

Assessment of Students' Enrolment of Schools of Nursing and Midwifery in the Northwestern States of Nigeria

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Abstract

This study assessed the students' enrolment of schools of nursing and midwifery in the northwestern states of the country (comprising Katsina, Kebbi, Sokoto, and Zamfara States). The population for the study comprises student Nurses and Midwives admitted to the schools in 2015, which were 1175. All the population was taken as a cohort in a longitudinal. Hence, Documentary analysis and Likert scale type of questionnaire were the instruments used in obtaining the necessary data. Descriptive (percentages, tables, graphs) statistics were used for the analysis. The findings revealed that, the number of student Nurses enrolled in the study year was higher than that of student Midwives, looking at the overall enrollment for the four states, the result shows that less than half (42%) of the enrolled candidates were able to make it to the final year. Similarly, retention levels and completion rates was higher among Nurses than Midwives. It is also seen that the dropout rate was higher at the first year compared to other years among both Nurses and Midwives. It is recommended that, emphasis should be given to science subjects at secondary schools' level in the zone, selection of potential students' Nurses and Midwives at enrolment level shall be done on merit, and infrastructural facilities for the schools should be enhanced to allow for maximum enrollment into Nursing and Midwifery Profession.

Keywords: Nursing Education, Midwifery, Enrolment, Retention, Compilation rate

Introduction

Nursing is an applied discipline that expresses itself in practice and has its foundations rooted in scientific and empirical knowledge, theory, and research. Nursing is referred to a profession within the health care sector, which focuses on the care of individuals, families and communities so that they may attain, maintain or recover optimal health and quality of life (Robert & Samson, 2012). A professional in Nursing is referred to as a Nurse. While according to Wang (2016) Midwifery is a



health science and health professions that deals with pregnancy, childbirth, and the postpartum period (including care of the newborn), besides sexual and reproductive health of women throughout their lives. Midwifery is defined as a medical profession that is independent and has direct specialized education and training. A professional in midwifery is known as a midwife.

The goal of the nursing and midwifery profession is optimum client wellness and the maximum level of functioning. The School of Nursing and Health Sciences curriculum reflects the belief that the general nurse must function in an independent role in many situations and be responsible for independent decisions and actions. Faculty in the School of Nursing and Health Sciences encourage the use of the science-based and goal-directed nursing process as a framework for critical thinking and decision-making to produce therapeutic nursing interventions. The nursing interventions are evidence-based and stem from their core knowledge. The professional nurse must appreciate the role of informatics - both the acquisition of knowledge and the timely keeping of electronic records (Ross, 2009).

Similarly, the WHO in 2019 reports that the global shortage of nursing personnel to staff the healthcare institutions has been identified as having a relationship with the poor production of a sufficient number from the training institutions, which is directly or indirectly related to the enrolment procedures, the retention rate of the students, and the completion of the course of study. Research on student withdrawal from third-level institutions in Ireland is quite recent. Eivers (2012) identified two main reasons for this: the reasons for withdrawal were believed to be beyond the scope of the higher education provider, and secondly, the assumption that non-completion of third-level programs was to be expected. Over the past ten years, an increasing body of research has been conducted regarding withdrawal in the Institute of Technology sector (Morgan, 2010; Morgan, 2011). Drawing on national and international studies, the following looks at the literature on the withdrawal of first-year students from their degree programs. The key topics of retention and attrition are explored, as are the intent to withdraw and the actual process of withdrawal itself. The review concludes with a presentation of the main recommendations emerging from key studies.

In a large-scale review of nurse education, concerns were raised regarding the high attrition rates experienced by pre-registration nursing programs in the UK. Attrition among student nurses is a long-standing problem, having been documented for many decades. While there is some variation in the recorded rate of attrition, the most recent estimates report an overall rate of 24.79% in the UK, at an estimated cost of £57 million annually (Nursing Standard, 2006). To be qualified to practice as a nurse or midwife, one has to go through rigorous academic activities during a threeyear basic nursing or midwifery training. During this period, a student is expected to pass all the internal examinations prepared by the school, then sit for a national examination prepared, marked, and graded by the Nursing and Midwifery Council of Nigeria. Then the person involved is licensed to practice as a nurse or midwife (Robert & Samson, 2012).



At the initial stage of nursing and midwifery training, a reasonable number of students are enrolled in these institutions to train both as nurses and midwives, but along the way, before the completion of the training, the majority of those enrolled students drop out, leaving a very negligible number to graduate, hence the shortage of health workers to render effective services. The World Health Organization standard for nurse-patient ratio is 1:4–1:8 depending on the severity of the patient's condition, which means that in a 100-bed facility, at least 13–25 nurses and midwives are expected to be employed to run a shift, i.e., either a morning, evening, or night shift (WHO, 2014) This study assessed the students' enrolment of schools of nursing and midwifery in the northwestern states of the country (comprising Katsina, Kebbi, Sokoto, and Zamfara States). Unlike the previous researches, this research focus on students' retention in Schools of Nursing and Midwifery. Similarly, its scope is the North Western Nigeria since most of the researches concentrated in Southern parts of the country.

Objectives of the Study

This study set out to assess the enrolment, retention, and completion rates of students in the school of nursing and midwifery in the North Western Zone of Nigeria. The specific objectives of the study include the following:

- 1. To examine age and gender differences in the enrolment into schools of nursing and midwifery in North Western State of Nigeria
- 2. To assess the extent of enrollment into schools Nursing and Midwifery in North Western States of Nigeria.
- 3. To assess the extent of retention of students in Schools of Nursing and Midwifery in North Western States of Nigeria?
- 4. To determine the extent of completion of studies among students in Schools of Nursing and Midwifery in North Western States of Nigeria **Research Questions**

The following research question is raised to guide the study:

- 1. Is there age and gender difference in enrollment of students in Schools of Nursing and Midwifery in North Western States of Nigeria?
- 2. What is the extent of enrollment of students in Schools of Nursing and Midwifery in North Western States of Nigeria?
- 3. What is the extent of retention of students in Schools of Nursing and Midwifery in North Western States of Nigeria?
- 4. What is the extent of completion of studies among students in Schools of Nursing and Midwifery in North Western States of Nigeria?

Methodology

The research design used in this study is the survey research design. The survey research design is appropriate for collecting data from the cross-section of population in social research. The use of survey design involves the use of appropriate sampling technique to draw a



representative sample from the population of interest. According to Achukwu (2019), survey design may either be static or dynamic. In a dynamic survey, the same subset of the population of interest is surveyed continuously over specific time intervals, while in static survey, a subset of the population is surveyed only once for a specific purpose. The survey research design adopted by this study is static in nature given the nature and objectives of the study. One advantage of using the survey design is that it will allow for the quantitative description of the characteristics of the sample. It will also allow for the objective analysis. Using appropriate inferential techniques, the survey research design will permit the generalization of the study's findings to the entire population from which the sample was drawn.

This research was conducted in northwestern Nigeria. Eight schools, comprising four nursing and four midwifery schools, were purposefully selected from Katsina, Kebbi, Sokoto, and Zamfara states. The purpose of the purposive selection was to enable the selection of schools established by the governments of the selected states. The population comprises student nurses and midwives in the selected schools that were admitted in 2015, except the school of nursing and midwifery in Sokoto, which did not admit students in 2015. For that school, students admitted in 2014 who were not able to make it to the next level and had to repeat the class were used. The population of the study consisted of 1175 students.

No sample of students was obtained as all the population was taken as a cohort in a longitudinal study, which is from admission in 2015 to qualification in 2018. The instruments used for collection of data were documentary analysis and questionnaire due to the suitability of the instruments to give relevant data and information in a shortest possible time. The instrument was validated by two professors and two PhD holders in the Faculty of Education. They vetted and determined its face and content validity as some of the items in the questionnaire were rejected, some were adjusted while some were accepted. The reliability of the instrument was determined by pilot testing with a representative sample at School of Midwifery Usmanu Danfodiyo University Teaching Hospital, Sokoto, and a test re-test method was used, instrument administered at two intervals, result ran and Coefficient of 0.83 was obtained determined by Cronbach Alpha. The data obtained were analyzed using descriptive statistics inform of frequencies and percentages presented in tables and graphs.

Results Research Question 1

Is there age and gender difference in enrollment of students in Schools of Nursing and Midwifery in North Western States of Nigeria?

Table 1: Distribution of respondents based on age and gender

Age Category Frequency

Cumulative Percentage (%)

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26 - 35	233	19.83		
36 - 45	0	00.00		
46 - 55	0	00.00		
Total	1175	100%		
Gender of R	espondents			
Male	406	34.55		
Female	769	65.45		
Total	1175	100%		

Source: Field Survey (2021)

Table 1 indicates that majority (80.17%) of the respondents were within the age range of 15-25 years while the remaining 19.83% were within the age of 26-35 years. Findings of the study revealed that none of the respondents was above 35 years of age, implying that the youth of 25 years and below dominated the nursing and midwifery classes for the 2015 intake. Similarly, majority (65.45%) of the respondents are female, while the remaining 34.55% were male implying that there were more female studying nursing and midwifery in the area of study compared to their male counterparts. This may be due to the fact that while both male and female students can enroll for nursing, only female students can enroll for midwifery course therefore the female had the advantage of registering for both while the male register for nursing only.

Research Ouestion 2

What is the extent of enrollment of students in Schools of Nursing and Midwifery in North Western States of Nigeria?

2015 Student Nurses and Midwives enrolment

Students' initial enrolment for any year is based on the carrying capacity of the institution and available manpower and the facilities. The 2015 student nurses and midwives' enrolment for the selected states is presented in Table 2.

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States	Nursing	Percentage (%)	Midwifery	Percentage
	Frequency		Frequency	(%)
Sokoto	87	11.82	54	12.30
Kebbi	172	23.37	107	24.37
Zamfara	357	48.51	220	50.11
Katsina	120	16.30	58	13.21
Total	736	100	439	100

Table 2: 2015 academic session student Nurses and	I Midwives enrollment by state



Source: Field Survey, (2021)

For the year 2015, Zamfara State School of Nursing and Midwifery had the highest enrolment with 48.51% and 50.11% of the total enrolment for nursing and midwifery, respectively for the four states. Kebbi state was next with 23.37% and 24.37% of the total enrolment for nursing and midwifery, respectively for the four states while Katsina state was third with 16.30% and 13.21% of the total enrolment for nursing and midwifery, respectively for the four states. This implies that Zamfara state school of nursing and midwifery was leading other states in the zone in terms of enrolments in both nursing and midwifery with nearly 50% of the total enrolment.

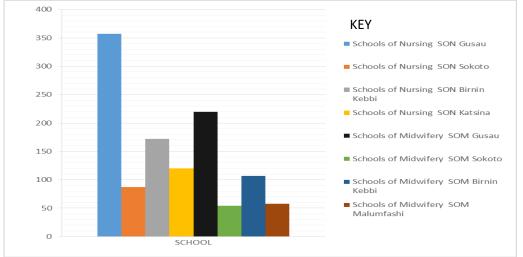


Figure 1: Enrolment pattern at the selected Institutions for the year 2015.

Research Question 3

What is the extent of retention of students in Schools of Nursing and Midwifery in North Western States of Nigeria?

While it is a known fact that enrollment into the schools of nursing and midwifery used to be very competitive due to the high number of prospective candidates, a good number of those who survived the screening and other pre-admission test are dropped before graduation mainly due to poor academic performances. Similar investigation was conducted in the schools under study and the result is presented in Table 4.

Table 4: 2015 academic session student Nurses and Midwives enrollment/retention by s	tate
Table 4. 2015 academic session student runses and midwives enforment/retention by s	all

States	Nursing	Number	Percentage	Midwifery	Number	Percentage
	No.	Retained	(%)	No.	Retained	(%)
	Enrolled			Enrolled		

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Sokoto	87	50	57.00	54	30	56.00	
Kebbi	172	48	28.00	107	43	40.00	
Zamfara	357	110	31.00	220	76	35.00	
Katsina	120	99	83.00	58	47	81.00	
Total	736	308	42.00	439	167	100	

Source: Field Survey, (2021)

For the nursing course, Katsina State had the highest retention rate with 83% of the admitted candidates making it to the final year followed by Sokoto State with 57%. Zamfara State had the highest enrollment of which only 31% of the admitted candidates made it to the final year and for Kebbi State with the second highest enrollment only 28% made it to the final year. Looking at the overall enrollment for the four states however, the result shows that less than half (42%) of the enrolled candidates were able to make it to the final year (Table 4). For the midwifery course, Katsina state also had the highest retention rate with 81% of the admitted candidates making it to the final year followed by Sokoto state with 56%. Kebbi state with the second highest enrollment had only 40% of the admitted candidates that made it to the final year and for Zamfara state with the highest enrollment only 35% made it to the final year. On the overall enrollment for the four states however, the result shows that only 42% and 38% of the enrolled candidates for the nursing and midwifery courses respectively were able to make it to the final year (Table 4). The result of the study indicates that there is high failure rate among candidates for both nursing and midwifery courses.

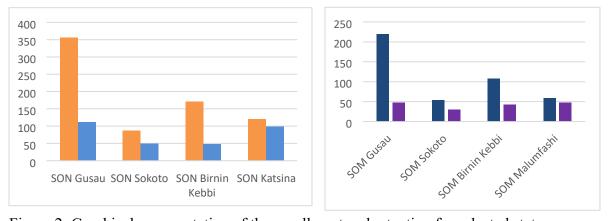


Figure 2: Graphical representation of the enrollment and retention for selected states

Research Question 4

What is the extent of completion of studies among students in Schools of Nursing and Midwifery in North Western States of Nigeria?



For the nursing and midwifery courses, retention to final year does not guarantee completion but qualify the students for presentation to the nursing and midwifery council for certification. Students are therefore, made to undergo pre-professional and the successful one will finally take the professional examination which they must pass to be able to obtain permit that will enable them practice as professional nurses and midwives.

Pre-professi	onal Exar	nination	Professiona	Professional Examination			
States	Number	r Number	Number Percentage Number			Percentage	
Nursing	Retaine	ed Passed	(%)	Retained	Passed	(%)	
Sokoto	50	49	98.00	49	48	98.00	
Kebbi	48	48	100	48	46	96.00	
Zamfara	111	110	99.00	110	97	88.00	
Katsina	99	99	100	99	95	96.00	
Total	308	306	99.00	306	280	92.00	
Midwifery							
Sokoto	30	30	100	30	26	87	
Kebbi	43	41	95	41	40	98	
Zamfara	76	76	100	76	47	62	
Katsina	45	45	100	45	45	100	
Total	197	192	99	191	158	83	

Table 5: 2015 academic session student Nurses and Midwives completion rate by state

Source: Field Survey, (2021)

Findings of the study (Table 5) revealed that only 42% and 38% of the candidates admitted for nursing and midwifery courses in the year 2015 respectively, were able to make it to the final year. For those that made it to the final year however, their performances at the pre-professional and professional examinations were very encouraging. For the nursing course, Kebbi and Katsina states recorded 100% success at the pre-professional examination, while Zamfara and Sokoto states recorded 99% and 98% success respectively. Kebbi and Katsina states recorded 96% percent success at the professional examination, while Sokoto and Zamfara states recorded 98% and 88% success, respectively at the Professional examination. Passing the professional examination is a requirement by the Nursing and Midwifery Council for certification and permission to practice.

For the Midwifery course, Sokoto, Zamfara and Katsina states recorded 100% success at the pre-professional examination, while Kebbi state recorded 95% success in the same examination. For the professional final examination, Katsina also recorded 100% success followed by Kebbi with 98%, while Sokoto and Zamfara recorded 87% and 62% success, respectively at the professional examination. Taking the four states together, 99% success was recorded at the pre-



professional examination and 92% at the professional examination, thus signifying a very high completion rate for the students that made it to the final year for nursing students. Similarly, 99% success was recorded at the pre-professional examination and 92% at the professional examination, thus signifying a very high completion rate for the students that made it to the final year for both nursing and midwifery courses in the four states.

Discussion of Findings

The study assessed the students' enrolment of schools of nursing and midwifery in the northwestern states of the country (comprising Katsina, Kebbi, Sokoto and Zamfara States). The findings on the age and gender distribution of respondents, findings of the study revealed that none of the respondents was above 35 years of age, implying that the youth of 25 years and below dominated the nursing and midwifery classes for the 2015 intake. Similarly, majority (65.45%) of the respondents are female, while the remaining 34.55% were male implying that there were more female studying nursing and midwifery in the area of study compared to their male counterparts. This is in line the findings of Umar (2021), which showed that, that 942 students are within the age range of 15-25 years, while 233 are within 26-35 years of age. This indicates that, majority of the students are below the age of 25 years.

On the issue of enrolment pattern among the states, for the year 2015, Zamfara State School of Nursing and Midwifery had the highest enrolment with 48.51% and 50.11% of the total enrolment for nursing and midwifery, respectively for the four states. Kebbi state was next with 23.37% and 24.37% of the total enrolment for nursing and midwifery, respectively for the four states while Katsina state was third with 16.30% and 13.21% of the total enrolment for nursing and midwifery, respectively for the four states. This support the findings of World Health Organization (WHO) Report (2016), which shows that, the Global Manpower shortage of Nursing personnel to man the healthcare institutions is said to be related to the poor retention of students at the Nursing and Midwifery Training Institutions. It is clearly seen in the result of the study as indicated that, at the institutions under study in the year 2015 the number of students enrolled for nursing programme is higher than that of Midwifery as 649 student Nurses were admitted, while Midwifery training 385 students were admitted.

On retention of students across the states, Katsina State had the highest retention rate for the nursing course, with 83% of the admitted candidates making it to the final year followed by Sokoto State with 57%. Zamfara State had the highest enrollment of which only 31% of the admitted candidates made it to the final year and for Kebbi State with the second highest enrollment only 28% made it to the final year. Similarly, for the midwifery course, Katsina state also had the highest retention rate with 81% of the admitted candidates making it to the final year followed by Sokoto state with 56%. Kebbi state with the second highest enrollment had only 40% of the admitted candidates that made it to the final year and for Zamfara state with the highest enrollment only 35% made it to the final year. On the overall enrollment for the four states however, the result

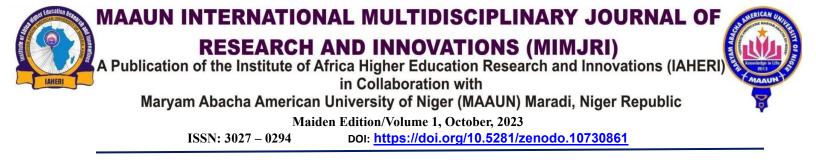


shows that only 42% and 38% of the enrolled candidates for the nursing and midwifery courses respectively were able to make it to the final year. This validates the findings of Umar (2021) that showed, the high number of student Nurses admitted is connected to the fact that both male and females are admitted for nursing programme, while for midwifery is only female. That is why the number of students Nurses almost double that of student Midwives. This makes it so that, the high the number of students admitted, the high the number retained.

For the nursing course, Kebbi and Katsina states recorded 100% success at the preprofessional examination, while Zamfara and Sokoto states recorded 99% and 98% success respectively. Kebbi and Katsina states recorded 96% percent success at the professional examination, while Sokoto and Zamfara states recorded 98% and 88% success, respectively at the Professional examination. Passing the professional examination is a requirement by the Nursing and Midwifery Council for certification and permission to practice. This concurs with the findings of Mary, (2013), which revealed that, the total quality of all the schools under study ranges between 66.9% and 80%, while the performance scores range between 62.4% and 89.2%. For the Midwiferv course, Sokoto, Zamfara and Katsina states recorded 100% success at the preprofessional examination, while Kebbi state recorded 95% success in the same examination. For the professional final examination, Katsina also recorded 100% success followed by Kebbi with 98%, while Sokoto and Zamfara recorded 87% and 62% success, respectively at the professional examination. This finding validates the work of Mary, (2013), who conducted a study on the Relationship between School Quality and Students' Performance in Selected Schools of Nursing in South-Western Nigeria. The findings showed that, in 2004, the score of the schools' ranges between 32% (State) and 86% (Federal), in 2005 between 61% (State) and 100% (Mission), 2006 scores range between 64% (State) and 100% (Federal), 2007 results range between 64% (Mission) and 97% (Federal). While, in 2008 ranges between 53% (Federal) and 97% (State).

Conclusion

The study assessed the students' enrolment of schools of nursing and midwifery in the northwestern states of the country (comprising Katsina, Kebbi, Sokoto and Zamfara States). The population for the study comprises of student Nurses and Midwives admitted into the schools in the year 2015, which are 1175, the tutors of the institutions 204 and 926 Hospital Staff where the students are posted for clinical experience. No Sample of was used as all the population was taken as a cohort in a longitudinal study. Documentary analysis and Likert scale type of questionnaire were the instruments used in obtaining the necessary data. Descriptive (percentages, tables, graphs) statistics was used for the analysis. The findings revealed that, the number of student Nurses enrolled in the study year was higher than that of student Midwives, looking at the overall enrollment for the four states, the result shows that less than half (42%) of the enrolled candidates were able to make it to the final year. Similarly, retention levels and completion rates was higher



among Nurses than Midwives. It is also seen that the dropout rate was higher at the first year compared to other years among both Nurses and Midwives.

For the nursing course, Kebbi and Katsina states recorded 100% success at the preprofessional examination, while Zamfara and Sokoto states recorded 99% and 98% success respectively. Kebbi and Katsina states recorded 96% percent success at the professional final examination, while Sokoto and Zamfara states recorded 98% and 88% success, respectively at the Professional final examination. This is because passing the professional final examination is a requirement by the Nursing and Midwifery Council for certification and permission to practice. Similarly, as for the Midwifery course, Sokoto, Zamfara and Katsina states recorded 100% success at the pre-professional examination, while Kebbi state recorded 95% success in the same examination. For the professional final examination, Katsina also recorded 100% success followed by Kebbi with 98%, while Sokoto and Zamfara recorded 87% and 62% success, respectively. Other factors such as poor learning environment, large number of students in the class, poor academic performance in science subjects at secondary level and marital problems are some of the identified factors responsible for students' withdrawal from training.

Recommendations

From the findings of the research therefore, the researchers deem it necessary to recommend the followings with a view to improving the enrollment, retention and completion rates of Nursing and Midwifery students in the North-West Zone of the country:

- 1. Emphasis should be given to science subjects at secondary schools with a view to improving students' enrolment, retention and completion rate at the institutions of Nursing and Midwifery.
- 2. Selection of potential students Nurses and Midwives at enrolment level shall be done on merit, to improve students' completion rate.
- 3. Infrastructural facilities for the schools should be enhanced to allow for maximum enrollment into the schools so as to have reasonable retention and completion rate for both Nursing and Midwifery sections.
- 4. The states in the zone should come up with a policy for rewarding any institution that achieved highest enrollment, retention and completion rates for both Nursing and Midwifery.

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