fifteen minimum entry requirements which the University has outlined.

Since there has been no study to establish the significance of the aptitude test to the nursing profession recruitment system, this investigation was instituted to find out if there is a relationship between student performance in aptitude test at recruitment time and actual progressive performance during training.

Objectives of the study

1. To establish if there is a relationship between the students' performance in aptitude at recruitment time and performance during training.

Method

This was a Retrospective study which was aimed at identifying if there was any relationship between passing of an aptitude test and progressive performance during training. A review of records of former students' performance in aptitude test at recruitment time and subsequent performance during training was undertaken. Purposive sampling method was utilized to select the study sample.

Target population

The target population included all records of students who were recruited into training in 2011, sat for an aptitude test at recruitment into nursing and completed their training in 2014.

Accessible population

The study population of interest that was reachable to the investigator and for this particular study, records of students recruited at Livingstone School of Nursing in Southern Province of Zambia was accessible to the investigator. The total number of files that were found at the School was fifty five (55). Out of these 55 records, only 21 had complete records and were purposively selected.



Administration block at block



Livingstone school of nursing



Picture of files for 2011

Sampling method

The target population comprised 55 files of former students and 21 were purposefully selected for review while 34 were left out since they contained incomplete data. Class result registers for the group was used to get the performance of each student and was compared with the performance during the aptitude test to determine if those that performed best at that time maintained the high performance. The records were sampled to determine the performance during aptitude test at recruitment time and a record of the subsequent performance during training was compared.

Data collection method

The category system was used, where all the characteristics of interest were identified, a checklist developed and used as a data collection tool. The check list included the performance of students in end of year qualifying examinations against the baseline aptitude score. The results of all the students during each year end was compiled and checked against the aptitude test score at recruitment time.

Ethical consideration

The study focused on the records of students who had since completed training and therefore written permission was sought from the medical superintendent to review the records at the School of Nursing. An informed consent was also signed by the principal tutor as the investigator sought access to the records. The accessed records were identified by numbers to enhance the anonymity of the students whose records were reviewed.

Data analysis plan

The data was analyzed using IBM SPSS statistics 20 license. The data was presented in frequency tables, histograms and cross tabulations. Descriptive statistics were utilized to explain the results of the study.

Results

Table 1. Showing student's Biographic data

	Frequency	Percentage	Valid percentage	Cumulative percentage
Age of Students				
Students less than 25 years	9	47.4	47.4	47.4
Equals or greater than 25 years	10	52.6	52.6	100.0
	19	100	100	
Gender of the Students				
Male	5	26.3	26.3	26.3
Female	14	73.7	73.7	100.0
Total	19	100.0	100.0	
Marital Status of students				
Single	17	89.5	89.5	89.5
Married	2	10.5	10.5	100.0
Total	19	100.0	100.0	

Table 1 shows the biographic details of students and majority were above 25 years of age, 10 (52.6%). Out of these 14 (73.7), were females and only 2 (10.5), were married.

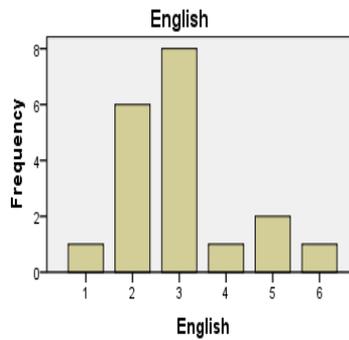


Figure 1

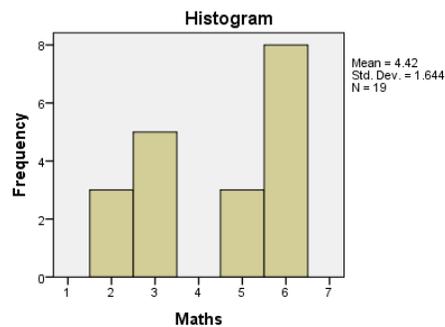


Figure 2

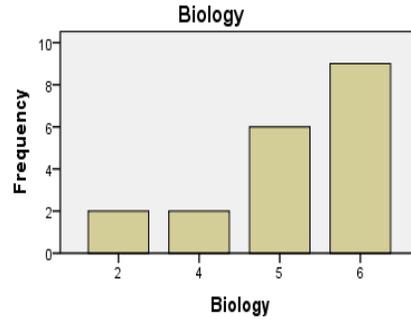


Figure 3

Figures 1, 2 and 3 shows the performance of all the students at high school in the three compulsory subjects. In figure 1 the majority scored a merit while in figure 2 and 3, the majority scored a credit.

Table 2. Year one Performance * Aptitude Score Cross tabulation

		Aptitude Score		Total
		Pass (10 and above 10)	Fail (below 10)	
Year one Performance	Passed	Count 1	0	1
		% within Year one Performance 100.0%	0.0%	100.0%
Year one Performance	Fail	Count 4	14	18
		% within Year one Performance 22.2%	77.8%	100.0%
Total		Count 5	14	19
		% within Year one Performance 26.3%	73.7%	100.0%

Table 2 indicates that only one student passed both aptitude and year 1 examinations at first attempt. The rest of the students cleared their examinations after second attempt.

Table 3. Year two Performance * Aptitude Score Cross tabulation

		Aptitude Score		Total
		Pass (10 and above 10)	Fail (below 10)	
Year two Performance	Passed	Count 2	10	12
		% within Year two Performance 16.7%	83.3%	100.0%
Year two Performance	Failed	Count 3	4	7
		% within Year two Performance 42.9%	57.1%	100.0%
Total		Count 5	14	19
		% within Year two Performance 26.3%	73.7%	100.0%

During year two, table 3, most of the students who failed the aptitude test (83.3%), past the end of year two examinations at first attempt.

Table 4. Year three Performance * Aptitude Score Cross tabulation

			Aptitude score		Total
			Pass (10 and above 10)	Fail (below 10)	
Year three Performance	Passed	Count	4	13	17
		% within Year three Performance	23.5%	76.5%	100.0%
	Failed	Count	1	1	2
		% within Year three Performance	50.0%	50.0%	100.0%
Total	Count	5	14	19	Count
	% within Year three Performance	26.3%	73.7%	100.0%	% within Year three Performance

Table 4 shows that the majority of the students (76.5%), who failed aptitude test past their year 2 end of year examinations on first attempt. Only one student failed end of year two examinations and apparently, this candidate had passed the aptitude test at entry into nursing school.

Table 5. Year 2 Practical * Aptitude Score Cross tabulation

			Aptitude Score		Total
			Pass (10 and above 10)	Fail (below 10)	
Year 2 Practical	Passed	Count	3	12	15
		% within Year 2 Practical	20.0%	80.0%	100.0%
Year 2 Practical	Failed	Count	2	1	3
		% within Year 2 Practical	66.7%	33.3%	100.0%
Total	Count	5	13	18	
	% within Year 2 Practical	27.8%	72.2%	100.0%	

Table 5 shows the performance of students in practical examinations at the end second year. Results indicated that 12 (80%) of students who had initially failed the aptitude test past the practical examination at the end of first year.

Table 6. Year 3 Practical * Aptitude Score Cross tabulation

			Aptitude Score		Total
			Pass (10 and above 10)	Fail (below 10)	
Year 3 Practical	Passed	Count	4	14	18
		% within Year 3 Practical	22.2%	77.8%	100.0%
Total	Count	4	14	18	
	% within Year 3 Practical	22.2%	77.8%	100.0%	

Table 6, showed that all the students, (100%) including those that had failed the aptitude test at enrolment, passed the practical examinations at the end of third year.

Discussion of findings

General Nursing Council of Zambia has a mandate to regulate nursing education and one of the standards that guide training institutions is the recruitment and selection guidelines. These guidelines require that candidates applying to enter nurse training pass an aptitude test. The aptitude test consequently has eliminated a lot of candidates aspiring to train as nurses. Sometimes, when colleges fail to obtain the required number of applicants, they end up reducing the pass mark for the aptitude test leading to a situation where some of the recruited candidates may not have passed the aptitude test at recruitment but successfully completed their training. The aim of this study therefore was to identify if there was a relationship between passing aptitude test and subsequent performance during training. The results of the study revealed that majority of the respondents were aged 25 years 52.6% and above and mostly were females 73.7%.

Table 2 indicated that only one student passed both aptitude and year 1 examinations at first attempt. The rest of the students cleared their examinations after second attempt. This picture did not clearly give guidance if there was a relationship between passing of the aptitude test and the subsequent performance in training. The results also may mean that there could have been a problem with the teaching system since the performance of all the students were very poor.

Tables 4, 5, and 6 revealed that most of the students who had failed aptitude test at the recruitment time, passed the end of second and third year examinations on first attempt, indicating that aptitude test was not the best determinant for selecting candidates that were educable. The aptitude test could have eliminated a lot of candidates who could have joined the profession but were not selected on the basis that they failed to pass the aptitude test. However, more research is required to evaluate the performance of the nurses that passed aptitude test at recruitment and those that did not pass at recruitment time.

Limitations of the study

The sample size was too small for the results to be generalized.

Conclusion

This study was set to investigate if there was any relationship between passing of an aptitude test and performance of students during nursing training. The performance of students was not consistent with the passing of the aptitude test. During year one, the poor performance in certain courses affected all the students despite passing the aptitude at recruitment time. In conclusion, this study has revealed that there was no correlation with passing of aptitude test and the progressive performance of the students during training. The investigator recommends that further research be undertaken to establish if there was a correlation between passing of aptitude and practical performance upon completion of training.

Acknowledgements

The author is indebted to Livingstone School of nursing and the management team for the permission granted to undertake the study and for their cooperation. The efforts and support by the course coordinator from Texila American University, Vanitha Prithiviraj cannot be overlooked. Thanks to TAU for according an opportunity to publish.

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