Original Research Article

Entry Requirements as a Predictor of Academic Performance in Semester and State Licensing Examination. A Case Study at Nursing and Midwifery Training College, Dunkwa-On –Offin, Central Region, Ghana

Abstract

Introduction; the standard of nursing education in Ghana is frequently brought to focus by stakeholders in the educational industry. This is obviously due to the emphasis placed on education by every nation as a means of economic, social and political development. The public outcry of the poor academic performance of nursing students in their semester and licensure examinations arouses researchers' curiosity to uncover the root cause of the problem.

Objectives; to assess students' academic performance from 2014 to 2019 at Dunkwa Nurses' and Midwifery Training College.

Methodology; this was a retrospective quantitative study conducted at the Nursing and Midwifery Training College, Dunkwa-On-Offin in the Central Region of Ghana. The study made use of all past students of both RGN (1-5) and RM (1 & 2) form Dunkwa-Offin Nursing and Midwifery Training College. Since the researchers had all the information needed for the study at their disposal, there was no need to sample the study population. All the files for the past students both Registered General Nurses and Registered Midwives were retrieved from the Administrator of the College. The files were distributed among the researchers to assess variables like age, sex, entry grade, SHS attended, CGPA and Licensure results. Data analysis was done using Statistical Package for Social Sciences (SPSS) version 20.0 and findings presented in charts and tables as well as texts. On the Ethical Considerations, prior to the data collection, permission was obtained from the Principal of Dunkwa Nursing and Midwifery Training College. The permission obtained helped the researchers to get the needed assistance and cooperation from the school administrator and other staff responsible for the students' files and other vital information.

Result and Findings; an overwhelming majority of the students 591(64.0%) were within the age range 18-21 years followed by 22-25 years 296 (32.1%) while the minority were within the age range of 26-30 years. Majority of the students 763(82.7%) were able to pass their licensure examination once, 133(14.4%) students were able to pass in the second chance while minority of the students 27(2.9%) passed during their third chance. On the relationship between the students' demographics and their licensure performance, majority of the students for all the demographic variables passed 770(83.4%) while minority 153(16.6%) failed with no statistical significance. An overwhelming majority of the

students 159 (71.3%) were able to pass their licensure examination once with 61(27.4%) writing twice while 3(1.3%) writing thrice. With no statistical significance, majority of the students (49.6%, 48.7% and 58.3% respectively) within the age groups had CGPA of 3.1-3.5 while the minority of the students had CGPA below2.0 with p-value = 0.29.

Conclusion; students' ages had no significance on their CGPA. Sex of the students had significance on their CGPA as most of the male students had CGPA of 3.1-3.5 while majority of the female students had CGPA of 2.6-3.0. Again, majority of the students who entered the institution with aggregate 10-16 had CGPA of 3.1-3.5 while majority of students who came with aggregate 31 and above had CGPA of 2.6-3.0 with a very high statistical significance. Moreover, most of the students who offered general science at the SHS had CGPA of 3.1-3.5 while other courses (Arts, Agric and Home science) had CGPA of 2.6-3.0 with no statistical significance. With no statistical significance, students from all levels of Senior High Schools (Regional, District and Sub-district) fell within the CGPA of 2.6-3.0.

Recommendations;

1. Management of the school should not consider the demographic characteristics of the applicants before admission.
2. Student nurses themselves must have adequate time to form their own personal study time table and engage in group studies in order to improve their CGPA and licensure performance.
3. The school administrators should ensure that adequate or conducive environment with library and internet facilities are available to encourage the students to learn.
4. The administrators should keep students' files well with all the necessary data for easy accessibility.
5. Future research should cover all NAC past students for holistic policy formulation**.**

Keywords; Academic Performance, Health Training Institutions, Nursing and Midwifery, Dunkwa-On-Offin

1.1 INTRODUCTION

The standard of nursing education in Ghana is frequently brought to focus by stakeholders in the educational industry. This is obviously due to the emphasis placed on education by every nation as a means of economic, social and political development (Adu-Gyamfi & Brenya, 2019). The public outcry of the poor academic performance of nursing students in their semester and licensure examinations arouses researchers' curiosity to uncover the root cause of the problem (Dube & Mlotshwa, 2018). For example, Adatara *et al* (2021) expresses great concern as regards

the declining quality of education of Ghanaian graduate nurses and midwives with little technical know-how. This was considered as a serious setback in the health care development of Ghana.

According to Dube *et al* (2018), academic performance is the ability of students to cope with their studies as well as how various tasks assigned to them by their instructors are accomplished. It also includes the ability to study and remember facts and to be able to express such knowledge gained either verbally, in writing or practically (Darling-Hammond *et al*, 2019). While Cantor *et al* (2018) describe poor academic performance as a performance that is adjudged by the examiner as falling below an expected standard, Osher *et al* (2018) decried the poor academic performance in specialized sciences such as Medicine, Surgery, Public Health, Psychiatry etc.

Academic failure is not only frustrating to the students and parents but leaves a devastating effect on the society in terms of shortage of competent nurses in all spheres of the economy and the nation's health challenges (Adu-Gyamfi & Brenya, 2019). Education at the Nursing Training is expected to be the peak and crown towards higher knowledge, an instrument used to achieve a more rapid economic, social, political, technological, scientific and cultural development of any country (Tery *et al*, 2019).

The performance of student nurses in licensure examination from 2014 to 2019 showed that there were variations in performance. In the years between 2014 and 2019, the pass rates varied between 45% and 60% (Darling-Hammond *et al*, 2019). Responding to the performance of the students, the acting Registrar of the NMC, Mr. Felix Nyante, told the Daily Graphic that the council was not happy with the general performance of the candidates. The poor performance of the candidates in the licensure examination, he said, was the result of a number of perceived related factors which involved the students, tutors, the school curriculum, clinical training sites, as well as the NMC policy or curriculum (Smith *et al*, 2018). The nursing milieu must track the modifications in the healthcare settings to guarantee the continuous production of high quality, secure and efficient patient services (Valiente *et al*, 2020). To achieve this, nurses must be prepared with the necessary competencies. Thus, policymakers and educators must primarily evaluate demands for the prospective workforce, based on requirements of the work setting (Ahluwalia, Damberg, Silverman, Motala & Shekelle, 2017).

1.2 Problem Statement

The role of the nursing education is to prepare student nurses for professional competence on the field nursing. Nursing education is described as 'a planned educational programme which

provides broad and sound foundation for effective practice of nursing (Fawaz et al, 2018). However, in a situation where this is lacking as a result of poor academic performance, there are likely to be problems at subsequent levels outside the four walls of the institution, especially when the students do not possess adequate knowledge needed to enhance professional skills required in executing basic nursing procedures for health (Wang *et al*, 2019). This study has become necessary, meriting scholarly attention in part because all the student nurses trained would eventually work in the hospitals where precious lives of the patients are deposited in their care (Waxman *et al*, 2018). Therefore, a poorly trained nurse becomes a threat to the lives of the patients he/she might be responsible for, which could result to loss of lives and compound the poor state of the health sector (Fawaz *et al*, 2018). The breakdown of the statistics made available to the Daily Graphic by the Nurses and Midwives Council (NMC) indicated that out of the 2,178 candidates who were presented for the Registered General Nursing examination, 823, representing 37.7 per cent, passed, while 1,355 were referred (Darling-Hammond et al, 2019).

For the Registered Midwifery examination, 679 candidates were presented, with 300, representing 44.1 per cent, passing and 379 being referred, while for the Registered Community Nursing, 45 candidates were presented, out of which 12, representing 26.7 per cent, passed. A total of 321 candidates sat for the Registered Mental Nursing examination and out of the figure 119, representing 37 per cent, passed, while 202 were referred. Failure in licensure and semester examinations is not associated with one nursing school (Adu-Gyamfi & Brenya, 2019). Finding out factors that lead to the poor performance of student nurses in this college is essential so that appropriate recommendations could be made for its rectification.

1.3 Significance of the study

Quality health care is paramount in every country and to achieve this competent nurses are needed. This piece of work is intended to find out the reasons for poor academic performance in both semester and licensure examinations. Obviously, the result of this topic will go a long way of raising the standard of nursing by equipping the various categories of nurses with the requisite knowledge in the profession. It will also reverse the misconception of the public on poor performance both in class and on the ward. Finally, it will serve as a source of reference for the various researchers as well as Nurses, Ministry of Health and Nurses' and Midwives Council in their future studies.

1.4 Purpose of the study

The study sought to assess the academic performance of students at Dunkwa-On-Offin Nursing and Midwifery Training College. The assessment was done in both semester and licensure examinations.

1.5 Objectives of the study

1.5.1 Main objective

To assess students' academic performance (semester and licensing examinations) at Nursing and Midwifery Training College, Dunkwa-On-Offin

1.5.2 Specific objectives

1. To determine students' Cumulative Grade Points Average (CGPA) at Nursing and Midwifery Training College, Dunkwa-On-Offin
2. To assess the students' licensure performance at Nursing and Midwifery Training College, Dunkwa-On-Offin
3. To establish any relationship between the demographic characteristics of the students and their CGPA at Nursing and Midwifery Training College, Dunkwa-On-Offin.
4. To establish the relationship between the students demographics and their licensure performance at Nursing and Midwifery Training College, Dunkwa-On-Offin.
5. To establish the correlation between students CGPA and their licensure performance at Nursing and Midwifery Training College, Dunkwa-On-Offin.

1.6 Research questions

1. What are the students' cumulative grade point averages at Nursing and Midwifery Training College, Dunkwa-On-Offin?
2. What are the students' licensure performances at Nursing and Midwifery Training College, Dunkwa-On-Offin?
3. Is there any relationship between the demographic characteristics of the students and their CGPA at Nursing and Midwifery Training College, Dunkwa-On-Offin?
4. Is there any relationship between the demographic characteristics of the students and their licensure performance at Nursing and Midwifery Training College, Dunkwa-On-Offin?
5. Is there any correlation between students' CGPA and their licensure performance at Nursing and Midwifery Training College, Dunkwa-On-Offin?

1.7 Delimitation

The study was confined at Dunkwa-On-Offin Nursing and Midwifery Training College due to the accessibility and proximity. The study only aimed at assessing students' academic performance in semester and licensure examinations.

1.8 Limitations of the study

One apparent limitation had to do with some missing data for the students in their files. It was very difficult to fill in the blank spaces.

Due to the limited time for the study, the researchers could not cover the Nurse Assistant Clinical students as a result of their number of batches.

The researchers simultaneously engaged in the study with other institutional activities like teaching, marking of scripts etc. This consequently cut down the time devoted for the research work. Notwithstanding all these limitations, the researchers were able to handle them and came out with a complete research work as expected.

METHODOLOGY

2.1 Study site

The study was conducted at the Nursing and Midwifery Training College, Dunkwa-On-Offin. The Nursing College established in 2007 as Health Assistant Training School. The school started diploma in registered general nursing in 2011 and now accredited with midwifery programme. Dunkwa Municipal Hospital was and is still being use for the practical aspects of the training. The College is situated in the Upper Denkyira East Municipality, a sub-metro of Cape coast Metropolitan Assembly. The school has a population of about thousand one hundred and fifty students. It consists of the Nurse Assistant Clinical Certificate and two professional sectors which are used together, namely the midwifery and General nursing colleges. It comprises of a centralize administration sector with a formal form of organizing the school. The school has a written constitution that governs the school and its activities. The school has five hostels with

four being female hostels and one for the males, demonstration rooms for practical studies and lecture rooms. It has its motor as “Knowledge and Health Promotion Our Priority”.

2.2 Study Design

Descriptive retrospective cross-sectional design was used for the census record review for the past academic data for the students.

2.3 Study Population

The study population was made up of all past diploma students (Registered General Nursing and Registered Midwives at Dunkwa Nursing and Midwifery Training College. The study used secondary data of these students to assess the various objectives of the study. To enter into any of the programmes, the applicant must have a Senior High School’s certificate in any of the following courses: General Arts, Pure Science, Agricultural science or Home Economics. The maximum grade for admission is aggregate 24 with admission age between 18 and 35 year. The two programmes offered take duration of three years each for completion. Students exit the College after taken the mandatory licensure examination with Ghana Nurses and midwives Council.

The Registered General Nursing (RGN) programme comprises both males and females. However, females are always more than males with ratio of 3:1 whilst the Midwifery programme has only females. The curricula for both programmes are based on the Semester and Course Unit System. These curricula competency-based and take into consideration the current needs of society and those of the student nurse. In this regard, greater emphasis is being laid on the community, physical and behavioural sciences as well as spiritual and ethical elements in nursing practice. The clinical practice is student-centered in order to allow for close correlation between theory and practice. Even though supervision and safety of practice in the clinical area should be the joint responsibility of the nurse educators and clinicians, preceptorship will be arranged so that supervisory responsibility will be that of the preceptor. This will be augmented with the students’ clinical schedule book for competency building. Candidates will be required to take the prescribed examination conducted by the nursing and Midwifery Council of Ghana. Successful candidates will be required to register with the Council before they can practice as Professional Registered Nurse or Midwife.

2.4 Sample and Sampling procedures

Since the researchers had all the data needed from the existing records, there was no need to sample the study population therefore all the data were included.

2.5 Data Collection Method and Tool

All the files for the past students both Registered General Nurses and Registered Midwives were retrieved from the Administrator of the College. The files were distributed among the researchers to assess variables like age, sex, entry grade, SHS attended, CGPA and Licensure results.

2.6 Data Analysis

Data analysis was done using Statistical Package for Social Sciences (SPSS) version 20.0 and findings presented in charts and tables as well as texts.

2.7 Ethical Considerations

Prior to the data collection, permission was obtained from the Principal of Dunkwa Nursing and Midwifery Training College and The Municipal Health Director of health service. The participating institution was informed that the participation in the study was voluntary. During the extraction of data, the names of the students were not written but codes were assigned to ensure anonymity. The institution was assured that the information collected would be kept confidential and used only for the purpose of the study. The institution was made to acknowledge the purpose and contents of the study and all questions satisfactorily explained to them in a language understood by them (English). They fully understood the contents and any potential implication as well as the right to change their minds (i.e. withdraw from the research) even after they had signed the consent form.

RESULTS

3.1 Sociodemographic characteristics of the students (RGN)

Table 1 shows the sociodemographic features of the students. An overwhelming majority of the students 591(64.0%) were within the age range 18-21 years followed by 22-25 years 296(32.1%) while the minority were within the age range of 26-30 years as shown in table 1. Again, most of the students 564(61.1%) were females while 359(38.9%) were males. Majority of the students 476(51.6%) came into this institution with aggregate 17-23 while 42(4.6%) were admitted with aggregate 31 and above, most of the students 569(61.6%) offered General Arts in their respective Senior High Schools with only 43(4.7%) offering General Agric. More than half of the students 472(51.1%) attended District SHS while 115(12.5%) attended Regional Senior High Schools.

Table 1: Socio-demographic characteristics of the students

Variables	Frequency	Percent(%)
Age		
18-21yrs	591	64.0
22-25yrs	296	32.1
26-30yrs	36	3.9
Sex		
Male	359	38.9
Female	564	61.1
Entry grade of students		
Aggregate 10-16	145	15.7
Aggregate 17-23	476	51.6
Aggregate 24-30	260	28.2
Aggregate 31 and above	42	4.6
SHS course offered		
General Science	174	18.9

General Arts	569	61.6
General Agric	43	4.7
Home Science	137	14.8
SHS attended		
Regional	336	36.4
District	472	51.1
Sub-district	115	12.5
Total	923	100.0

3.2 Students' Cumulative Grade Point Average (RGN)

Figure 1 shows the Cumulative Grade Point Average of past students; majority of them 463(50.2%) had CGPA of 2.6-3.0 followed by 3.1-3.5 thus 356(38.6%) while 48(5.2%) had CGPA of 2.0-2.5.

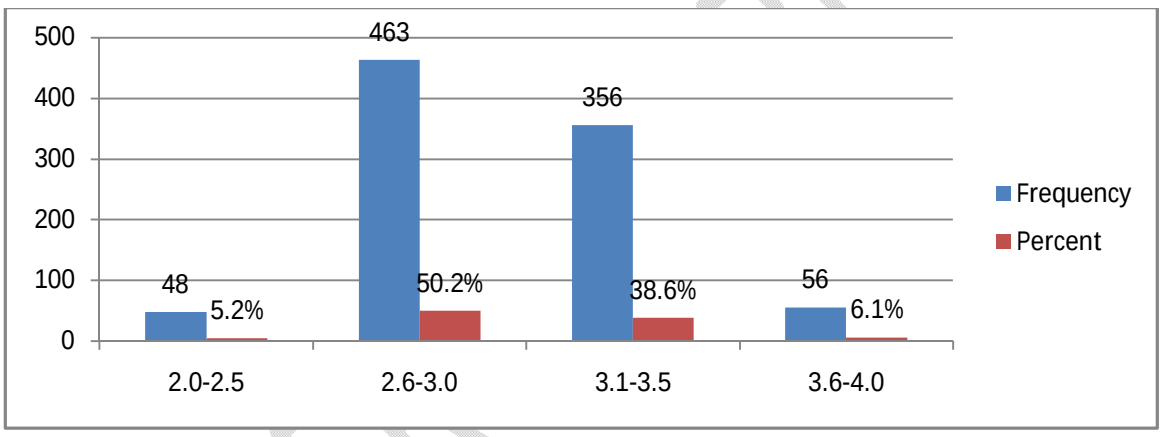

Figure 1: Cumulative Grade Point Average for the students

3.3 Students' licensure examination performance (RGN)

Figure 2 shows the students' performance in their licensure examination. Majority of the students 763(82.7%) were able to pass their licensure examination once, 133(14.4%) students were able to pass in the second chance while minority of the students 27(2.9%) passed during their third chance.

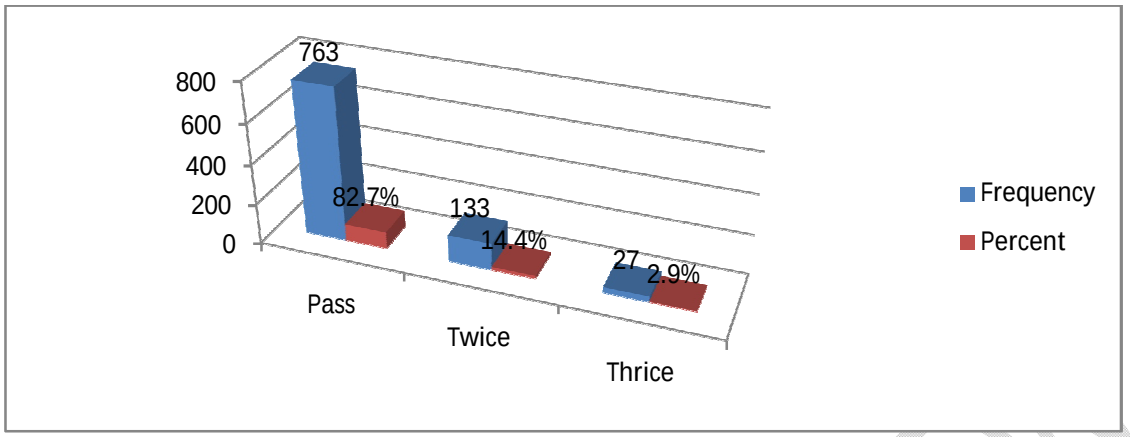

Figure 2: Students performance in NMC examination

3.4 Relationship between students' demographics and their CGPA (RGN)

With weak statistical significance, majority of the students (51.1%, 45.3% and 75.0% respectively) within the age groups had CGPA of 2.6-3.0 while the minority of the students had CGPA of 2.0-2.5 with p-value = 0.05. Most of the male students 164(45.7%) had CGPA of 3.1-3.5 while majority of the female students 308(54.6%) had CGPA of 2.6-3.0 which was statistically significant (p-value = 0.02) as detailed in table 2. Again, majority of the students 70(48.3%) who entered the institution with aggregate 10-16 had CGPA of 3.1-3.5 while majority of students 29(69.0%) who came with aggregate 31 and above had CGPA of 2.6-3.0 with a very high statistical significance (p-value= 0.000). Moreover, most of the students 87(50.0%) who offered general science at the SHS had CGPA of 3.1-3.5 while other courses (Arts, Agric and Home science) had CGPA of 2.6-3.0 with no statistical significance (p-value=0.07) as shown in table 2. With no statistical significance (p-value=0.09), students from all levels of Senior High Schools (Regional 44.6%, District 52.8% and Sub-district 55.7% fell within the CGPA of 2.6-3.0.

Table 2: Bivariate analysis of relationship between students' demographics and their CGPA (RGN)

Variables	Cumulative Grade Point Average Frequency(%)					X^2*(p-value)*
	2.0-2.5	2.6-3.0	3.1-3.5	3.6-4.0	Total	
Age						
18-21yrs	31(5.2)	302(51.1)	229(38.7)	29(4.9)	591(100.0)	
22-25yrs	14(4.7)	134(45.3)	123(41.6)	25(8.4)	296(100.0)	18.564*(0.05)*

26-30yrs	3(8.3)	27(75.0)	4(11.1)	2(5.6)	36(100.0)	
Total	48(5.2)	463(50.2)	356(38.6)	56(6.1)	923(100.0)	
Sex						
Male	16(4.5)	155(43.2)	164(45.7)	24(6.7)	359(100.0)	
Female	32(5.7)	308(54.6)	192(34.0)	32(5.7)	564(100.0)	14.418*(0.02)*
Total	48(5.2)	463(50.2)	356(38.6)	56(6.1)	923(100.0)	
Entry grade						
Aggregate 10-16	0(0.0)	63(43.4)	70(48.3)	12(8.3)	145(100.0)	
Aggregate 17-23	30(6.3)	226(47.5)	183(38.4)	37(7.8)	476(100.0)	
Aggregate 24-30	16(6.2)	145(55.8)	94(36.2)	5(1.9)	260(100.0)	33.787*(0.000)*
Aggregate 31 & above	2(4.8)	29(69.0)	9(21.4)	2(4.8)	42(100.0)	
Total	48(5.2)	463(50.2)	356(38.6)	56(6.1)	923(100.0)	
SHS Course offered						
General Science	9(5.2)	70(40.2)	87(50.0)	8(4.6)	174(100.0)	
General Arts	29(5.1)	288(50.6)	215(37.8)	37(6.5)	569(100.0)	12.759*(0.07)*
General Agric	4(9.3)	22(51.2)	15(34.9)	2(4.7)	43(100.0)	
Home Science	6(4.4)	83(60.6)	39(28.5)	9(6.6)	137(100.0)	
Total	48(5.2)	463(50.2)	356(38.6)	56(6.1)	923(100.0)	
SHS attended						
Regional	17(5.1)	150(44.6)	145(43.2)	24(7.1)	336(100.0)	
District	27(5.7)	249(52.8)	167(35.4)	29(6.1)	472(100.0)	10.268*(0.09)*
Sub-district	4(3.5)	64(55.7)	44(38.3)	3(2.6)	115(100.0)	
Total	48(5.2)	463(50.2)	356(38.6)	56(6.1)	923(100.0)	

Source: Records review, 2019

3.5 Relationship between students' demographics and licensure performance (Bivariate analysis) RGN

On the relationship between the students' demographics and their licensure performance, majority of the students for all the demographic variables passed 770(83.4%) while minority 153(16.6%) failed with no statistical significance (p-values above 0.05) as shown in table 3.

Table 3: Relationship between students' demographics and licensure performance (Bivariate analysis) RGN

Variables	**Licensure performance Frequency(%)**			X^2***(p-value)***
	Pass	Fail	Total	
Age				
18-21yrs	496(83.9)	95(16.1)	591(100.0)	
22-25	246(83.1)	50(16.9)	296(100.0)	0.959*(0.619)*
26-30	28(77.8)	8(22.2)	36(100.0)	
Sex				
Male	306(85.2)	53(14.8)	359(100.0)	

Female	464(82.3)	100(17.7)	564(100.0)	1.397*(0.137)*
Entry grade				
10-16	119(82.1)	26(17.9)	145(100.0)	
17-23	408(85.7)	68(14.3)	476(100.0)	
24-30	209(80.4)	51(19.6)	260(100.0)	3.920*(0.270)*
31 and above	34(81.0)	8(19.0)	42(100.0)	
SHS Course offered				
G. Science	148(85.1)	26(14.9)	174(100.0)	
G. Arts	470(82.6)	99(17.4)	569(100.0)	
G. Agric	38(88.4)	5(11.6)	43(100.0)	1.380*(0.692)*
Home Science	114(83.2)	23(16.8)	137(100.0)	
SHS attended				
Regional	285(84.8)	51(15.2)	336(100.0)	
District	397(84.1)	75(15.9)	472(100.0)	4.597*(0.120)*
Sub-district	88(76.5)	27(23.5)	115(100.0)	

3.6 The relationship between students' CGPA and Licensure performance (RGN)

With no statistical significance (p-value= 0.98) majority of students 48(85.7%) who had CGPA of 3.6-4.0 passed their licensure examinations once while majority of students 15(3.2%) who had CGPA of 2.6-3.0 wrote three times in their licensure exams as detailed in table 4.

Table 4: Bivariate analysis for the relationship between students' CGPA and Licensure performance (RGN)

Variables	**Licensure performance Frequency(%)**				X^2*(p-value)*
	Pass	Twice	Thrice	Total	
CGPA					
2.0-2.5	37(77.1)	7(14.6)	4(8.3)	48(100.0)	
2.6-3.0	379(81.9)	69(14.9)	15(3.2)	463(100.0)	6.933*(0.98)*
3.1-3.5	299(84.0)	50(14.0)	7(2.0)	356(100.0)	
3.6-4.0	48(85.7)	7(12.5)	1(1.8)	56(100.0)	
Total	763(82.7)	133(14.4)	27(2.9)	923(100.0)	

3.7 Demographic characteristics of students (Rm)

Table 5 presents the sociodemographic characteristics of the midwifery students. An overwhelming majority of the students 133(59.6%) were within the age range 18-21 years followed by 22-25 years 78(35.0%) while the minority 12(5.4%) were within the age range of 26-30 years as shown in table 5. Again, all the students 223(100.0%) were females. Majority of

the students 99(44.4%) came into DNMTC with aggregate 17-23 while 13(5.8%) were admitted with aggregate 31 and above. Most of the students 126(56.5%) offered General Arts in their respective Senior High Schools with only 5(2.2%) offering General Agric. More than half of the students 103(46.2%) attended Regional SHS while 28(12.6%) attended Sub-district Senior High Schools as detailed in table 5.

Table 5: Demographic data of Registered Midwifery students

Variables	Frequency	Percent(%)
Age		
18-21	133	59.6
22-25	78	35.0
26-30	12	5.4
Total	223	100.0
Entry grade		
Aggregate 11-16	17	7.6
Aggregate 17-23	99	44.4
Aggregate 24-30	94	42.2
Aggregate 31 & above	13	5.8
Total	223	100.0
SHS course offered		
General Science	32	14.3
General Arts	126	56.5
General Agric	5	2.2
Home Science	60	26.9
Total	223	100.0
SHS attended		
Regional	103	46.2
District	92	41.3
Sub-district	28	12.6
Total	223	100.0

3.8 Students CGPA (RM)

Figure 3 shows the Cumulative Grade Point Average for students, majority of them 111(49.8%) had CGPA of 3.1-3.5 followed by 2.6-3.0 that is 69(30.9%) while 1(0.4%) had CGPA of 2.0-2.5.

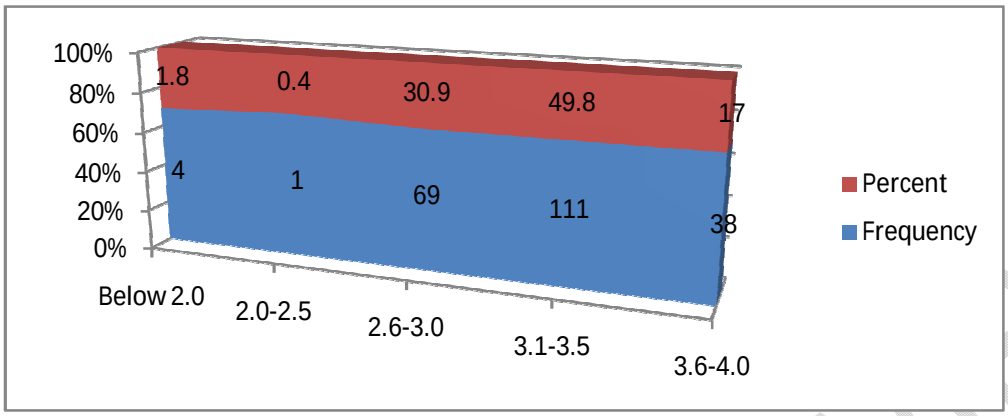

Figure 3: Students' CGPA

3.9 Students' NMC performance (RM)

An overwhelming majority of the students 159(71.3%) were able to pass their licensure examination once with 61(27.4%) writing twice while 3(1.3%) writing thrice as shown in figure 2 below.

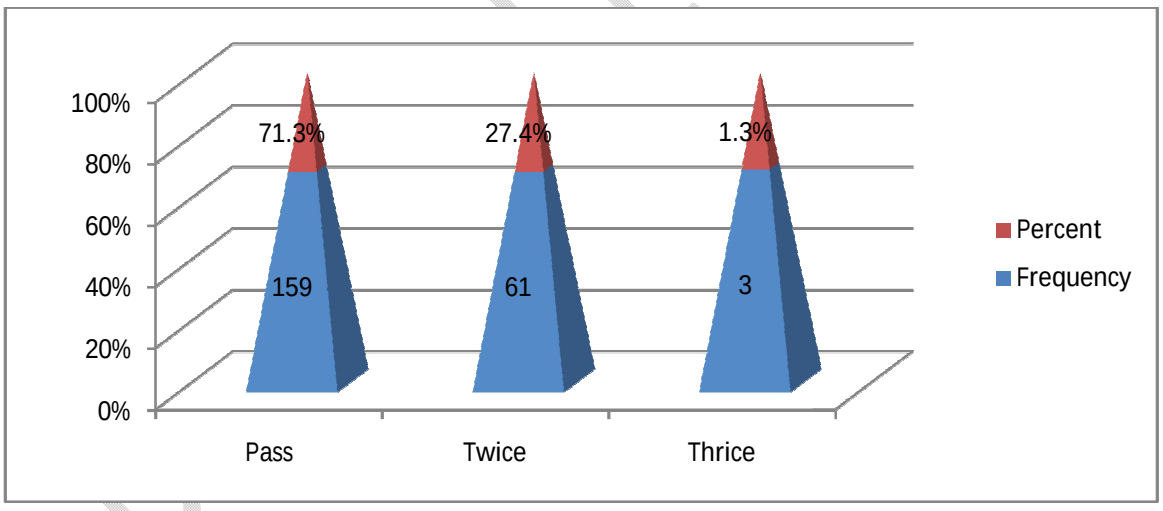

Figure 4: Students' NMC performance

3.10 The relationship between students' demographic data and their CGPA RM

With no statistical significance, majority of the students (49.6%, 48.7% and 58.3% respectively) within the age groups had CGPA of 3.1-3.5 while the minority of the students had CGPA below2.0

with p-value = 0.29 as detailed in table 2. Again, majority of the students 9(52.9%) who entered the institution with aggregate 11-16 had CGPA of 3.1-3.5 while majority of students 7(53.8%) who came with aggregate 31 and above also had CGPA of 3.1-3.5 without statistical significance (p-value= 0.22). Moreover, most of the students 16(50.0%) who offered general science at the SHS had CGPA of 3.1-3.5 while other courses (Arts, Agric and Home science) also fell within same CGPA range (3.1-3.5) with no statistical significance (p-value=0.75) as shown in table 2. With no statistical significance (p-value=0.855), students from all levels of Senior High Schools (Regional (48.5%), District (55.4%) and Sub-district (35.7%)) fell within the CGPA of 3.1-3.5 (table 6).

Table 6: Bivariate analysis for relationship between students' demographic data and their CGPA RM

Variables	**Cumulative Grade Point Average Frequency(%)**						**X^2(p-value)**
Age	**< 2.0**	**2.0-2.5**	**2.6-3.0**	**3.1-3.5**	**3.6-4.0**	**Total**	
18-21	3(2.3)	0(0.0)	36(27.1)	66(49.6)	28(21.1)	133(100.0)	
22-25	1(1.3)	1(1.3)	29(37.2)	38(48.7)	9(11.5)	78(100.0)	7.365*(0.29)*
26-30	0(0.0)	0(0.0)	4(33.3)	7(58.3)	1(8.3)	12(100.0)	
Total	4(1.8)	1(1.30	69(30.9)	111(9.8)	38(17.0)	223(100.0)	
Entry grade							
11-16	2(11.8)	0(0.0)	2(11.8)	9(52.9)	4(23.5)	17(100.)	
17-23	2(2.0)	1(1.0)	30(30.3)	49(49.5)	17(17.2)	99(100.0)	16.366*(0.22)*
24-30	0(0.0)	0(0.0)	32(34.0)	46(48.9)	16(17.0)	94(100.)	
31 & above	0(0.0)	0(0.0)	5(38.5)	7(53.8)	1(7.7)	13(100.)	
Total	4(1.8)	1(0.4)	69(30.9)	111(49.8)	38(17.0)	223(100.0)	
SHS Course offered							
G. Science	1(3.1)	0(0.0)	7(21.9)	16(50.0)	8(25.0)	32(100.0)	
G. Arts	3(2.4)	0(0.0)	41(32.5)	60(47.6)	22(17.5)	126(100.0)	8.452*(0.75)*
G. Agric	0(0.0)	0(0.0)	2(40.0)	3(60.0)	0(0.0)	5(100.0)	
Home Science	0(0.0)	1(1.7)	19(31.7)	32(53.3)	8(13.3)	60(100.0)	
Total	4(1.8)	1(0.4)	69(30.9)	111(49.8)	38(17.0)	223(100.0)	
SHS attended							
Regional	2(1.9)	0(0.0)	32(31.1)	50(48.5)	19(18.4)	103(100.0)	
District	1(1.1)	0(0.0)	28(30.4)	51(55.4)	12(13.0)	92(100.0)	11.506*(0.855)*
Sub-district	1(3.6)	1(3.6)	9(32.1)	10(35.7)	7(25.0)	28(100.0)	
Total	4(1.8)	1(0.4)	69(30.9)	111(49.8)	38(17.0)	223(100.0)	

3.11 The relationship between students' demographics and Licensure performance

On the relationship between the students' demographics and their licensure performance, majority of the students for all the demographic variables passed 165(74.0%) while minority 58(26.0%) failed with no statistical significance (p-values above 0.05) as shown in table 7.

Table 7: Bivariate analysis for relationship between students' demographics and Licensure performance

Variables	**Licensure performance Frequency(%)**			**X^2(p-value)**
Age	**Pass**	**Fail**	**Total**	
18-21	101(75.9)	32(24.1)	133(100.0)	
22-25	53(67.9)	25(32.1)	78(100.0)	3.690*(0.904)*
26-30	11(91.7)	1(8.3)	12(100.0)	
Total	165(74.0)	58(26.0)	223(100.0)	
Entry grade				
11-16	12(70.6)	5(29.4)	17(100.0)	
17-23	76(76.8)	23(23.2)	99(100.0)	0.917*(0.798)*
24-30	67(71.3)	27(28.7)	94(100.0)	
31 & above	10(76.9)	3(23.1)	13(100.0)	
Total	165(74.0)	58(26.0)	223(100.0)	
SHS Course offered				
G. Science	29(90.6)	3(9.4)	32(100.0)	
G. Arts	90(71.4)	36(28.6)	126(100.0)	
G. Agric	5(100.0)	0(0.0)	5(100.0)	7.786*(0.111)*
Home Science	41(68.3)	19(31.7)	60(100.0)	
Total	165(74.0)	58(26.0)	223(100.0)	
SHS attended				
Regional	80(77.7)	23(23.3)	103(100.0)	
District	67(72.8)	25(27.2)	92(100.0)	2.160*(0.150)*
Sub-district	18(64.3)	10(35.7)	28(100.0)	
Total	165(74.0)	58(26.0)	223(100.0)	

3.12 The relationship between students' CGPA and Licensure performance

Without statistical significance (p-value= 0.008) majority of students 30(78.9%) who had CGPA of 3.6-4.0 passed their licensure examination once while 3(4.3%) of students who had CGPA of 2.0-2.5 wrote thrice before passing their licensure exams as detailed in table 8.

Table 8: Bivariate analysis for relationship between students' CGPA and Licensure performance

Variables	Licensure performance Frequency (%)				X^2(p-value)
Age	**Pass**	**Twice**	**Thrice**	**Total**	
CGPA					
Below 2.0	2(50.0)	2(50.0)	0(0.0)	4(100.0)	
2.0-2.5	0(0.0)	1(100.0)	3(4.3)	1(100.0)	25.543*(0.008)*
2.6-3.0	40(58.0)	26(37.7)	0(0.0)	69(100.0)	
3.1-3.5	87(78.4)	24(21.6)	0(0.0)	111(100.0)	
3.6-4.0	30(78.9)	8(21.1)	0(0.0)	38(100.0)	
Total	159(71.3)	61(27.4)	3(1.3)	223(100.0)	

** P-values below 0.05 are statistically significant above 0.05 signify no relationship*

4.1 DISCUSSION

The first objective of the study assessed past students' cumulative grade point average. The finding revealed that most of the students had CGPA of 2.6-3.0 followed by 3.1-3.5 thus while few of them had CGPA of 2.0-2.5. An overwhelming majority of the students were able to pass their licensure examination once with few writing it twice. This implies that most of the students were within the average score range putting the academic activities in the college at a good position. When academic institutions confer a diploma or a certificate on a student this is an indication to society in general that this student has what it takes in terms of the capability, knowledge and skills in that specified field or discipline (Duckworth, 2020). Academic success among nursing students remains complex and multidimensional, and although demographic factors remain essential in academic performance, there are an array of different factors, such as

personality, behavioural, self-efficacy and cognitive factors, that also impact successful outcomes according to *Pitt et al*, (2021).

Within Jeffery's (2019) Universal Retention and Success model, which focuses on nursing student success, completions, and longer-term retention, it has been indicated that students need the capacity to meet the challenge of tasks, need to be committed and diligent, and have high levels of motivation to attain outcomes with persistence. Academic self-concept and motivation have been found to be a strong predictor of academic achievement in general and academic success amongst nursing students more specifically (Khalaila, 2018; Radi, 2018).

The findings also revealed that demographic characteristics of the students did not have any influence on their academic performances. This might be due to the fact that students were given the same opportunities for their academic endeavors. These findings are in sharp contrast with some studies where sociodemographic features of the students had influence on their academic performance. Duckworth et al. (2020), in her seminal work, brought to light 'grit', which is the perseverance, passion, and commitment to meet long term goals despite adversity and leads to success. As such, it was demonstrated that grit predicted individual achievement more than talent alone when it came to measures of success in both academic and non-academic outcomes. For example, higher levels of grit was shown to predict better performance among students, increased numbers of high school graduates, higher Grade Point Averages among university students, greater retention among military cadets, determine longer term employment outcomes, have increased effectiveness and retention among novice teachers, and lastly it has been demonstrated that grittier men are less likely to divorce than those who are less gritty (Kelly et al., 2019).

Alshammari et al, (2017) found that there is a link between selection criteria and the consequent academic performance of the students in the General Nursing Diploma at the Nursing Training Colleges in Ghana. There are certain factors which if taken into consideration will assist to ensure that only quality students are selected and these factors include amongst others gender, age, entry qualifications and previous academic performance. Institutional resources are items such as overhead projectors, marker boards, transparencies and diagrams that the teacher will need in his intended learning activity and which will enable him to achieve his lesson outcomes (Wolters et al, 2015). The nurse educator's presence in the clinical area is prudent as it affords her quality time to support the students and give them whatever guidance and supervision that

they need. These authors assert that practical placements are more difficult to take stock of. Also reiterate that the practical placements must be more suitable for the intended learning outcomes. This entails looking closely at agreements with service providers, scrutinizing patients' profiles in different units, and the situational analysis of the facilities being utilised for practical placements (Jeffreys, 2019).

Teachers who make use of a participative learning approach establish a dynamic relationship between themselves and students (Pelter & Pengpid, 2015). In this type of approach, teachers and students' alternate in dominating the teaching scene as at one stage students are in the driver's seat while at another stage the teacher will lead the process. There will be instances where the teacher will take students on board and deliberate on the content of their learning with them (Pelter & Pengpid, 2015).

4.2 Summary

The majority of the students (both RGN and RM) were within the age range of 18-21 years of age. Again, most of the students were females. This implies that the school always admits more females than males with entry grade of between 17-23 aggregate. Majority offered General Arts and attended District Senior High Schools. Majority of RGN and RM had CGPA of 2.6-3.0 while the minority had CGPA of 2.0-2.5.An overwhelming majority of the students were able to pass their licensure examination once, with some passing during their chance while minority of the students passed during their third chance.

Students' ages had no significance on their CGPA. Sex of the students had significance on their CGPA as most of the male students had CGPA of 3.1-3.5 while majority of the female students had CGPA of 2.6-3.0. Again, majority of the students who entered the institution with aggregate 10-16 had CGPA of 3.1-3.5 while majority of students who came with aggregate 31 and above had CGPA of 2.6-3.0 with a very high statistical significance.

Moreover, most of the students who offered general science at the SHS had CGPA of 3.1-3.5 while other courses (Arts, Agric and Home science) had CGPA of 2.6-3.0 with no statistical significance. With no statistical significance, students from all levels of Senior High Schools (Regional, District and Sub-district) fell within the CGPA of 2.6-3.0.

On the relationship between the students' demographics and their licensure performance, majority of the students for all the demographic variables passed while minority failed with no statistical significance. Student passing his or her licensure exams is not dependent on any

demographic characteristics. With no statistical significance majority of students who had CGPA of 3.6-4.0 passed their licensure examinations once while majority of students who had CGPA of 2.6-3.0 wrote three times in their licensure exams. Though the difference was not significant, however, high CGPA helps students to pass their licensure once.

4.3 Conclusion

The role of academic performance can be considered an important variable in determining the success of nursing students in Nursing Training Colleges. The findings suggest that as a students' academic performance increased, so too does their GPA improved. Interestingly, perceived demographic characteristics of students that were thought to influence GPA were not found to be correlated with students GPA. A closer look at the findings from this study suggests that there was no significant difference in perceived performance across the study with regard to perceived academic elements of the program. The finding is linked to students being engaged in the consolidation elements that have been purposefully embedded within the specific curriculum examined. These include, an increase in the amount of time students spend in clinical practice across the year, in particular the final semester of study, where there is a strong emphasis on students being provided opportunities to apply both the theoretical and skill based components that they have learnt across the program in both actual and simulated clinical practicum.

4.4 Recommendations

1. Management of the school should not consider the demographic characteristics of the applicants before admission.
2. Student nurses themselves must have adequate time to form their own personal study time table and engage in group studies in order to improve their CGPA and licensure performance.
3. The school administrators should ensure that adequate or conducive environment with library and internet facilities are available to encourage the students to learn.
4. The administrators should keep students' files well with all the necessary data for easy accessibility.
5. Future research should cover all NAC past students for holistic policy formulation.

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