

**CAREER CHOICES AND PATHWAYS DETERMINANTS AMONG  
GRADUATE NURSES IN LOW AND MEDIUM-INCOME COUNTRIES: A  
CASE STUDY OF PWANI UNIVERSITY KENYA**

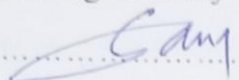
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H152/4030/2018**

**A RESEARCH THESIS SUBMITTED TO THE GRADUATE SCHOOL IN  
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OF A DEGREE OF MASTER OF PUBLIC HEALTH IN EPIDEMIOLOGY  
AND DISEASE CONTROL OF JARAMOGI OGINGA ODINGA  
UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**DEC, 2023**

### DECLARATION

This research thesis is my original work and has not, to the best of my knowledge, been presented for an award of degree in any other institution

Signature.......... Date..... 2<sup>nd</sup> Oct 2023.....

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### APPROVAL

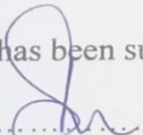
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## **DEDICATION**

To my beloved family for their tireless support and dedication throughout the study period. All this is for you.

## ABSTRACT

The existing shortage in human resources for health (HRH) remains a global concern, making healthcare workers a global priority. While nurses comprise a significant component of HRH, their shortages, especially in low- and middle-income countries (LMICs), have greatly contributed to the persistent poor health outcomes and poor progress towards attaining universal health coverage. Moreover, universal health coverage largely depends on attracting and retaining nurses in primary health care (PHC). However, there is very limited understanding of the factors that influence graduate nurses' decisions when choosing a career path in nursing after training, especially in LMICs. Furthermore, current research has shown a worrying increase in the attrition rate of graduate nurses, indicating that more than half of these nurses intend to leave nursing practice within their first year of employment. Therefore, understanding how these graduate nurses decide on their career path is critical in informing future policies on attraction and retention in PHC. This thesis paper explores the factors influencing career choices and pathways of graduate nurses in low- and middle-income countries and their implication in the attraction and retention of graduate nurses in primary health care. A systematic literature review was conducted to examine the factors influencing career choices and pathways of graduate nurses in LMICs. An empirical study established graduate nurses' career choices and pathways trained at Pwani University, Kenya. Quantitative and qualitative data collection involved an online self-administered questionnaire followed by individual in-depth interviews of selected participants to better understand the experiences behind their career choices. From the study, there was a significant statistical relationship between respondents' university entry status and current job ( $p= 0.02$ ) whereby majority of those who had direct entry were in private sector (42%) while majority of those who upgraded were in public sector (24%). The study results show that mentorship (58.9%) and parental influence (33.9%) were significant factors that influence career choices. Other factors that motivate individuals to choose nursing included the love of the physical nature of the profession, a desire to be part of a noble profession, exposure to caregiving, relatives in the nursing profession, and previous experiences with illness. Nurses are more likely to remain in their jobs if working conditions are favorable and if personal development opportunities are available. However, they are more likely to leave if there is a lack of growth opportunities, role ambiguity, a hostile environment, or more attractive external job opportunities. The study also showed that most nurses work in hospital services and prefer urban locations due to the availability of personal growth opportunities and job prospects. The study therefore recommends offering job security, personal growth opportunities, a supportive work environment, clear job roles, and incentives for nurses working in rural and remote areas to increase nurse attraction and retention in public healthcare. The current study further recommends a longer cohort follow-up study to be conducted, incorporating larger sample sizes from various settings to compare pertinent influencing factors among these groups.

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## **ABBREVIATIONS AND ACRONYMS**

<b>BSN:</b>	Bachelor of Science in Nursing
<b>BSNPH:</b>	Bachelor of Science in nursing and public health
<b>CASP:</b>	Critical Appraisal Skills
<b>CUE:</b>	Commission for University Education
<b>FBO:</b>	Faith-Based Organizations
<b>HIC:</b>	High-Income Countries
<b>HRH:</b>	Human resource for health
<b>LMICs:</b>	Low- and Middle-Income Countries
<b>MDGs:</b>	Millennium Development Goals
<b>MeSH:</b>	Medical Subject Headings
<b>NCK:</b>	Nursing Council of Kenya
<b>NGO:</b>	Non-Governmental Organization
<b>PHC:</b>	Primary Health Care
<b>PRISMA:</b>	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
<b>SAQ:</b>	Self-Administered Questionnaire
<b>SDGs:</b>	Sustainable Development Goals
<b>SDGs:</b>	Sustainable Development Goals
<b>UHC:</b>	Universal Health Coverage
<b>UNFPA:</b>	United Nations Population Fund
<b>WHO:</b>	World Health Organization

## CHAPTER ONE: INTRODUCTION

### 1.1 Background to the Study

Human Resources for Health (HRH) remains a very significant component of primary health care (PHC), representing the largest single public spending on healthcare services globally (Reifler, & Dykens, 2016). HRH has been prominently featured in current literature as a major contributor towards strengthening health systems, especially in low- and middle-income countries (LMICs) (Reifler, & Dykens, 2016; United Nations, 2016; World Health Organization, 2018a). The global health workforce shortage is recognized as a key HRH challenge in LMICs and developed countries, with the attraction and retention of nurses recognized as a global priority (WHO, 2018a).

Global health care workforce shortage has been cited as a significant contributor towards missing out on the millennium development goals (MDGs) (Bhatt, Giri & Koiral, 2010); an issue that, if not addressed, may prove to be a stumbling block towards the achievement of Universal Health Coverage (UHC). The ability to attain and sustain universal health care depends largely on recruiting and retaining nurses in primary health care (Halperin & Mashiach-Eizenberg, 2014). However, there is limited understanding of the experiences that influence nurses' decisions to choose a career in nursing after training. Interestingly, studies have shown that new graduate nurses experience higher attrition rates, with more than 50% reporting an intention to leave the profession within one year of practice; an indication of various factors that may be unique to graduate nurses that interact to influence their decisions to exit/remain in nursing as a career (Price *et al.*, 2018).

Global HRH shortages have been attributed to inadequate healthcare workforce production, poor attraction and retention policies, absenteeism, mal-distribution, and inadequate HRH planning and management (Waters *et al.*, 2013; Sojane, Klopper, & Coetzee, 2016). Moreover, factors influencing career decisions have also been acknowledged to play a vital role in determining the attraction and the rate of retention into primary health care (Yeager & Wisniewski, 2017). Despite the advancements in recognizing the HRH crisis in LMICs, progress in identifying practical solutions to address the problem has been inadequate (Waters *et al.*, 2013).

Nurses form a large proportion of HRH and are the main professional component in the delivery of healthcare. Their contribution to PHC has been acknowledged as crucial in delivering effective healthcare (Dawson, Nkowane, & Whelan, 2015), with a strong association between nurse appropriate skill mix and desired health care outcomes (Wakaba *et al.*, 2014). While increasing the nurse-patient ratio has been associated with improved health care outcomes, increasing specifically the number of Bachelor of Science in Nursing (BSN) graduates has been linked with better improvements in patient health outcomes (Aiken *et al.*, 2011; Jang & Oh, 2019; Nantsupawat, Kulnaviktikul, & McHugh, 2015). Understanding factors that influence graduate nurses' decisions to remain in PHC is an important step towards improving health care outcomes, especially in universal health coverage. However, there is limited understanding of the experiences that influence nurses' decisions to choose a career in nursing after training.

Informed by the need to have adequately prepared and more competent nurses to meet the dynamic healthcare needs of its people, Kenya, like many other LMICs, introduced the Bachelor of Science in Nursing (BSN) program. It surged the

production of highly skilled staff for the much-needed primary health care (Mullei *et al.*, 2010). Despite this effort, there is still a big gap in the absorption and retention of degree nurses in primary care facilities, with a shortage of BSNs in primary care facilities hitting 50% by 2016 (Health Workforce Report, 2017). According to the Kenya Health Workforce Report (2017), a small portion of BSN-trained nurses ended up in primary health care, a trend that is likely to persist if not addressed and leads to the severe shortage of high-level skilled nurses in primary care facilities.

Factors influencing career decisions play a crucial role in BSNs deciding to take a career in PHC or not. If these factors are well understood, they will facilitate reforms to attract and retain degree nurses in PHC. Studies on nurses have elicited relevant insight on the factors influencing career decisions and pathways of nurses. In a study by Robson A & Robson F (2015), he found out that decisions to remain in a nursing career were linked to a combination of factors, including the importance of the work and work-family conflict. Other studies have identified related factors including perceived organizational support (Masters & Liu, 2016), an initiative for professional development (Bruyneel *et al.*, 2017; Duffield *et al.*, 2014; Kenny, Reeve, & Hall, 2016; Nowrouzi *et al.*, 2016), career satisfaction (Masters & Liu, 2016; Osuji *et al.*, 2014), and a suitable working environment (Abou & Hashish, 2017; Kenny *et al.*, 2016; Laschinger, 2012). Factors influencing the decision to opt-out of career include the inability to cope with work-family conflicts (Chen *et al.*, 2015; Shacklock & Brunetto, 2012; Yamaguchi *et al.*, 2016), lack of initiative for personal development (Tummers, Groeneveld, & Lankhaar, 2013) and heavy workloads (Havaei, MacPhee, & Dahinten, 2016).

While these studies offer vital information on factors influencing career choices and pathways of nurses, how these factors specifically influence graduate nurses remains unclear; hence the need for exploratory studies focusing specifically on graduate nurses to understand how these factors interact to influence graduate nurses' career decisions. Little attention has been paid to assessing factors influencing graduate nurses' career choices and their implications in attracting and retaining those nurses in PHC. Moreover, there is limited literature on the factors influencing career choices and pathways of graduate nurses from LMICs. Comprehensive data is required to establish regional health care workforce needs, targets, and plans to increase the supply of health professionals (Chan *et al.*, 2017). This data will provide unique evidence useful in reforming nursing practice and nursing education. This study, therefore, aimed to examine the factors that have influenced career choices and pathways for graduate nurses trained in Pwani University, Kenya, and the implications they have in their attraction and retention to PHC.

## **1.2 Statement of the Problem**

Career decisions and pathways of nursing trainees have been cited as one of the causes of disequilibrium in the labour market of registered nurses (Alilu, Zamanzadeh, Fooladi, Valizadeh, & Habibzadeh, 2016). Yet, there is still a lack of understanding of the interacting factors that influence career choices and pathways of nursing graduates and their implications in attracting and retaining them into primary health care. Although a few studies have focused on career pathways of nursing trainees and job choices, they have failed to address factors specific to graduate nurses (Liaw *et al.*, 2016). Additionally, Kwansah *et al.* (2012) have shown that degree nurses have a higher likelihood of opting out of PHC as a career than their diploma counterparts, depicting that the factors influencing graduate nurses' career choice may

be different from the diploma and lower-level trained nurses. Additionally, there is limited literature on the factors influencing career choices of graduate nurses who have been trained in rural settings, especially in LMICs (*Liaw et al., 2016*).

While career choices of healthcare personnel in High-Income Countries (HIC) have been addressed extensively by longitudinal studies with detailed health workforce databases (*Ador et al., 2017; Ashley et al., 2018; Wareing et al., 2017*), such information is lacking in LMICs. Understanding the factors that influence graduate nurses to choose and remain in nursing as their career path is of great importance in informing future attraction and retention strategies in LMICs.

### **1.3 Purpose of the study**

The purpose of this cross-sectional exploratory study was to identify career choices and pathways determinants among graduate nurses in low and medium-income countries: a case study of Pwani University Kenya. A systematic literature review was employed to understand the factors influencing career choices of graduate nurses in LMICs. An empirical mixed-methods study was conducted to examine the current career choices of graduate nurses from Pwani University, the factors that influenced their career choices, and how this has impacted attraction and retention in PHC.

### **1.4 Objectives of the Study**

This study was guided by the following general and specific objectives of the study:

#### **1.4.1 Broad Objective of the Study**

To examine career choices and pathways determinants among graduate nurses in Pwani University Kenya.

### **1.4.2 Specific Objectives of the Study**

The following specific research objectives guided this study;

- i. To identify factors that affect career choices and pathways for graduate nurses in Pwani University Kenya.
- ii. To determine the career choices and pathways of graduate nurses trained at Pwani University Kenya.
- iii. To determine the implications of career choice factors and pathways of graduate nurses trained at Pwani University, Kenya, in graduate nurses' attraction and retention in PHC service.

### **1.5 Research Questions**

The study sought to answer the following research questions.

- i. What factors influence career choices and pathways for graduate nurses in Pwani University Kenya?
- ii. What are the career choices and pathways of graduate nurses trained at Pwani University, Kenya?
- iii. What are the implications of career choice factors and pathways of graduate nurses trained at Pwani University in graduate nurses' attraction and retention in PHC service?

### **1.6 Justification of the Study**

This study holds significant importance in addressing the global concerns surrounding the shortage of human resources for health (HRH) and the persistent challenges faced by healthcare systems, especially in low- and middle-income countries (LMICs). This

justification outlines the key reasons why this study is of utmost relevance and contributes valuable insights to the field of nursing workforce management.

Firstly, the global shortage of healthcare workers, particularly nurses, remains a pressing concern that affects the delivery of essential healthcare services. With nurses being a substantial component of HRH, the scarcity of nursing professionals in LMICs has been identified as a major contributing factor to the poor health outcomes and hindered progress towards achieving universal health coverage. Thus, understanding the factors influencing graduate nurses' career choices and pathways is pivotal in designing effective strategies to address the healthcare workforce crisis and ultimately improve health outcomes.

Secondly, the study's focus on the attraction and retention of nurses in primary health care (PHC) is of utmost significance in achieving universal health coverage. PHC plays a critical role in providing equitable access to essential healthcare services, particularly for vulnerable populations. Attracting and retaining nurses in PHC settings is crucial for enhancing healthcare access, reducing health disparities, and ensuring the effectiveness of health systems in LMICs.

Thirdly, despite the acknowledged importance of nursing professionals in healthcare systems, there is limited understanding of the factors that influence graduate nurses' career decisions, particularly in LMICs. The current study seeks to bridge this knowledge gap by conducting a systematic literature review and an empirical investigation among graduate nurses trained at Pwani University, Kenya. The study's findings will contribute valuable insights into the motivations, preferences, and challenges that shape nurses' career choices, providing evidence-based data to inform policy development and targeted interventions.

Moreover, the study's identification of a concerning increase in the attrition rate of graduate nurses, with more than half intending to leave nursing practice within their first year of employment, underscores the urgency of addressing retention challenges. By delving into the factors associated with early attrition, the study can guide the implementation of measures to enhance nurse job satisfaction, professional development, and workplace environments. This, in turn, can contribute to reducing attrition rates and bolstering nursing workforce stability in LMICs, particularly in Kenya.

In conclusion, this study offers a compelling justification for its importance. Through its comprehensive examination of the factors influencing nursing career decisions, this study has the potential to inform evidence-based policies and interventions that address the healthcare workforce crisis and strengthen healthcare systems in LMICs. By shedding light on the motivations, challenges, and preferences of graduate nurses, this study contributes significantly to the field of nursing workforce management, ultimately improving healthcare delivery and advancing progress towards universal health coverage in LMICs

### **1.7 Significance of the Study**

There is a need to inform health system planners, managers, and policy makers of the importance of understanding and appreciating the dynamics of the healthcare workforce. These include understanding the factors that influence graduate nurses' career choice into PHC after completing training in nursing institutions and the factors that may influence the attraction and retention of these graduates in PHC. Addressing this issue requires first-hand, reliable data on which to base policy decisions.

Existing gaps in the factors influencing career choices and pathways of graduate nurses and their impact on attraction and retention into primary care are critical setbacks in forecasting the likelihood of graduate nurses considering a career in primary care in the future (Liaw *et al.*, 2016). This is significant in projecting HRH's future needs and a resourceful knowledge tool in scaling up health systems. This will help inform health systems and policy reforms towards attracting and retaining graduate nurses into primary care in this era where more focus is on strengthening PHC.

Understanding the factors that influence career choices and pathways of graduate nurses and their intentions in taking a career in primary healthcare will help predict and understand the future trends in the deployment of nurses, their career motivations. The findings from this study are vital in giving preliminary insight into career movement and pathways of graduate nurses trained in rural settings, and therefore will form a basis for future research on enhancing health systems. The findings from this study are vital in informing future attraction and retention policies specific to graduate nurses, especially those trained in low- and middle-income countries.

## **1.8 Scope and Limitations of the Study**

### **1.8.1 Scope of the Study**

The study was limited to graduate nurses trained and graduated from Pwani University since the inception of the BSN program.

### **1.8.2 Limitations of the Study**

One of the limitations of this study was that some of the contacts of graduate nurses were missing in the database or were no longer in service, which highly impacted the

response rate. Another limitation of the study was the use of participants from one institution. This may have introduced bias based on the location of training.

### **1.9 Operational Definitions of Terms**

The following is the definition of terms as used in this context:

**Ample working conditions** refers to the working environment and all existing circumstances affecting labour in the workplace, including job hours, physical aspects, legal rights, and responsibility, organizational culture workload and training.

**Required Sections:** Used in questionnaire to mean mandatory sections that must be filled out before moving to the next question in the questionnaire

**Career guidance:** refers to a set of multiple processes, techniques, or services designed to assist an individual in understanding and in acting on self-knowledge and knowledge of opportunities in work, education, and leisure and to develop the decision-making skills by which to create and manage their career development.

**Career Path:** refers to a series of positions available in some occupational or specialized work area, ordinarily connoting possibilities for advancement.

**Career:** refers to a sequence of employment-related positions, roles, actions, and experiences and defines how one sees oneself in the context of one's social environment, in terms of one's

plans, one's past accomplishments or failures, and one's present competencies and attributes.

**Career decision-making** refers to a process that defines an individual's choice regarding a particular career.

**Direct entry graduate nurse** refers to the nurse who has completed their nursing degree after full-time training selected after secondary level education without going through a diploma in nursing.

**Graduate nurse:** is a nurse who has completed their academic studies but not completed the requirements to become a Registered Nurse.

**Upgrading graduate nurses:** Nurse who upgraded from a diploma to a nursing degree.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

The overall objective of this study is to understand factors influencing career choices and pathways of graduate nurses in LMICs and the implication of those factors in the attraction and retention of graduate nurses into PHC. The literature review has been conducted based on the objectives established to identify the gaps the study seeks to fill. The main focus areas will be the challenges facing HRH production, absorption, retention, and their implications to PHC. The review explores the concept of PHC and its implementation in LMICs and the challenges facing its implementation, and the attainment of Universal Health Coverage (UHC). The importance of nurses in PHC is also discussed, including nurses' role as 'mirror' for HRH, the role of BSN trained nurses, their production, absorption, and retention into the health system. Lastly, the factors influencing the career choices of nurses have been discussed and the implication this has on attraction and retention into PHC.

### **2.2 Implementation of PHC and its Importance in Universal Health Coverage in LMICs**

About 50% of the world's population lacks access to essential health services. Yet, more than 80% of these services can be provided within the PHC framework, ranging from maternity services, disease prevention to chronic disease management through palliative care (Mash & Von, 2018). PHC has for many years been adopted as an organizing principle in many health systems globally. Although there is still much to accomplish, PHC has greatly contributed to improved health outcomes in countries that have embraced it as a strategy (Kringos *et al.*, 2010). The Alma Ata Declaration, originally issued in 1978, outlined five guiding principles towards "health for all,"

which included accessibility of healthcare services, community involvement in health promotion, promoting community health, appropriate use of technology, and inter-sectoral collaboration (Baum, 2007). However, its implementation has not been fully realized with goals to attain “Health for All” by the year 2000 not being fully realized (Ji & Chen, 2016). Despite the redundancy in achieving its goals, there is consensus that countries that have their health systems organized on PHC principles have achieved greater improvements in health care outcomes and that PHC goals are still as valid as they were in 1978 (Leslie & Lonneman, 2016; Powell *et al.*, 2017; Kringos *et al.*, 2010). The PHC concept has evolved with time, and currently, it has received more focus than it was in the past four decades.

Forty years since the Alma Ata declaration, the Global Conference on Primary Health Care in Astana in 2018 commemorated the Alma Ata milestones intending to reaffirm the Alma Ata PHC principles, as well as redesign and politically committing countries to embrace PHC as the core strategy towards achieving UHC and other health, related Sustainable Development Goals (SDGs) by 2030 (WHO, 2018a). The Astana Declaration acknowledged that the Alma Ata implementation had been uneven with poor health service accessibility in those populations who need it most. Therefore, it emphasized and refocused PHC efforts to achieve the highest attainable health standards for all (WHO, 2018a).

This is where the concept of primary care plays a great role in reaching disadvantaged populations. Designed to improve the level of health in the community, primary care plays a vital role in health care service decentralization by bringing health services closer to the population (O’Donnell *et al.*, 2016). Primary care has been appraised globally to improve service delivery in the community at a cheaper cost and the best

way to decongest hospitals through first contact and bring healthcare closer to people's places of residence and work (Obioha & Molale, 2011). According to Marsh (2018), a robust health system requires primary health care at its core. A systematic review by Kringos *et al.* (2010) showed significant evidence of how strong primary health care contributes to overall health systems performance, including the quality, efficiency, and equity of service delivery and hence a critical component of PHC.

The current focus on UHC in the context of the SDGs; with more emphasis on disadvantaged populations, environmental health, as well as providing not only value for money, but more especially, a cost-effective, accessible, and affordable health care is certainly founded on the PHC principles (Van Weel & De Maeseneer, 2009). Various reports have supported the validity of the PHC concept. The World Health Report (2008) emphasizes organizing health systems on the PHC principle and recognizes areas of reform including (1) UHC through improved health equity and protection from financial risks; (2) people-centred service delivery that is responsive as well as in support of universal coverage; (3) a more reliable and accountable leadership; and (4) implementation of public policy across sectors to improve individual/community health. However, PHC implementation in many LMICs has continued to suffer underfunding, under-development, and HRH challenges in the recruitment and retention of necessary healthcare workers needed for its implementation (Mash, & Von, 2018). Thus, how practical the HRH issues are addressed remains core in attaining PHC and UHC goals.

### **2.3 Importance of Nurses in PHC**

The world's ageing population is increasing at an alarming rate, and this has led to a shift from acute to chronic diseases and increased complexity of disease morbidity

and multi-morbidity of diseases; a factor that has consequently increased the importance of the role of nurses in the attainment of Universal Health Coverage (Kline & Bowdish, 2016). Nurses form the largest component of the healthcare workforce. They are at the frontline in healthcare delivery, forming the first contact while spending the longest time with patients in most healthcare settings (Mamishi, 2017). The establishment of primary health care and patient-centred care has seen an expansion of the role of nurses and increasing recognition of the significance of nurses in multidisciplinary teams (Jackson *et al.*, 2013). Studies have focused on the role played by nurses in primary health care, recognizing the important role of registered nurses with the ability to fully utilize their skills and experience with higher independence levels (Flieger, 2017; Jackson *et al.*, 2013).

Nurse staffing has been correlated with health outcomes, with poor healthcare outcomes being attributed to inadequate skilled and competent nurse-staff to handle the complex and increased healthcare needs (Ly *et al.*, 2016). Kershaw (2011) acknowledges the importance of nurses in the health system as they work as frontline healthcare providers playing a vital role in patient support, patient advocacy, and patient education, and providing holistic care to patients.

In Kenya, nurses have always dominated the health workforce, with their proportions in HRH vital in determining, to a greater extent, the transferable health outcomes associated with positive changes in HRH (Pozo-Martin *et al.*, 2017). According to the Kenya Health Workforce Forecast report (2015), the total number of health workers employed in Kenya was about 57000, out of which 60% were nurses. These nurses assume many responsibilities in primary care facilities and hence are accountable for

the health of about 80% of the Kenyan population that reside in rural and semi-urban settings (Wakaba *et al.*, 2014).

#### **2.4 Role of Graduate Nurses in PHC**

Recent studies have identified domains of primary health care practice, identifying the role of degree trained nurses with renewed interest in primary health care, including preventive care, care management, practice operations, management of chronic illness, and transition care with improved health outcomes (Wilkinson, 2015; Smolowitz *et al.*, 2015). Nurses with BSN degrees are well prepared to address healthcare demands placed on them. Therefore, they are worth their skills in health promotion, leadership, case management, critical thinking, and the ability to address a variety of complex patient demands in outpatient and inpatient settings (Conley, 2019).

High-Income Countries (HICs), leading nursing organizations, and advocacy groups have recognized the benefits that BSN nurses bring into the health system. A study by Kutney-Lee, Sloane, and Aiken (2013) found that a 10-point increase in the proportion of nurses with BSN degrees within a hospital was linked to a death reduction of 2.12 per thousand patients. For a set of patients with complications, there was an average death reduction of 7.47 deaths per thousand patients. Another study by Blegen *et al.* (2013) found that health care facilities with a higher number of registered degree nurses had lower incidences of mortality associated with heart failure, postoperative deep vein thrombosis, failure to rescue, and pulmonary embolism, and an associated shorter length of hospital stay. McHugh *et al.* (2013), in a study of patient outcomes in Magnet hospitals, found out that in a 30 day stay, there were 14% lower odds of inpatient deaths and 12% lower odds of failure-to-rescue as

compared to patients cared in non-Magnet hospitals. These outcomes were attributed largely to investing in highly qualified staff and Magnet hospitals having a higher proportion of degree nurses.

Lewis, O'Boyle-Duggan, and Poltney (2017) show that higher-level training gives nurses the potential to deliver a positive impact on health care outcomes. They, however, realized that high-level trained nurses tend to meet regulatory barriers that hinder them from fully practising their scope, thereby limiting their capacity over time. Notwithstanding the benefits they bring into the system, these nurses are more likely to abandon their nursing careers for a more fulfilling career.

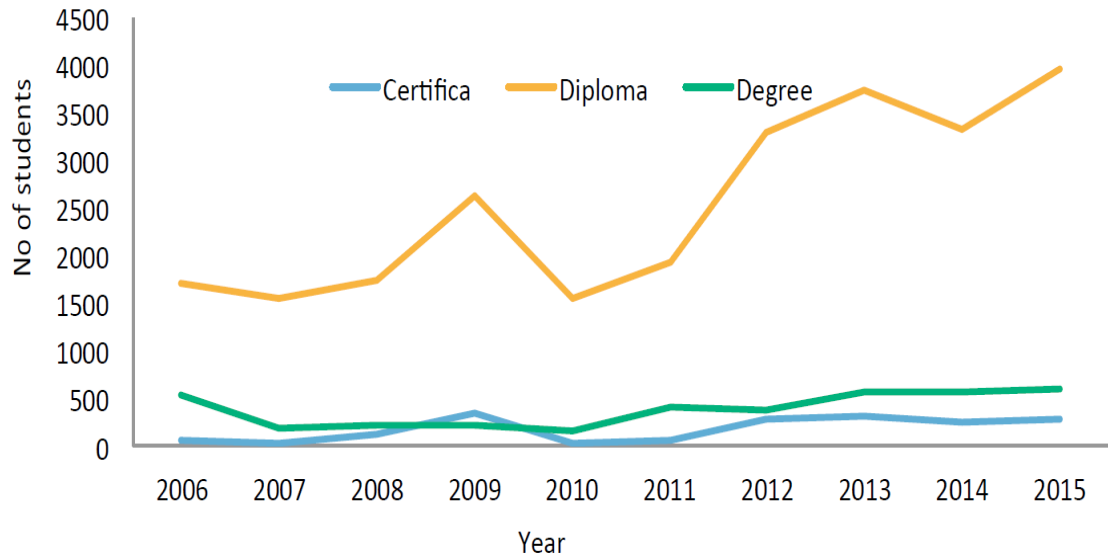
## **2.5 Graduate Nurse Production, Absorption, and Retention in Kenya**

HRH production, absorption, and retention have been major issues in health systems, especially LMICs. The current nurse shortage is a global concern, with healthcare shortage hitting 7.2 million in 2016 (Miseda *et al.*, 2017). The indicators are more worrying, given that by the year 2035, the global nursing shortage is projected to reach 12.9 million (Campbell *et al.*, 2013). In LMICs, poor health outcomes have been exacerbated by weak PHC implementation resulting from a severe shortage in human resources for health (Ly *et al.*, 2016). This is one of the identified key constraints to scaling up health systems, a factor that has crippled primary health care, especially in low and middle-income countries (Mangham & Hanson, 2010). Nevertheless, many LMICs are faced with the need to increase the nursing workforce and retain them in primary care, where the health needs are greatest and at the same time maintaining satisfaction, competency, and productivity (Butt, 2015). In Ghana, for example, nurse staffing in PHC has been met with difficulties even after the

government had put in place salary incentives to attract and retain nurses (Kwansah *et al.*, 2012)

In a bid to have more competent and well-prepared nursing professionals to address the complex health needs in the Kenyan population, degree level nurse (BSN) training in Kenya was started in 1988 and 1992 in Baraton University and the University of Nairobi, respectively (Kenya Nursing Workforce Report, 2012). Since then, the number of both public and private universities offering BSN has considerably increased, producing a considerable number of highly skilled nurse professionals, with a current number reaching over 3000 registered BSNs countrywide (Kenya Health Work Force Report, 2017). Nevertheless, the number of BSNs who have joined primary health care is still wanting. Informed by the need to scale up health systems, the Kenyan government oversaw the direct absorption of pioneer BSNs into the public service in 1997. Twelve years later, successive regimes were able to employ only 89 BSNs.

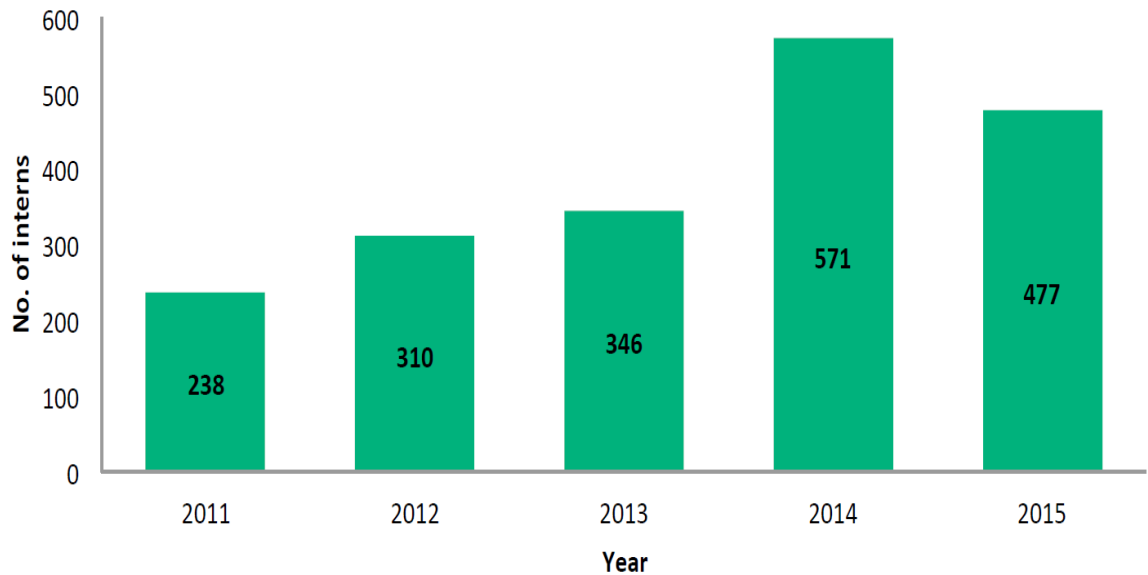
This is thereby denying these BSNs an opportunity to utilize their skills to ensure Kenyans have the highest attainable health standards as depicted in the UHC goals (Pozo-Martin *et al.*, 2017). Compared to other cadres, BSN production has been increasingly stable but consistently low over the years. Between 2006 and 2015, only 12.4 % (3,849) of the total nurses enrolled were BSN holders (Kenya Health Work Force Report, 2017).



**Figure 2.1: Enrollment of nurses in Kenya; 2006-2017**

**Source: Kenya Health Work Force Report 2015**

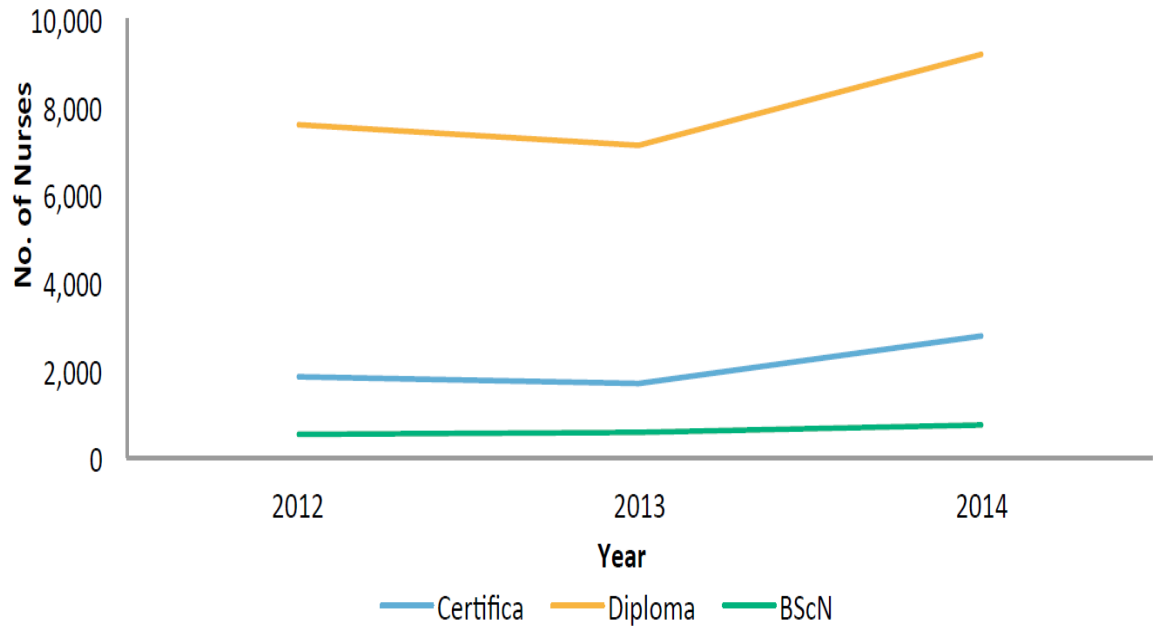
BSN training in Kenya is regulated by the Nursing Council of Kenya (NCK). It oversees the training, registration, licensing, and enrollment and sets standards and scope of practice. Students joining the BSN program may do so by either direct entry from secondary school or upgrading after satisfactory completion of the diploma nursing program. BSN graduates are required to undergo a one-year internship program before they are registered and licensed to practice. The number of BSNs who apply for internships has increased since 2011, peaking in 2014. However, the number of BSNs absorbed into the health care systems does not match the production (Mullei *et al.*, 2010).



***Figure 2.2: Internship applications for BSNs 2011-2015***

**Source; Kenya Health Work Force Report 2015**

Based on the data from the Kenya Health Work Workforce Report 2015, Kenya had a nurse to population ratio of 8.3 nurses per 10,000 populations as of 2015, a value that is far below the WHO recommended 25 nurses per 10,000 populations. Despite the increased production of BSN nurses, their absorption and retention remain persistently low, indicating many trained BSNs that remain unabsorbed into the health care system. The figure below shows the number of active nurses and year of retention, and level of training.



*Figure 2.3: Number of active nurses and year of retention and level of training*

**Source: Kenya Health Work Force Report 2015**

## **2.6 Overview of Factors Influencing Career Choices of Nurses Globally**

Healthcare organizations face the challenge of attracting and retaining nurses. To address this, there is a need to understand why nurses leave their nursing career prematurely or why they do not choose nursing as a career pathway after training. Specific factors have been identified globally to influence nurses' decisions to leave or remain in their careers. In Egypt, a study on ethical work climate, organizational support, job commitment, and job satisfaction concerning turnover intent, Abou (2017) recognized the important contribution of an ethical working climate, job satisfaction, organizational support, and commitment in determining the nurses' career decision. The author shows that an enhanced ethical climate, supportive work conditions, and job-related benefits influence nurses' decision to remain in a healthcare facility, hence low turnover. A study involving Belgian Nurses (Bruyneel

*et al.*, 2016) showed that emotional exhaustion and job characteristics significantly influence nurses' career decisions to leave. 29% of the nurses intended to leave their career in the next one year of practice.

A study in Central Taiwan found that work-family conflict significantly influenced job satisfaction and was important in determining career decisions (Chen *et al.*, 2015). This was also the case in another study in Japan, where job control, work-family conflict, and family variables were identified as important factors affecting job decisions (Yamaguchi *et al.*, 2016). Tourangeau *et al.* (2012), in a study conducted in two provinces in Canada, found that condition of the work environment, organizational support and practices, patient relationship, physical and psychological job responses, work rewards, relationship with other workers, and external factors were the major contributors towards the nurses' decision to leave or remain in their career. In contrast with other studies, the concept of job satisfaction was insignificant.

In the UK, work-family conflict, the importance of work, and personal attachment to the work were the most important determinants of nurses' career decisions (Robson & Robson, 2014). Robson and Robson (2014) also found out that age and length of service correlate well with intentions to remain or leave service. Kwansah *et al.* (2012) identified that determinant factors were categorized as pull factors or push factors. Pull factors are those situations or conditions that attract nurses to take a career and remain in PHC, while push factors are considered factors that influence nurses to take a career in the non-PHC field. Push factors that have been reported in current literature include high workload, difficult work conditions, perception of being neglected by the ministry of health, lack of future career advancement, lack of structure mentoring.

Factors such as career advancement opportunities and benefits such as better working conditions, mentorship, and recognition were identified as pull factors into PHC. Their study identified job satisfaction, career development (learning opportunities, supervision, and mentorship), salary and allowances, working conditions (infrastructure, equipment, and supplies, transport and communication, recognition) as the pertinent factors influencing the choice of job in PHC. The study recognized that nurses with a higher diploma or university degree were less likely to accept a career in remote areas hence their lower representation in PHC. These groups have been trained in advanced diagnostic and surgical support, and most of them are likely to remain in tertiary facilities.

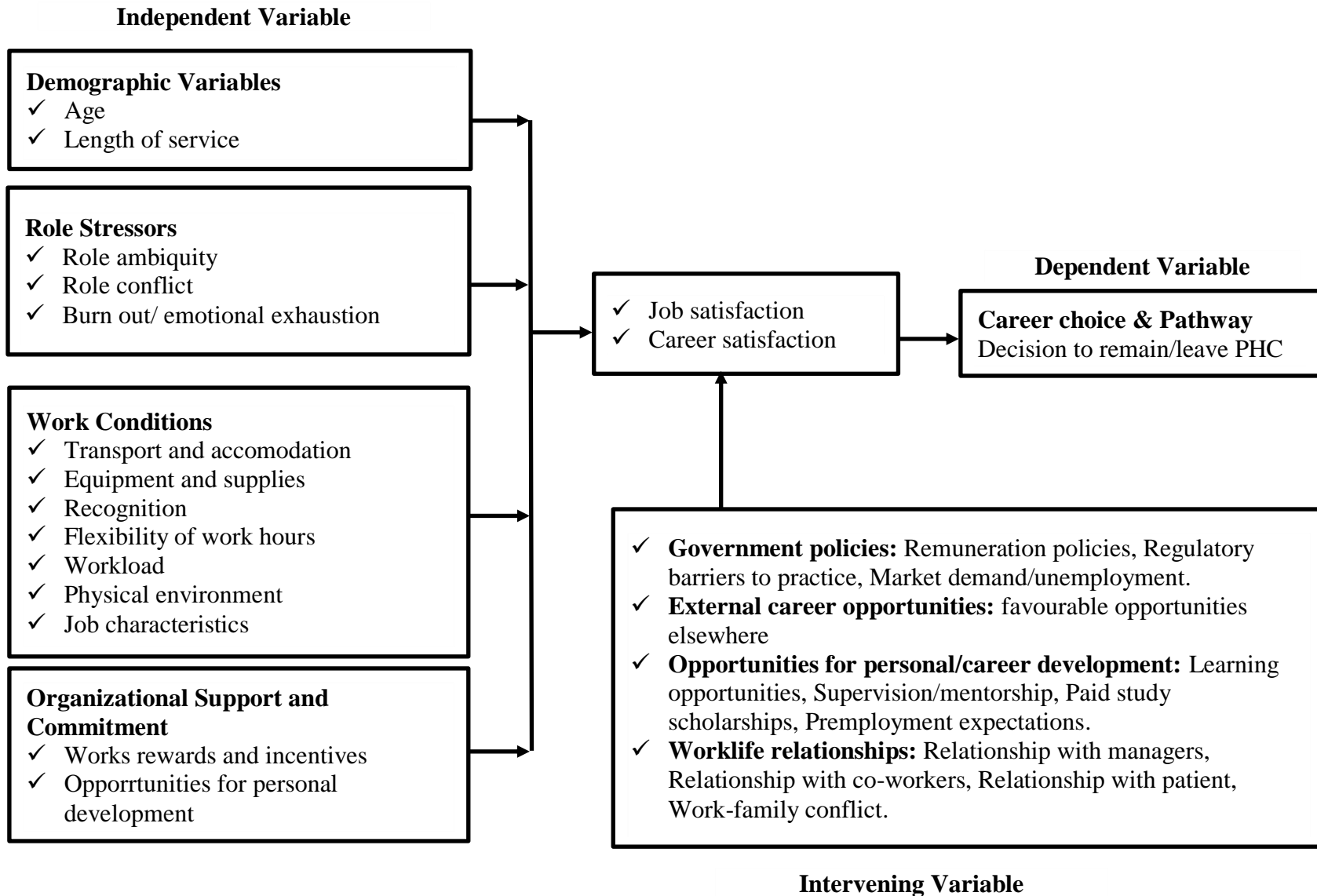
## **2.7 Conceptual Framework**

Based on the literature review on factors influencing career choices of nurses, several factors were found to influence the career decisions of nurses either to remain or leave their career in PHC. The literature review that no single factor influences career decisions but rather an interaction of various factors that work together to directly or indirectly influence the career choices of nurses. As illustrated in figure 4, twelve themes emerged from the literature review. All these factors have been found to, directly and indirectly, affect nurses' career decisions/pathways. Some factors directly affect other factors that influence career choices, which indirectly affect career decisions.

The conceptual framework shows a direct effect of prior-work socializations (pre-employment expectations, integration, work-family conflict) on job and career satisfaction but have no direct effect on career decisions. Job satisfaction has a direct effect on a career decision. Government policies (Remuneration policies, Regulatory

barriers to practice, and Market demand or unemployment) directly affect career choices. Role stressors (Role ambiguity, Role conflict, Burn out or emotional exhaustion) directly affect career choices by directly influencing job satisfaction and, hence, having a stronger influence on career decisions.

Organizational support (Works rewards and incentives, opportunities for personal development and career progression), work-life relationships (Relationship with managers, Relationship with co-workers, Relationship with patient), and opportunities for personal/career development (Learning opportunities, Supervision/mentorship) have both direct and indirect influence on career choices/pathways of nurses. External factors such as favourable career opportunities not related to PHC directly influence career decisions. The central study features are the factors influencing career decisions/pathways of nurses.



*Figure 2.3: Conceptual Framework*

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This study employed a descriptive, exploratory cross-sectional design. The study took two parts: a systematic literature review to examine the factors influencing career choices and pathways of graduate nurses in LMICs. The second part was an empirical study to examine and analyze the career choices of graduate nurses from Pwani University, the factors that have influenced their career choices, and their implications in attraction and retention into PHC.

### **3.2 Systematic Literature Review**

The Preferred Reporting Items mostly guided this literature review for Systematic Reviews and Meta-Analyses (PRISMA) statement tool (Moher *et al.*, 2009). The main aim of this systematic review was to identify factors that influence career choices and pathways for graduate nurses in LMICs. The systematic literature review examined published literature to understand the factors influencing career choices and pathways of graduate nurses in low- and middle-income countries.

#### **3.2.1 Search Strategy**

Published English literature was searched in CINAHL, PubMed, and google scholar (2000-2018). Keywords and Medical Subject Headings (MeSH) were used for the main concepts of interest.

Career choice: ‘career choice’ OR ‘job choice’ OR ‘job decision’ OR ‘career decision’ OR career pathway, and Graduate nurses: ‘graduate nurses’ OR nurses OR nursing.

I used the search strategy (career decision) OR (job choices) OR (career pathways) OR (career choices [MeSH Terms]) AND ((nurse [MeSH Terms] OR graduate nurses OR nursing)) for PubMed search. I applied the search term: Nurs\* OR "graduate nurse" AND ("Career choices" OR "career decisions" OR "job choices" OR "job decisions") NOT "student nurse" for google scholar search with filters for publication date (2000-2018) and “articles only.” I also employed snowballing literature search by screening for relevant articles from the reference list of selected papers.

### **3.2.2 Inclusion Criteria**

I only included articles that met the following inclusion criteria: i) Study designs: I included papers reporting empirical findings, ii) Timeline: The study included published peer-reviewed papers within 10 years of publication, iii) Setting: Only papers reporting practice in LMICs were included, iv) Target population: Had to include graduate nurses as the target population, and v) Outcome measures: Papers that reported on the factors influencing career choices and pathways for graduate nurses.

### **3.2.3 Exclusion Criteria**

All unpublished papers, reports, documentaries, papers published not earlier than 2000, Papers reporting findings from High-income countries, Papers reporting findings from populations other than graduate nurses, and systematic reviews and meta-analysis were excluded from this study.

### **3.2.4 Outcome Measurement**

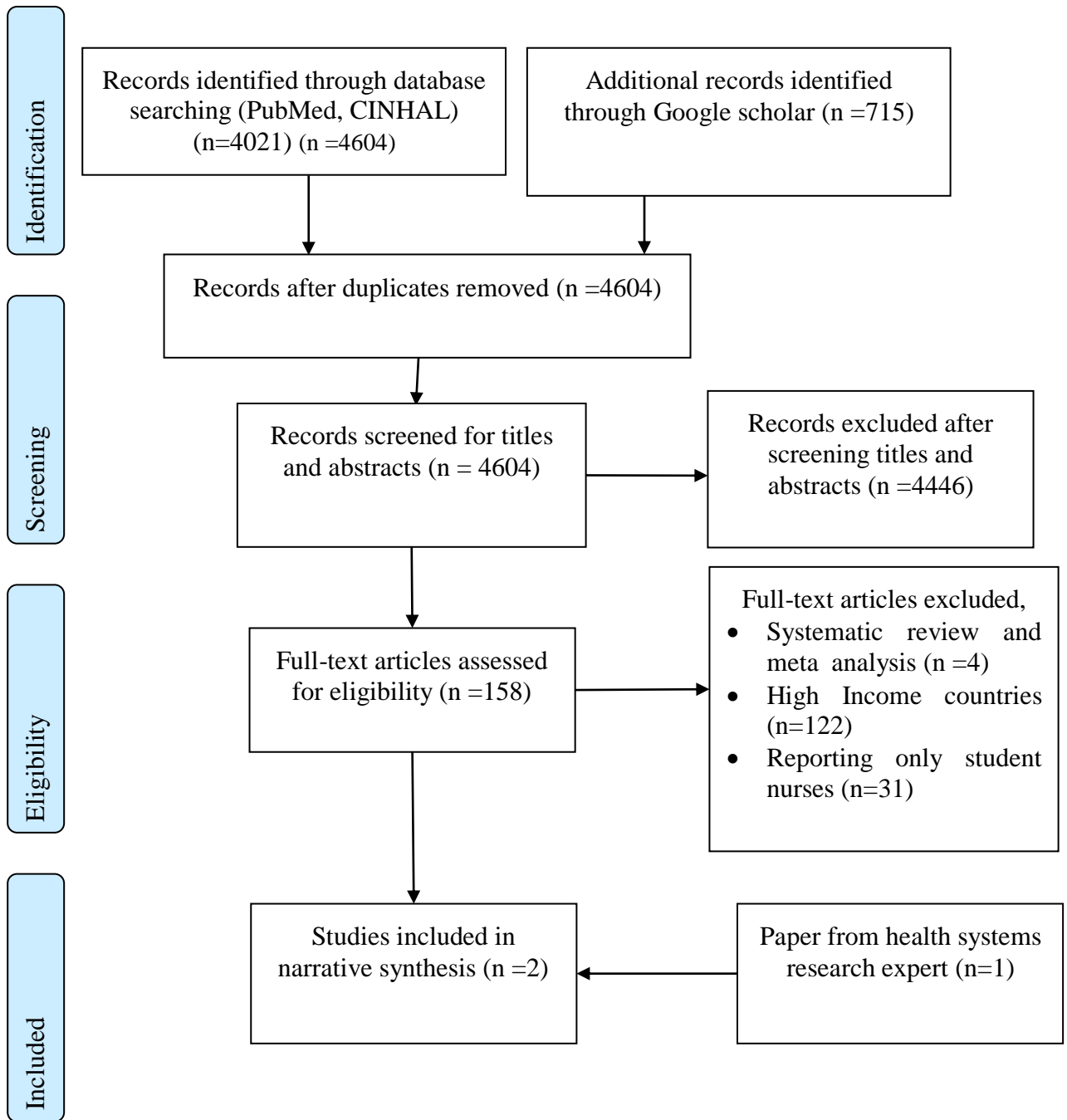
The outcome of interest in this review was the factors influencing the career choices of graduate nurses in LMICs.

### **3.2.5 Data Extraction**

I identified articles from the databases and removed duplicates, screened titles, and abstracts against the prior set exclusion and inclusion criteria. Where full-text review revealed a paper that did not meet the inclusion and exclusion criteria, I excluded the paper from further analysis. The completed paper selection process was reported using the customized Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart shown in figure 6 below (Moher *et al.*, 2009).

Standard abstraction procedure was applied in the assessment for the quality of the methodology of the selected articles. Reported factors influencing career choices were extracted using the data abstraction form, including the author, year, type of study, study population, number of years in training, reported career choices, and the reported reasons for career choices (Appendix VI, Appendix VII).

## PRISMA FLOW CHART



**Figure 3.1: Article selection process**

**Adopted from Moher *et al.* (2009)**

### **3.2.6 Quality appraisal**

The quality of the evidence reported for the selected papers was checked and reported using the Critical Appraisal Skills (CASP) tool (Critical Appraisal Skills Programme, 2018). This was used to assess the objectivity, validity, and reliability of the methodology used.

### **3.2.7 Synthesis of results**

Thematic analysis of the selected papers to identify emerging themes was conducted to develop a coding framework based on the emerging themes. The selected papers and the coded contents concerning the developed coding framework were then read through carefully. Manual coding was done by charting the coded data and analyzing it by compiling ideas and concepts from the selected papers and fitting them into articulate themes.

## **3.3 Empirical study**

### **3.3.1 Area of the Study**

The study involved degree nurses who graduated from Pwani University since the inception of the nursing degree program. These nurses were expected to be working in different locations, and therefore, this study included all accessible nurses eligible for the study. Pwani university was selected as a study area because it represented a rural setting, and it was purposefully selected because it was close to the research institution hence easily accessible. Additionally, Pwani university has a research collaboration MOU with the research institution making it easier/possible to access its research data.

### 3.3.2 Research Design

The study is a descriptive, exploratory cross-sectional survey to establish the career pathways of the nurses trained at Pwani University and the factors that have influenced their career pathways. Exploratory cross-sectional survey was preferred because it provides a comprehensive overview of a population's attitudes, beliefs, and behaviors. It is an efficient way to quickly explore a wide range of topics, allowing researchers to get a better understanding of the population they are studying. Additionally, the design is relatively inexpensive and can be completed quickly.

### 3.3.3 Population and Sample Size

The target population includes all graduate nurses who completed their Bachelor of Science in Nursing (BSN) or Bachelor of Science in nursing and public health (BSNPH) training from Pwani University between 2016 and 2018. The Bachelor of Science in Nursing (BSN) at Pwani university started in the year 2011. The program offers training to direct entry and upgrading students in three years and four years, respectively. The first lot of the upgrading students graduated in 2014, followed by subsequent upgrading and direct entry graduate.

*Table 3.1: Number of BSN graduates, Pwani University 2014 to 2018.*

<b>Year of graduation</b>	<b>Mode</b>	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>Total</b>
<b>Number of students</b>	<b>Direct entry</b>	37	40	54	131
	<b>Upgrading</b>	12	33	43	88
	<b>Total</b>	49	73	97	219

**Source: Pwani University student administration database 2019**

### 3.4 Sampling Techniques and Sample Size

#### 3.4.1 Sampling Techniques

Etikan, Musa, and Alkassim (2016) define sampling as selecting a part of an aggregate or totality by which a judgment of inference about the aggregate or totality is made. It is the process of drawing samples that would be representative of the population of the study. Its objective is to secure a sample subject to limitations of size and produce the characteristics of the population as closely as possible. In this study, the stratified random sampling technique was used to select the individuals to participate. The stratified sampling was suitable because it represented all staff categories based on the population proportion so that no category of respondents was left unrepresented. According to Singh and Masuku (2014), in the procedure for stratified sampling, the population was divided into strata based on the category. A 10 - 30% sampling fraction was picked from each stratum to represent and form the final sample size.

#### 3.4.2 Sample Size Determination

Kim and Wang (2019) observed that a 10-30% sample size is sufficient to generalize the findings. Fischer's formula was used to calculate the sample size. The study adopted the formula as follows;  $n = \frac{Z^2 P(1-P)}{I^2}$ .

Where:

- n** is the sample size [where population > 10,000]
- Z** is the normal deviation at the desired confidence interval. In this case, it was taken at 95%, Z value at 95% is 1.96
- P** is the proportion of the population with the desired characteristic.
- Q** is the proportion of the population without the desired characteristic.

$I^2$  is the degree of precision; it was taken to be 10%.

Since the proportion of the population with the characteristic is not known, then 50% was used such that;

$$n = \frac{1.96^2 \times 0.5(1 - 0.5)}{0.1^2} = 96$$

Since the target population is <10,000, the sample adjustment was made using the following formula.

$$nf = \frac{n}{1 + \frac{n}{N}}$$

Where:

**nf** is the desired sample size for a population <10,000

**n** v calculated sample size

**N** is the total population

Therefore;

$$nf = \frac{96}{1 + \frac{96}{219}} = 66.7$$

Thus, the desired sample size (nf) is 67 respondents.

### 3.5 Data Collection

Qualitative and quantitative data were collected in two phases. The first phase included the collection of quantitative data using online self-administered questionnaires. The second phase involved collecting qualitative data from selected participants following the analysis of the self-administered questionnaires (Appendix II).

### **3.5.1 Instrumentation**

Kombo and Tromp (2006) assert that questionnaires enable information collected from a large sample and diverse regions. Two categories of data collection instruments were used in this study. Primary data was collected by an online self-administered questionnaire sent to each participant through email (Appendix II) and Interview Guides for graduate nurses (Appendix III). Questionnaires used in earlier studies (Al-Takroni *et al.*, 2018; Ekici, 2017) were adopted and customized to fit into the context of this particular study. A pre-test of the questionnaire was conducted with the Kilifi County hospital nursing staff who were not eligible to participate in the study. Pre-testing of the tools was aimed at finding ways to improve them. Based on the feedback from the pre-test, the questionnaire was refined and finalized and then emailed to the respondents.

The utilization of a self-administered questionnaire, specifically an online format, offered several substantial advantages in this research endeavor. Employing an online self-administered questionnaire in research provides notable benefits that enhance data collection in terms of quality, efficiency, and reliability. The primary advantage lies in the convenience and accessibility afforded to participants. Online questionnaires enable respondents to engage with the survey from any location and at their preferred time, utilizing various digital devices like computers, tablets, or smartphones. Such accessibility not only fostered improved response rates but also facilitated the inclusion of a more diverse and extensive audience within the research cohort.

Moreover, the adoption of online surveys proves cost-effective compared to traditional paper-based methodologies. The elimination of printing, mailing, and manual data entry

processes results in reduced administrative expenses and the preservation of valuable resources. Furthermore, online self-administered questionnaires contribute to time efficiency, as data collection can be automated, and responses are instantaneously recorded. This expeditious process lessens the time required for data entry and analysis. Additionally, participants had the freedom to complete the questionnaire at their preferred pace, which encourages more thoughtful and accurate responses.

The study's geographical coverage necessitated the inclusion of a sizable and diverse participant pool, an objective that was effectively accomplished by utilizing online self-administered questionnaires. The benefits of convenience, cost-effectiveness, time efficiency, and accessibility significantly supported the successful execution of the research, as these advantages outweighed the inherent challenges of employing traditional paper-based surveys in such an extensive and geographically dispersed study.

In conclusion, the incorporation of an online self-administered questionnaire in this research offered various notable advantages that substantially enhanced data collection. The utilization of this method demonstrated its efficacy in promoting convenience, cost-effectiveness, time efficiency, data accuracy, global reach, standardization, real-time monitoring, flexibility, customization, and environmentally-friendly practices. By harnessing these benefits, researchers were empowered to successfully obtain reliable and comprehensive data from a diverse participant cohort, thereby contributing to the overall validity and success of the research project.

During the second phase of the study, an interview guide was used to conduct phone interviews to gain more insight into the factors influencing career choices. The interview

guide questions were open-ended, and the generation of the questions was based on the factors identified through the systematic literature review (Appendix III).

Phone interviews were chosen as the preferred data collection method in this study, primarily due to their numerous advantages and suitability when compared to face-to-face interviews. These advantages encompass cost-effectiveness, expanded geographical reach, enhanced convenience for participants, increased anonymity and comfort, time efficiency, and improved interviewer flexibility. Additionally, phone interviews allowed for effortless recording, ensuring accurate data capture and facilitating subsequent transcription for comprehensive data analysis.

The cost-effectiveness of phone interviews played a pivotal role in this research, as it eliminated the need for costly travel expenses. Consequently, researchers were able to efficiently reach a geographically dispersed participant pool without incurring excessive financial burdens. Furthermore, phone interviews proved instrumental in connecting with participants in remote or hard-to-access areas, thus broadening the geographic scope of the study and enhancing the diversity of the sample. This broader reach contributed to a more comprehensive and representative dataset.

Participants experienced enhanced convenience through phone interviews, as they were able to engage in the interviews from their preferred locations at mutually agreed-upon times. This aspect significantly minimized disruptions to their daily routines, promoting a higher level of participant cooperation and ensuring a more positive research experience.

The relative anonymity inherent in phone interviews fostered a comfortable and candid environment for participants, particularly when discussing sensitive or personal experiences. This increased comfort level encouraged participants to share their perspectives more openly compared to face-to-face interviews, leading to more insightful and authentic responses. The data collection process benefitted from the depth and richness of these responses.

Moreover, the ease of recording during phone interviews was advantageous, as researchers were able to accurately capture interview data. These recordings served as valuable resources during subsequent transcription, thereby reducing the risk of omitting crucial information during the data analysis phase.

In conclusion, the selection of phone interviews as the primary data collection method in this study was driven by the manifold advantages, they offered over face-to-face interviews. The combination of cost-effectiveness, expanded reach, participant convenience, increased comfort and candor, time efficiency, and interviewer flexibility culminated in a more comprehensive and reliable dataset. Additionally, the seamless recording capability facilitated accurate data capture, enhancing the overall validity and depth of the research findings

## **3.5.2 Data Collection Procedures**

### **3.5.2.1 Phase 1: Cross-sectional survey using a self-administered questionnaire.**

The first phase of the primary data collection was conducted Between February and March 2019. Eligible participants for the study were all BSN nurses who completed their degree from Pwani University within five years. Contact information was accessed from the university database, and this was used as a primary means of contacting the nurses. Snowballing was used to identify graduates whose contacts were missing. The participants were contacted primarily by phone and were requested to provide current email addresses for the questionnaire. Written consent was sent through their emails, together with the online self-administered questionnaire (Appendix I). Those who completed the questionnaire were considered to have consented to take part in the survey. The self-administered questionnaire was used in assessing demographics as well as the current employment status, designation, and place of work. All the participants were asked to fully complete the questionnaire and email it back within one week. To increase the response rate, the participants were contacted frequently to follow their progress and give timely feedback in case they had any questions.

### **3.5.2.2 Phase 2: In-depth Interviews with Selected Participants**

A portion of graduate nurses was selected from the group that completed the self-administered questionnaires to participate in the in-depth interviews. Selected nurses were categorized into strata based on various characteristics identified from the responses in the completed questionnaires and to ensure non-repetitiveness.

The categories included: Graduate Nurses working in rural public health facilities (primary care facilities) in clinical nursing positions (stratum 1), Graduate Nurses working in urban public health facilities (high-level facilities) in clinical nursing positions (stratum 2), Graduate Nurses working in private health facilities in clinical nursing positions (stratum 3), Graduate Nurses that completely left nursing (working in community-based or non-profit based organizations, research institutions, educational institutions, business persons and any other non-clinical/ non-health related field).

A portion of participants from each stratum was selected based on their availability and consenting to participate in in-depth interviews. Appointments were made through phone calls. The sample identified was sent a written consent to participate in in-depth interviews to examine the factors that have influenced their career decision and their perception of the strategies to attract and retain graduate nurses in primary care.

Using a semi-structured interview guide, in-depth face-to-face or telephone interviews (where feasible) were conducted with the graduate nurses to explore the following issues: Reasons for choosing their current career, Experiences in their current career, Reasons for intentions to change/remain in their current career, Reasons for intentions to change/remain in same location, sector or facility and Their perspective on attraction and retention strategies of graduate nurses into Primary Health Care.

The interview guide was, however, structured flexibly to allow for any other emerging issues. The interviews were conducted after completing and analyzing the quantitative responses by April 2019 and were administered in English. The interviews took

approximately one and half hours to allow time for interviewer probing. Interviews were conducted and audio-recorded, and later transcribed by the researcher.

### **3.6 Data Processing and Data Management**

Returned questionnaires were assessed for completeness, counterchecked, and cleaned, ready for analysis. The soft copy questionnaires were stored in multiple computers to protect against loss and password-protected to ensure security and privacy of the data. De-identification was done by assigning serial numbers to each questionnaire.

Recorded interview audios were transferred to multiple computers to avoid loss and serialized based on the interview date and interviewee for anonymity. They were then checked for clarity and completeness before they were handed out for transcription. The data was securely stored and available to authorized persons only, including the researcher and the principal investigators.

#### **3.6.1 Data Analysis Methods**

To address objective two, a quantitative analysis was conducted to determine the career choices for all the participants. Simple descriptive analyses were employed to illustrate the current careers and proportions of graduates in those careers.

To address objective three, a qualitative thematic analysis of the interviews was conducted to gain a deeper insight into the factors that have influenced the participants to undertake their current careers.

The factors identified in the qualitative analysis were incorporated to explain the descriptive quantitative data obtained from the SAQ to ultimately explain how and what factors influence the attraction and retention of graduate nurses into PHC.

#### **3.6.1.1 Quantitative Data Analysis**

Quantitative analysis of questionnaires was applied to answer objective 2 in understanding the current career options of graduate nurses who graduated from Pwani University. Basic summary statistics were used to describe the characteristics of respondents, including the type of entry (direct entry or upgrading), employment status (employed or unemployed), and nature of career (PHC/no-PHC). This was to answer objective number two on the current career paths of graduate nurses from Pwani University. This data was presented graphically using pie charts, bar graphs, and line graphs. The percentage of graduates in various career paths was calculated and presented graphically using pi-charts and bar graphs. It was used to determine the proportion of BSNs currently in PHC compared to other non-PHC careers.

#### **3.6.1.2 Qualitative Data Analysis**

Qualitative analysis was conducted to address objective 3 in gaining deeper insight into factors influencing the career choices and pathways of graduate nurses trained at Pwani University.

Recorded audio interviews were transcribed and then grouped into their respective strata. Transcripts from each category were thematically analyzed independently and compared to determine any differences between the various categories. I read each transcript independently and code to categorize them into factors influencing the career choices of

graduate nurses. An initial basic reading of the transcripts will be followed by in-depth reading to identify dominant themes generated. The analysis adhered to the prior laid down conceptual framework, which defines the factors influencing career choices and their impact on attraction and retention into PHC. Discrepancies and disagreements in coding were discussed to reach a consensus. Accurately illustrated categories under each theme were then be identified.

### **3.7 Logistical and Ethical Considerations**

The aim of the study was to understand how graduate nurses choose their career pathways. The study did not involve any human controlled studies. The overall approval for the study was obtained from the KEMRI scientific and ethics review unit (SERU) (Appendix V). Ethical approval for data collection process was approved by the Jaramogi Oginga Odinga University of Science and Technology Ethics and Review Committee (Appendix VIII). Clearance to research the area was obtained from Pwani University, and written permission to access the graduate nurse's database was obtained. Study participants were only allowed to proceed with the study provided they electronically signed the consent form. The participants were provided with study information sheets detailing the purposes of the study, duration of the study, terms of their consent, and the contact details of the principal investigator. Persons who voluntarily agreed to participate were considered to have read consented to the study. Separate consents were requested from participants who took part in the qualitative interviews. All the information obtained from the participants was kept confidential and anonymous. No personal identifying information was collected.

## **CHAPTER FOUR: RESULTS**

### **4.1 Introduction**

This chapter describes the results from data analysis. It provides the participants socio-demographic information followed by the descriptive analysis of the factors influencing their career decisions. To answer the research questions, two on the current career choices and pathways of Pwani University graduates, the characteristics and findings from the study participants will be presented in tables and figures.

### **4.2 Questionnaires Response Rate**

Questionnaires were digitized and shared through emails of 67 eligible participants and were given two weeks to respond to the questions. Reminders were sent after every five days to remind those who had not responded to do so. A total of 58 out of the 67 participants responded to the questionnaires making a response rate of 90%. Five of the filled questionnaires were incomplete, while two people turned down the request to participate. The incomplete questionnaires were not included in the descriptive analysis.

### **4.3 Respondents Profile**

The research question sought to determine the mode of entry, year of graduation, demographics, whether nursing was their first career choice, the location where they spent most of their childhood, how they paid their school fees, as well as factors that influence their retention or exit from primary health care. Data from 58 complete questionnaires were analyzed using descriptive statistics. The analysis included a table of frequencies, distribution by percentages and proportions.

#### 4.4 Demographic Information

Factors assessed under demographics included gender, age, type of entry, marital status, location of upbringing, year of graduation, mode of fee payment, and if nursing was their first choice.

##### 4.4.1 Age, Gender, and Marital Status

Participants were asked to provide information regarding their gender, marital status, and date of birth. Their age was calculated from the date of birth.

*Table 4.1: Age, gender, and marital status*

Entry type	Age, gender, and marital status					
	Mean Age	Male	Female	Married	Single	Total
Direct entry	26.2	30 (51.7%)	15 (25.9%)	11 (19.0%)	34 (58.6%)	45 (77.6%)
Upgrading	43.4	1 (1.7%)	12 (20.7%)	9 (15.5%)	4 (6.9%)	13 (22.4%)
<b>Grand Total</b>	*	31 (53.4%)	27 (46.6%)	20 (34.5%)	38 (65.5%)	58 (100%)

Table 4.1 above illustrates the age distribution, gender, and marital status of the 58 participants based on entry type. A majority of the respondents (45; 77.6%) were direct entry nurses while 13 (22.4%) were upgrading nurses, and their mean age was 26.2 years and 43.4 years for direct entry nurses and upgrading nurses, respectively. Male nurses were a majority of the respondents, with a proportion of 53.4% (n=31). 65.5% (n= 38) of the respondents were single while 20 (34.5%) were married.

#### 4.4.2 Where did you spend most of your childhood?

The respondents were asked to indicate the type of area where they spent most of their childhood. The results are presented in Table 4.2 below.

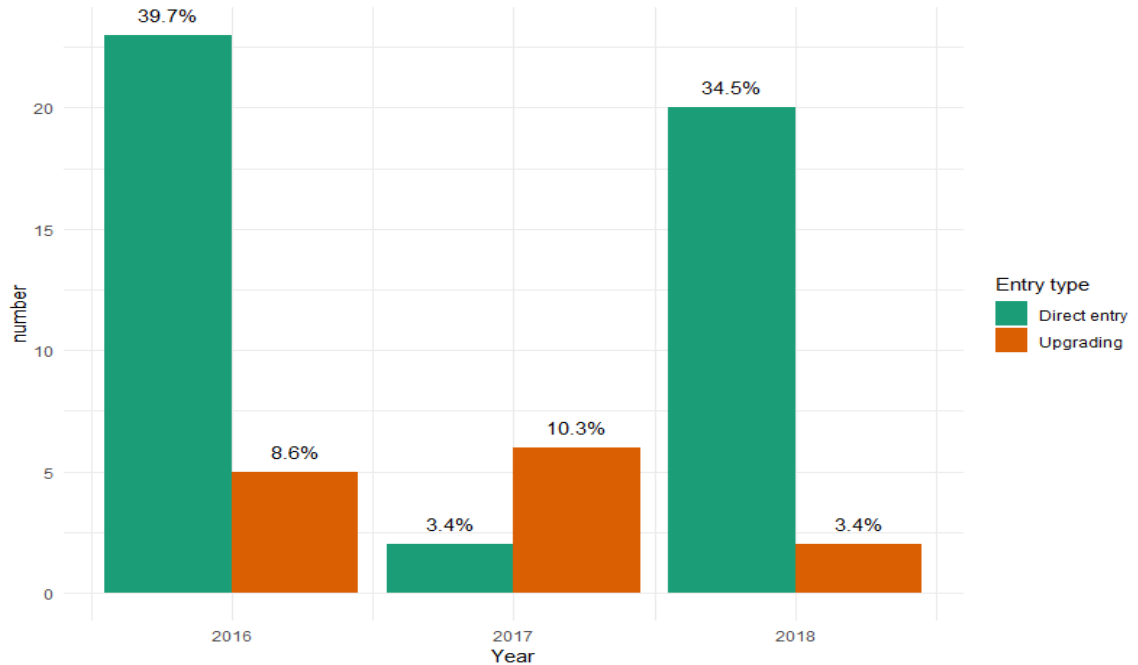
*Table 4.2: Type of location where spent most childhood*

Entry type	Area spent most childhood				Statistics and p value
	Very rural	Relative rural	Urban town	Urban city	
<b>Direct entry</b>	17 (29.3%)	22 (37.9%)	5 (8.6%)	1 (1.7%)	$\chi^2 = 2.57$ df= 3 p= 0.46
<b>Upgrading</b>	3 (5.2%)	6 (10.3%)	3 (5.2%)	1 (1.7%)	
<b>Grand Total</b>	20 (34.5%)	28 (48.3%)	8 (13.8%)	2 (3.4%)	

The majority of the upgrading and the direct entry nurses spent most of their childhood in a relatively rural area, 10.3% (n=6) and 37.9% (n=22), respectively. Overall, most nurses spent most of their childhood in rural areas 48.3% (n=28) while very few were from urban cities; 2 (3.4%). There was no significant statistical relationship between entry type and area spent in childhood (p=0.46).

#### 4.4.3 Year of Graduation

Participants were asked to indicate the year when they graduated. Figure 4.11 below represents the proportion by year of graduation and type of entry.



**Figure 4.1: Entry type**

Majority of the participants graduated in 2016 (47.3%, n=28), followed by 2018 (37.9%, n=22) while 2017 had the least number of respondents (14.8%, n=8). For the 2016 respondents, most of them were direct entry nurses 36.7% (n=23), however, the 2017 cohort had more upgrading nurses n=6 (10.3%) compared to direct entry, n=2(3.5%).

#### 4.4.4 Nursing as the first choice

This part required respondents to state whether nursing was their first-choice career when joining college/university.

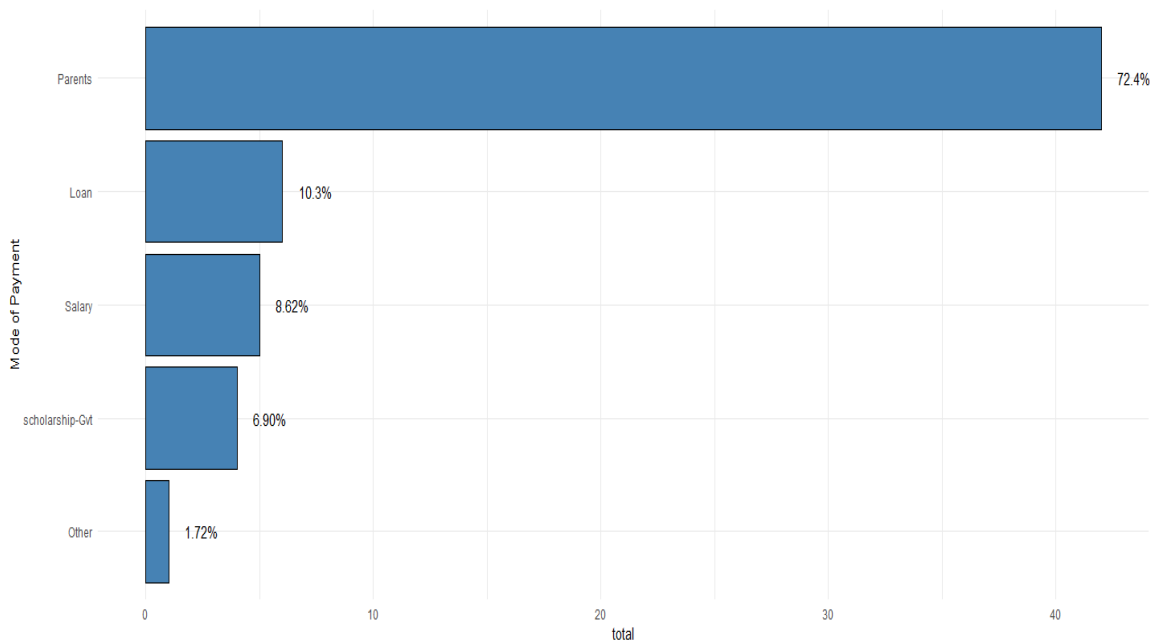
**Table 4.3: Nursing as a first career choice**

Entry type	Nursing as the first choice		Statistics and p value
	Yes	No	
Direct entry	28 (48.3%)	17 (29.3%)	$\chi^2 = 0.21$ df= 1 p= 0.64
Upgrading	9 (15.5%)	4 (6.9%)	
<b>Total</b>	<b>37 (63.8%)</b>	<b>21 (36.2%)</b>	

There was no significant statistical relationship between entry type and nursing being first choice of career (0.64). Overall, most of the respondents (37; 63.8%) had selected nursing as their first career choice. 48.3% (n=28) were direct entry nurses while 15.5% (n=9) were upgrading entry nurses. Other courses selected as the first choice included medicine, biochemistry, pharmacy, nutrition, and engineering.

#### 4.4.5 Mode of Fee Payment

This question required respondents to select how they raised their school fees to support their nursing program. Respondents were allowed to make multiple selections if they paid their fees from multiple sources.



**Figure 4.2: Mode of Fee Payment**

Figure 4.12 shows that 72.4% of the respondents had their fees paid by their parents, while 10.3% took loans to pay the fees. 6.9% reported having obtained scholarships/bursaries from the government.

**4.5 Career Pathways**

The factors assessed under career paths included employment type, permanent, short-term contract, internship program, or unemployed. Questions regarding the type of facility, the sector under which the facility lies, and the location were also assessed.

**4.5.1 Employment Status**

Respondents were asked to state whether they were employed and the type of organization they were working in. The results are presented in Table 4.4 below.

**Table 4.4: Employment Status**

Employment Status								
Type of Entry	Gender	Employed in Management	Employed in Health Research	Employed in Hospital Services	Employed in Primary care	Internship	Unemployed	Employed in Other
Direct	Female	1 (2%)	1 (2%)	3 (5%)	0 (0%)	7 (13%)	0 (0%)	1 (2%)
	Male	2 (4%)	3 (5%)	8 (15%)	1 (2%)	11 (20%)	3 (5%)	1 (2%)
Upgrading	Female	0 (0%)	2 (4%)	9 (16%)	1 (2%)	0 (0%)	0 (0%)	0 (0%)
	Male	0 (0%)	0 (0%)	1 (2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Total		<b>3 (6%)</b>	<b>6 (11%)</b>	<b>21 (38%)</b>	<b>2 (4%)</b>	<b>18 (33%)</b>	<b>3 (5%)</b>	<b>2 (4%)</b>

Table 4.4 shows that respondents were predominantly employed in hospital services, n=21 (38%), followed by internship=18 (33%). Interestingly, in a country with more emphasis on primary care, only 4% (n= 2) of the respondents worked in primary health care. For this sample, 5% (n=3) were unemployed.

#### 4.5.2 Facility Sector

Participants who responded as employed in the employment status section were asked to state the type of sector where the facility belonged. Respondents were given options to include Academia/healthcare research, private for-profit, private not-for-profit/Non-Governmental Organization, Faith-Based Organizations (FBO), and the public sector.

Table 4.5 below shows the results.

**Table 4.5: Facility Sector**

Type of Entry	Facility Sector				Statistics and p value
	Academia/research	Private for-profit sector	Private not-for-profit/NGO/FBO	Public sector	
<b>Direct entry</b>	4 (12%)	8 (24%)	6 (18%)	4 (12%)	$\chi^2 = 9.54$ df= 3 p= 0.02
<b>Upgrading</b>	1(3%)	1(3%)	1(3%)	8 (24%)	
<b>Grand Total</b>	<b>5 (15%)</b>	<b>9 (37%)</b>	<b>7 (21%)</b>	<b>12 (36%)</b>	

Table 5 shows that most respondents were in the private sector (58%), followed by the public sector (36%), and the least from Academia/Health Research. There was a significant statistical relationship between respondents' university entry status and current job (p= 0.02) whereby more direct entry nurses were employed in the private sector, 42% compared to upgrading (6%). On the other hand, more upgrading nurses were employed in the public sector (24%) than direct entry counterparts (12%).

Respondents were asked to state the terms of employment, whether they were permanently employed, short-term contracts, or working as part-timers. Table 4.6 below illustrates the results of the survey.

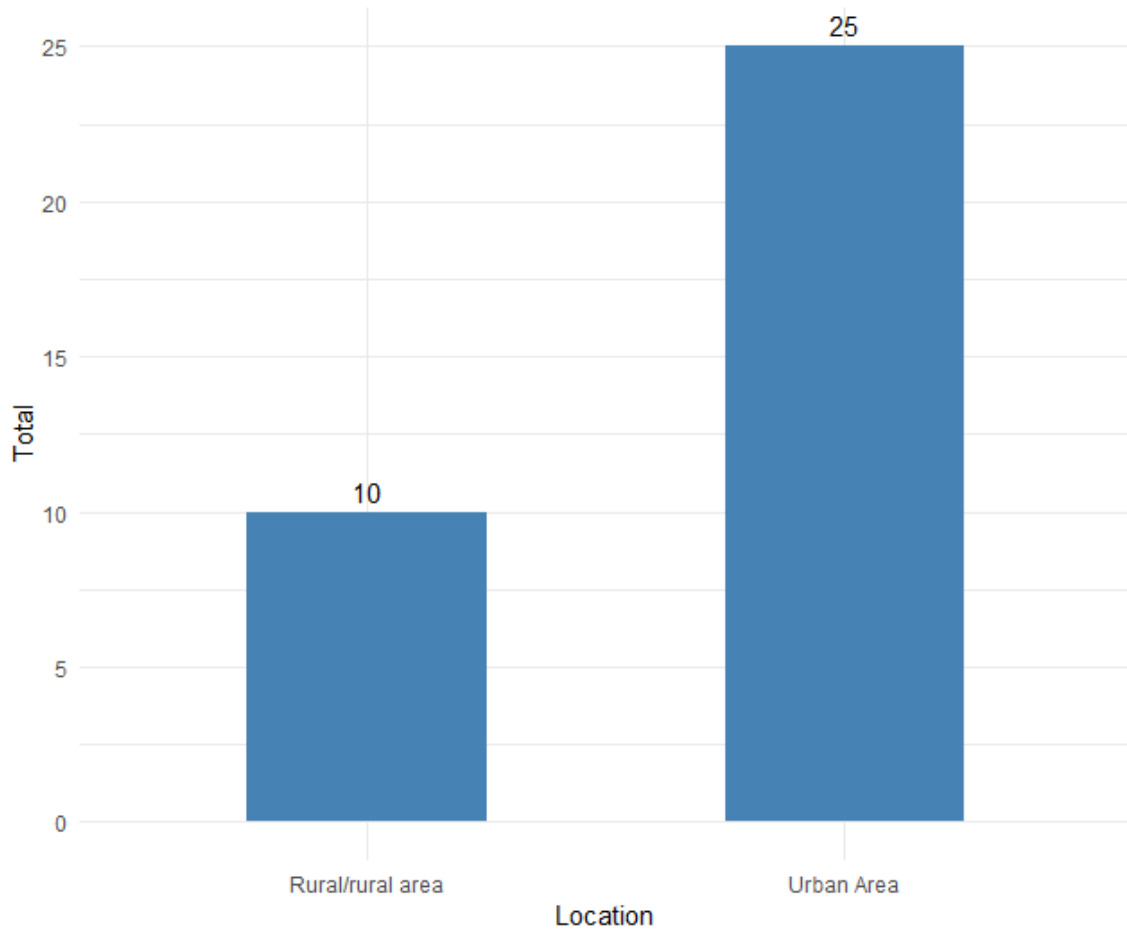
**Table 4.6: Terms of employment**

<b>Entry type</b>	<b>Terms of Employment</b>		
	<b>Permanent</b>	<b>Part-time</b>	<b>Short term</b>
<b>Direct entry</b>	8 (36.4%)	2 (9.1%)	2 (9.1%)
<b>Upgrading</b>	10 (45.5%)	0 (0.0%)	0 (0.0%)
<b>Total</b>	18 (81.8%)	2 (9.1%)	2 (9.1%)

Table 4.6 shows that all the respondents were predominantly employed permanently (18; 81.8%), while 9.1% (n=2) were employed on a short-term and contract basis. Concerning the entry type, all the employed upgrading nurses from the sample were permanently (45%), with a similar trend in the direct entry respondents (36.4%).

### **4.5.3 Location of Facility**

The participants were asked to state where the work facility was situated. Figure 4.13 shows the distribution of the facilities where the respondents were working.



***Figure 4.3: Location of Facility***

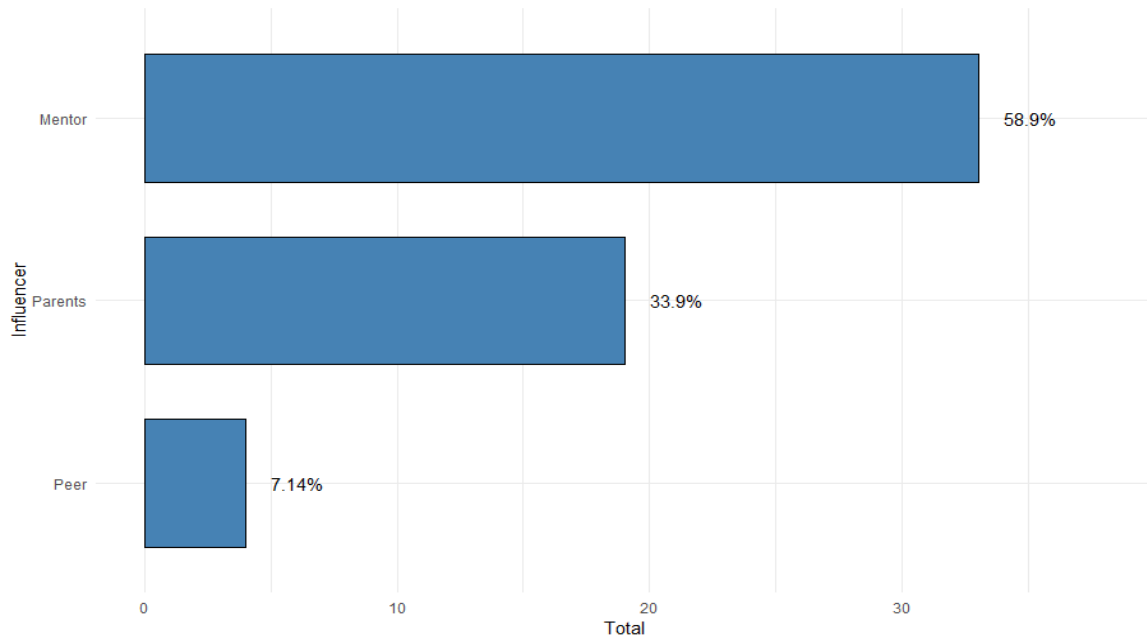
From figure 4.13 above, the majority of the respondents were working in urban areas (25; 71.4%) while very few (10; 28.6%) were working in rural areas.

#### **4.6 Career Choices and Future Plans**

This section examined the significant persons who influenced the respondents' choice of nursing as a career, factors that influenced the respondents' choice to remain in a place of work, factors that may influence their decision to leave their current work as well as their intention to remain or exit the nursing profession in 5 years. The results were presented in figures and tables using percentages and proportions.

#### 4.6.1 Who influenced your decision to become a nurse?

Respondents were asked to report the person who significantly influenced their choice of nursing. The results are represented in figure 4.14 below.



**Figure 4.4: Who influenced your choice of nursing**

Figure 4.14 above shows that most of the respondents (58.9%) were influenced by their mentors (Rather than parents) to undertake a nursing career. 33.9% were influenced by their parents, while their peers influenced about 7.2%.

#### 4.6.2 Reasons for choosing nursing as a career

In a phone interview with the selected individual, participants gave many reasons for choosing to nurse as a career. These included parental motivation and support, mentorship from peers and relatives, the certainty of securing a job easily, and for others, it was for the love of the physical nature of nurses. For some, however, the desire to pursue nursing developed due to the high value that the community accorded to nurses

and hence wanted to be part of a noble profession. Growing up in a hospital neighborhood allowed some participants to mingle and get exposure to health care providers, which triggered the desire to be nurses. This is demonstrated by the comments below.

*“I just liked nursing because as I grew up, I was going to the hospital, and nurses were seen as those people who heal, who provide healing. another important thing is that my parents also were motivating me, ‘Ooh, we want you to be a Daktari (doctor)’ ... And even the community around also they value somebody who is a doctor, Daktari (doctor) that is how the nurses were being called in the community.” (Health Research)*

*“I grew up in, immediate neighborhood there was a hospital, And then when you enter inside the hospital you could see the work they were doing and that time I believe that they were doing what was best for everybody. And then again, of course, when you are young, the only thing that you knew was either nursing or teaching because now teachers, you are there with them, and nursing is that they are your neighbors and you are there with them now and then.” (Primary care nurse)*

Influence from relatives and neighbors who were nurses themselves was reported by an overwhelming majority of the nurses to have motivated them to choose a nursing career. However, others reported failing to attain the pass mark to pursue medicine and hence selected nursing as an alternative health-related course, as demonstrated by the comments below.

*“Initially I wanted to do pharmaceutical technology, but then I discussed with my aunt who is a nurse, yeah and she told me nursing was... nursing could be better than pharmaceutical technology coz with nursing you can advance in terms of specialization and all that yeah”* (Public Primary care nurse)

*“I have some few individuals who had pursued nursing ... they gave me the positive stuff about nursing career. I didn't get the points to do medicine, so I opted for another medical course.”* (Private Primary care nurse)

*“From high school, I did not want to be a nurse, I wanted to be a doctor, a medical doctor, but unfortunately, I scored an A grade. I missed just a point to get government sponsorship. So, this made me chose a course that is closely related to medicine.”* (Health-related Academia)

For some participants, their prior experiences of losing a loved one, caring for a sick relative, or seeing their relative suffering from common diseases influenced their desire to care for the sick. However, for others, the experience of having observed patients either being mistreated or neglected in health care facilities triggered the urge to join nursing and be role models in providing quality health care services.

*“I think what made me go for nursing...I lost my dad at a time when I was in, and I was wondering if there was a way I could have stopped that from happening.”*

*”In High school, ...one of our colleagues who had had an injury by then, so when we went to (X) hospital, we found women who had stayed on the labour they were at the casualty, delivered on the floor. Somehow something just triggered me that one day, I needed to either go to the medical field” (Public primary care nurse).*

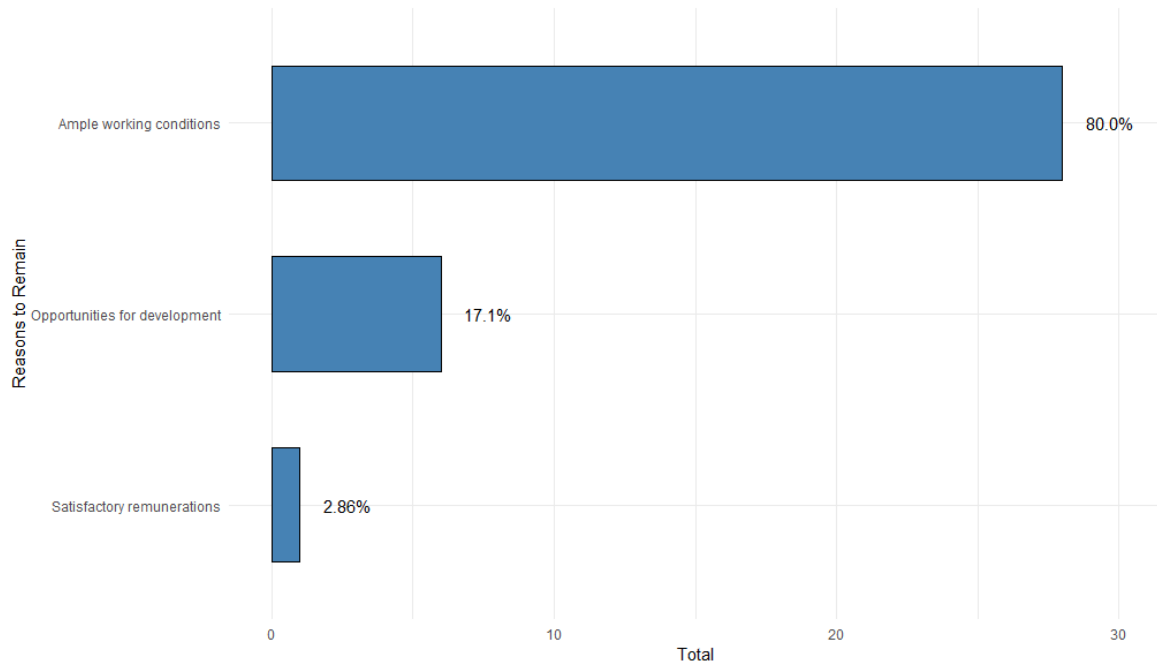
*“My mother was diagnosed with diabetes, and that was after going to several hospitals and upon several misdiagnoses that were when they finally diagnosed her with diabetes and this was after she was wasted and diabetes had already eaten her up, and she had cataract. So, after I saw my mother had suffered for a long time, I just decided I would do a medical course, which is nursing so that I can go into this medical field and help people get well when they have this condition” (Private primary care nurse).*

In addition to social expectations, some participants expressed an inherent desire to help the sick, resulting from prior experience and exposure to nursing care in their earlier school years. They developed the desire to care for the sick.

*“I think it was more of a social drive so that I can be in a position to help many people. I acknowledge my foundation to me pursuing nursing to our school nurse. And I think I found myself in a rare position where I was part of succession where I was groomed to become dispensary captain there was a bit of push to think in terms of areas of medical” (Health care researcher).*

### 4.6.3 Reasons to remain in current job

Respondents were asked to select from a list, reasons that would make them remain in their current job. Figure 4.15 below displays the results of this question.

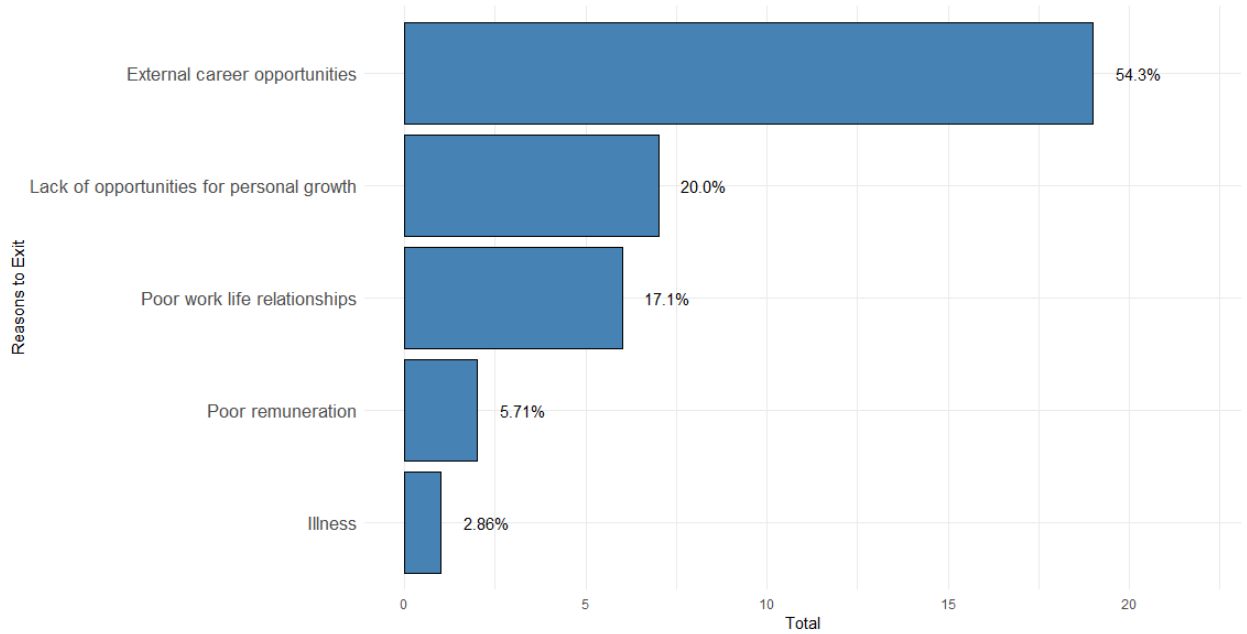


**Figure 4.5: Reasons to remain in current job**

Of the graduate nurses who filled the questionnaires, 80.0% indicated that they would remain in their current jobs given ample working conditions. 17.1% responded that the availability of opportunities for personal development would entice them to retain their current jobs, while 2.8% felt that good remunerations were motivation enough (figure 4.15).

### 4.6.4 Reasons to exit current job

Respondents were asked to select from a list, reasons that would make them leave their current job. Figure 4.16 below displays the results of this question.



**Figure 4.6: Reasons to exit current job**

As indicated in Figure 4.16, 54.3% of the participants responded that they would leave their current employment given exciting external career opportunities. 20.0% and 17.1% responded that they would leave if there were a lack of opportunities for personal growth and poor work-life relationships, respectively. In contrast to the current speculation about poor remuneration, only 5.7% cited poor remuneration as a reason to leave their current job.

In a phone interview, nurses were asked to give reasons why they might leave their current job. Role ambiguity, poor relationship between diploma and degree nurses, and ‘hostile environment’ were motivations to exit nursing for other careers. Some participants reported it was hard for their degree counterparts to be welcomed in the department as they were seen as potential rivals for the management positions that their diploma counterparts held.

*“And I think that is what pushed me out... I am a BSN, and most people are even the head of departments in the hospitals. These diploma nurses, sometimes they look down upon you, and anytime you try to do anything they take it like it is because you are BSN that’s why you are doing it”*  
(Health Academia).

#### **4.7 Decision-Related to Work Location**

It was worth noting that most of the nurses were brought up in rural settings, but most participants worked in urban settings. Those who resided in urban settings attributed it to the availability of personal growth and advancement opportunities, better social infrastructure, accessibility to technology, availability of job opportunities, and easy access to learning institutions. One nurse articulated that her stay in an urban setting offered her more exposure and experience limited in rural settings.

*“The reason as to why I chose to work in an urban area is because I wanted to advance in terms of my career and sometimes you find that when you are in the rural areas is not so easy to access the learning”*  
(Public hospital service nurse)

The majority of nurses denied any influence of their age, family, or marital status on their choice of location. However, some nurses reported that being young, single, and not having children allowed them to move freely without concern for family and children. These nurses admitted to accepting offers even in hostile remote locations easily compared to when they were married and had children. This is illustrated below.

*“I am currently single, not married, I don’t have any baby, so, I can say I don’t have anything tying me down, I can easily move from place to place, but I will understand in case I had a baby or I was married it would be harder for me because now I would to start relocating together with my family. But currently, I don’t have any burden I’m freelance”* (Public primary care nurse)

#### **4.8 Experiences with Managers**

For the participants in a management position, hard work, merit, and having a degree in nursing were the precursors to attaining a management position. They acknowledged that a degree in nursing training offered them prior knowledge in management. Other participants in management positions reported having got prior management skills and experience from delegated management tasks, on-job training from senior staff, and if any, hospital-initiated management training. This is demonstrated in one of the participants’ comments.

*“Mostly we have had I have gone for some pieces of training organized by the hospital I have done some advanced courses short courses inpatient care. They somehow prepared me for the managerial position.”* (Private hospital manager nurse).

It is encouraging that a majority of the participants expressed a good relationship with their managers. They attributed the good relationship to the traits and management style of their managers. Democratic management style, participatory decision-making process,

good formal and informal communication, approachability and understanding, and development opportunities were the main factors that fostered a good relationship with their managers. Some participants reported positive experiences because they were given the autonomy to choose and work within areas where they felt more comfortable working. This is illustrated in one of the participant's comments below.

*“She asked us which places are you comfortable to work in? She then gave us lists of all places that had a shortage, and she wanted to fill it and then asked us which departments are you comfortable working in? that was good. To me, it was good. There are departments you like, and you can work best there”* (Health Academia).

Concerning this, most participants reported having had a good relationship with their managers also acknowledged that their managers gave them space to voice their own opinions, provided them with guidance and delegated responsibility, and were willing to accommodate new ideas. This is illustrated below.

*“It excellent coz she always involves us in the management before making the decisions, so they are always comfortable with-it coz most decisions are made from our contributions she comes up with something new tells us to contribute, and how it should be then, she makes the final decision”* (Private Hospital service nurse).

Nevertheless, some participants reported negative experiences from their managers. This was attributed to their inability to accommodate new ideas, obstruction of the flow of

services, and reluctance to delegate and mentor other staff. One of the participants had this to say:

*“Mmh., I would say, I think the challenge was there because that I was a threat to the office, and they were also found on me because you want to do this the person decides to give you a lot of barriers. Write a proposal to get some money to do an activity. You request a vehicle, and the person says “huyu hatapata hii gari” (this one will not get this vehicle). You look for a way to get a vehicle you want to go out. The person decides to sign the vehicle for another activity, “yani” (so). I always believe that manager is always. You cannot compete with your manager because you will only get yourself hurt” (Public primary care nurse).*

The majority of the participants acknowledged the influence of gender on management and preferred male nurses over female nurses. Some participants believed that male managers were hands-on and active when it came to solving management issues. Male managers were also thought to be more understanding and more organized in their work. Female managers were seen as commanding and emotionally unstable. Some of the participants said:

*“I met one male manager, and I think what I can say is that he was more organized in his work” (primary care nurse).*

*“By that, I mean ok, at some point I’ve been managed by ladies, but we. we quarrel at some point we don’t agree on some point ...so it has not*

*been nice. But working with a man I think to me it's good ..."* (Healthcare researcher).

#### **4.9 Career Challenges and Coping Strategies**

Results of the in-depth interviews revealed numerous challenges that nurses face in their daily work. Shortage of staff and a heavy workload were the major challenges depicted by a majority of the participants. Staff shortage in the private sector was attributed to high turnover as a result of poor remunerations. Poor allocation of staff among the facilities within the county was also attributed to poor priority setting practices. The nurses alleged that facilities were allocated an excess of staff while others lacked. Lack of essential supplies in the facility was another challenge that crippled the performance of the nurses. Although a few nurses reported receiving negative treatment from patients and their family members, most nurses acknowledged having a good relationship with their patients. The below comments demonstrate this.

*"Sometimes you are in the department you have no staff you have to leave your work as a manager, and you have to do what you have to do in the ward. Number two, of course, no commodities, so you have to do witchcraft in the hospital to manage well in the ward. Patients' attitude towards us they believe you are always wrong, no appreciation, nobody is seeing the good thing you are doing to them but only the bad thing which leads to abuses you know, and court cases."* (Nurse Manager; Public)

*“Of the challenges we face in private hospitals, sometimes the pay is not that good. The magnitude of the work is very high. Also, sometimes you are understaffed coz as I have told you to employ a nurse today after some while they disappear so getting a replacement sometimes takes a lot of time and all that so sometimes the remaining staff we get them to work overload.” (Nurse Manager; Private)*

*“In some places, you’ll find they have very many healthcare workers, and others of the same level have probably a fifth of what the other facility has” (Public primary care nurse)*

Other participants expressed challenges of poor support supervision, lack of motivation from management, and lack of appreciation from patients. Even after advancing their studies, some nurses expressed dissatisfaction in recognition of either promotion or salary increment, as demonstrated in the comments below.

*“There is no motivation for both salaries. I started as a certified nurse now I have a degree, but my payslip still says I am a certificate, so you can imagine I qualified in 2006 as a diploma nurse. However, up to date, I am still a certificate; it’s demoralizing” (Nurse: hospital service).*

Some nurses depicted a great concern over the growing rivalry between the degree-trained nurses and their diploma counterparts as posing a big challenge towards their workplace cohesion. Some participants were concerned that despite having attained degree level training, there were no systems to employ degree level nurses and had to

settle with lower job group salaries. Other nurses expressed their fear of the tendency of the employers not to consider degree-trained nurses, as demonstrated below.

*“Sometimes they (diploma level nurses) look down upon you, and anytime you try to do anything, they take it like it is because you are BSN (degree level nurse) that’s why you are doing it.”*

*“The challenges come from the employer, (they tell you) ‘you have a degree, but here we do not employ degree nurses, so you have to persevere with our pay” (Private primary care nurse).*

*“One of the worst challenges probably I would have experienced was a scenario where I went for a course then came back, and someone was like ‘you went for this course but I ... will be leading you, so go for your training and your college courses, but you’ll still find us here, and we’ll be ruling”. (Public Primary care nurse)*

Another participant from an underserved rural setting expressed challenges of the language barrier with the local community, poor communication, poor working environment, severe shortage of basic hospital supplies and equipment, and poor remuneration relative to location and workload. This is illustrated below.

*“One is a language barrier because the village I’m working in does not speak the same language as to where I was born at so, sometimes it is hard for us to communicate.”*

*“There are a few nurses, the few nurses who are here we end up being overworked. So, there is burnout; there is a lot of burnout. And then another challenge I’m facing is, there is less pay concerning the amount of work we are doing”* (Public primary care nurse).

Nurses used various strategies in coping with these challenges. These included communications and lobbying with higher authority to address the issue of nursing shortages, task shifting by utilization of trainee students at the facility to offer non-complex tasks while at the same time prioritizing nursing care to critically ill patients. Other nurses had resorted to working long shifts to cover the staff shortage, while others utilized facility-generated funds to employ nurses on short-term contracts. Other nurses used teamwork while others formed individual initiatives to talk to community members and patients to change their negative perception towards nurses. This is illustrated in the quotes below.

*“We are forced to, you know, work with the students that we have, and when you are in a ward where you have very sick patients, you are forced to take care of the very sick at the expense of the others who are in category two.”* ( Public primary care nurse)

*“One the issues of staff shortage, I think we’ve communicated to the relevant lobe for more through the relevant channels. So, we decided to source for the money that we get through Linda mama and engaged nurses on a casual basis”* (Nurse manager; public).

*“Some of the adjustments are like in our ward we work as a team we’ve embraced teamwork, so you find that even if we are overwhelmed like there is a lot of work we work as a team, and that has enabled us to cope well...”* (Public primary care nurse)

Despite the challenges, most participants found the courage to move from personal enrichment to satisfied patients. Concerning this, some participants were motivated by their families, supervisors/managers, and mentors who encouraged them to move forward. One of the participants acknowledged that their obligation to take care of their family kept them pushing ahead. This is illustrated in the comments below.

*“You know first being a nurse is there is that self-drive that no matter what challenges you face you will always remember like yeah I chose to be a nurse and I have to do what I have to do to take care of the patients because I have that love for the patients so even if I am overwhelmed the work is a lot, but I always want to see patients cared for I don’t want to see patients suffering”* (Public Primary care nurse).

#### **4.10 Career Plans**

In response to a question regarding their 5-year career plans, most nurses expressed a desire to advance and move out of bedside nursing to other positions. Some nurses who expressed a desire to exit bedside nursing had plans to advance their education, lecturing at medical colleges, and take management positions. Others wished to specialize as health researchers. It was encouraging that some nurses expressed an overwhelmingly

passionate desire to advance in nursing and specialize in providing quality care in their speciality. It is striking that these nurses selected nursing as their first career choice and reported to have had a good experience being managed in their current careers. This is illustrated by a comment from one of the participants below.

*“I intend to go back and do my masters; I also probably intend to bring in a change where I am”* (Public primary care nurse).

*“Now that I did my bachelor’s in nursing, I’m not going to quit away from nursing, and I intend to do on MSC, in outreach yes so, my career path will always be nursing”* (Public hospital service nurse).

Movement into the private sector was attributed to a better learning environment, especially equipment availability and a ample working environment. However, some nurses reported finding refuge in the private sector, expressing dissatisfaction with the bureaucracy in the public sector. Lack of job opportunities in the public sector was another factor that pushed some nurses to the private sector. This is what some of the participants had to say:

*“Ok you know in the private sector you are provided with everything like the equipment’s the drugs so you can learn more, unlike the public sector where that equipment is scarce’s sometimes you can have the equipment’s but they are not functioning but here everything is functioning, so it’s a good learning environment”* (Private Hospital service nurse).

*“Lack of opportunities in the government sector I have applied for several posts, but I haven’t got any positive response...”* (Private primary care nurse)

#### **4.11 Recommendations to Attract and Retain Graduate Nurses in Primary Health Care**

In response to the question on strategies to improve attraction and retention of graduate nurses into primary health care, expectedly, most of the participant’s recommendations focused on improving the working environment. The majority recommended equipping primary care facilities with basic and crucial medical equipment to enable quality care delivery. This is demonstrated in the following comments.

*“I think one of the things that we need to do to help graduate nurses to remain in primary health care makes it as palatable as any other careers like if someone is considering going to the rural area to do...making sure that working conditions are as conducive or as palatable as any other cadre of giving care”.* (Health care researcher).

Most participants recommended a change in the perception of the nursing profession by both the graduate nurses and the community. They recommended more exposure to rural health practice of the degree nurses during their training to understand the reality of rural health practice better. This is demonstrated below.

*“Historically, we know that primary health care was being offered by people who have been prepared at diploma level. Sometimes, the notion is*

*that since I'm a graduate, I can't be part of primary health care, but primary healthcare is the basis of any health in society. So, I think some sort of culture for them to think, look it is not; to stop considering working as a primary care nurse as a demotion but as a way in which you finally fit into the pipeline” (Health care researcher).*

Most participants recommended providing opportunities for career growth in the nursing profession by providing institution-initiated and sponsored training opportunities and paid study leaves. This is illustrated in one of the participants' comments

*“I think a lot needs to be done. You see, nurses are very important people in the society so one of them might think, nurses being given an opportunities to further their careers I think that can retain us because you'll get nurses are moving out of the profession, to go to choosing other careers where they can develop” ( Health researcher).*

Some nurses recommended autonomy of nurses and especially the independence of graduate nurses. Although most participants expressed satisfaction with the management, some participants recommended improvement in the nursing management to accommodate graduate nurses.

*“One, there is the aspect of autonomy, the nurse... in the broad perspective of management you need to give your staff autonomy, and then later you ask them for responsibility. If this independence can be given to*

*our graduate nurses, it can boost our morale in working” (Health Academia).*

Some participants recommended the implementation of a proper remuneration and recruitment system to cater to the degree nurses. It was proposed for a policy to consider degree nurses in employment in primary health care settings. This is illustrated below.

*“The scope of work is narrowed like you did the nursing thing, but the amount of pay you receive is meagre; it doesn’t add up. I think we need to standardize with the employer out here” (Health Academia)*

*“I think the government should come up with a policy that graduate nurses should be employed in government sectors after completion of their internship coz now most of the advertisements you see are majorly targeting the diploma nurses, but the graduate nurses have limited opportunities very limited opportunities to join the public sector” (Private primary care nurse)*

Reforms in the training of graduate nurses were recommended to include specialization of nurses into respective nursing specialities rather than graduating general practice nurses. Some participants argued for a relevant training curriculum to incorporate contemporary issues in nursing care. This was articulated in some of the participant’s comments

*“For now, the way it is and the way the county government is putting it if it is possible what I can advise ... they should specialize on their fourth*

*year. So that when you come out of the internship, you are either a midwife, you are either in management or surgery anyway those specialities” (Public primary care nurse)*

*“Relevant pieces of training in primary healthcare and this would be where you feel is a groove because sometimes, I feel there is a very big disconnect between how the nurse, the training is being done in the university or wherever it is being done and the practice and what the policy says. Sometimes there is a lot of push by the government to have universal health care and everything, but you only hear this when you get into the industry, but you don’t hear it when you are in the university” (Health care researcher).*

Some participants recommended, to be put in place at the healthcare institutions, a clear guideline on the scope of practice that clearly defines the responsibilities and scope of graduate nurses, which is distinct from those of other lower-level trained nurses. One of the nurses had this to say;

*“You like now when I go to the wards, like (X) hospital ward what I do; a nurse can do the same thing with a certificate in nursing. I will probably oversee the management level, but if you are a junior staff, you do the same thing that the diploma nurse and certified nurse do because I don’t have a clear guideline. It is just in that book on the scope of practice, but it is not being done”. (Public primary care nurse)*

## CHAPTER FIVE: DISCUSSION

### 5.1 Introduction

This chapter summarizes the key findings, followed by a discussion of the limitations and strengths of the study.

### 5.2 Key Findings

This study shows that nursing was the first choice for most participants, with a considerable proportion having selected medicine as their first choice. However, the findings of this study contradict the findings of a study conducted on the South African nursing Cohort, which indicated that medicine was the first career choice for most nurses (Ditlopo & Blaauw, 2014). The major motivations for a nursing career were mentorship and parental influence. Other reasons for choosing a nursing career are certainties of employment, the community's high value accorded to nursing, parental and family members' advice as well as personal desire due to previous encounters. A study by Alboliteh *et al* (2022) came up with similar findings whereby they noted that nursing students' career choice was determined by their parents. Similarly, Dos Santos (2020) found out that; parents, family members and social expectations influence nursing students' major course selection. Despite the fact that majority of these students find the course unpleasing to them, they just pursue it to the end because most institutions do not have an option of changing. In a study by Kallio, Kangasniemi & Hult (2022), registered nurses stated that their personal desire of service to humanity as well as the honourability associated with the profession influenced their decision to become nurses.

Most of the participants preferred working in urban settings as compared to rural areas. This finding is supported by a study conducted on the scarcity of clinicians in the rural areas and job preferences of both doctors and nurses in India, which indicated that most nurses, including those trained in the rural areas, are likely to accept job offers in the urban areas, or facilities close to urban areas (Rao *et al.*, 2013). This study also supports the factors that influence nurses' choice of work location. Participants in this study indicated that urban areas have more job opportunities, access to technology, opportunities for career growth, and social infrastructure than rural areas. However, our findings are contradicted by the findings of other studies. A study conducted by Silvestri-Elmore, Alpert, Kawi, & Feng (2018) found that nurses who spent much time in rural settings are more likely to practice in rural areas.

Most graduate nurses in this study demonstrated a willingness to work in the private sector instead of the public sector. Factors cited for the preference of the private sector included availability of ample working environment, equipment, better learning opportunities, unavailability of jobs in the public sector, and the bureaucracy associated with the public sector. Other studies mirrored these findings, indicating that nurses in the private sector are more satisfied with their jobs (Ditlopo & Blaauw, 2016). The majority of the participants were more likely to remain in their current jobs if the working environment was ample and the availability of personal growth opportunities. Participants who were likely to move out of their current jobs indicated they would do so if: they got a more exciting external offer, lack of opportunities for personal growth in the current job, poor remuneration, and poor relationships in the workforce. These findings are supported by a study conducted by Abou, 2017 and Ditlopo & Blaauw, 2016. The

majority of participants who were likely to remain in their job also cited a good employee-manager relationship. The majority of participants in our study indicated that they had good relationships with their managers. The manager traits and management styles propagated this positive relationship.

### **5.3 Strengths and Limitations**

The major limitation of this study is that it only targeted participants from a single institution. The information given by the participants may not be a true representation of the views of nurses from different universities and localities. However, selecting participants from one locality was necessary to elicit information pertinent to such a group, then generalized to similar groups. Also, a small sample size was used in this study because the majority did not respond to the questionnaire, 39%. However, this was a higher response than other similar studies, which reported a response rate of 28% (Schmiedeknecht *et al.*, 2015). One strength of this study is that it employed both exploratory qualitative and quantitative methods that identified the factors influencing career choices, career pathways, job attraction, and retention.

## **CHAPTER SIX: RECOMMENDATIONS AND CONCLUSION**

### **6.1 Introduction**

The preceding chapters of this research paper have comprehensively examined the critical issue of the existing shortage in human resources for health (HRH), with a specific focus on the scarcity of nurses in low- and middle-income countries (LMICs). Throughout the study, an in-depth exploration of the factors influencing graduate nurses' career choices and pathways has been conducted, shedding light on the challenges faced by the nursing profession in LMICs. Additionally, valuable insights into the factors affecting nurse retention and the preferences of nurses concerning work settings and locations have been provided.

This chapter draws upon the comprehensive analysis of the empirical study and the systematic literature review to formulate evidence-based recommendations and conclusions. The primary objective of this chapter is to furnish policymakers, healthcare administrators, and stakeholders with practical and actionable guidance to effectively address the nurse shortage crisis and enhance nurse attraction and retention in primary health care (PHC) settings.

The recommendations presented in this chapter are firmly rooted in the empirical findings and are aligned with the overarching goal of achieving universal health coverage. As we delve into the proposed recommendations, it is essential to consider their potential implications on healthcare systems, workforce management, and the overall quality of healthcare services in LMICs.

Lastly, while the findings of this research provide valuable insights into the factors influencing nurse career choices and retention, the study strongly advocates for the undertaking of a longer cohort follow-up study encompassing larger sample sizes and diverse settings. This extended study will serve to further validate the results and provide a deeper understanding of the complexities involved in nurse attraction and retention in various LMIC contexts.

In conclusion, this chapter offers evidence-based recommendations that are aimed at effectively addressing the nurse shortage crisis in LMICs and fostering an environment conducive to enhanced nurse attraction and retention in PHC settings. The proposed measures are designed to create a supportive and nurturing environment for nurses, thereby fostering a resilient and highly motivated nursing workforce. The implementation of these recommendations holds the utmost significance in advancing universal health coverage and ultimately improving health outcomes for populations in LMICs

## **6.2 Recommendations**

This study was able to identify the factors influencing career choices, career pathways, job attraction, and retention. Most of the issues raised may not have a single and simple solution, but some strategies may help solve the issues. Some of the recommendations to address the issues identified in the study are as follows;

### **6.2.1 Recommendation for PHC**

The study showed that Mentorship and parental influence are two of the most critical factors influencing graduate nurses' career choices. Fewer people may choose nursing as

a career if there is a lack of Mentorship and parental guidance. This could lead to a nursing shortage in public healthcare (Belaid et al., 2017). Healthcare organizations can address this issue by encouraging experienced nurses to mentor and guide new nurses. Furthermore, health organizations can organize outreach programs to educate parents and high school students about nursing as a career and its significance in public health.

The study also showed that nurse attraction or retention is determined by availability of personal and career development opportunities. If public healthcare organizations do not provide opportunities for personal growth, nurses may seek employment in other healthcare sectors or leave the profession entirely. This could result in a nursing shortage in public healthcare. To address this issue, healthcare organizations can offer long-term employment contracts to nurses and professional development opportunities to retain them.

A poor work environment can also lead to job dissatisfaction and nurse attrition. This study recommends healthcare organizations to improve the work environment by fostering a supportive and collaborative work culture, fostering interprofessional relationships, and providing opportunities for work-life balance. According to the current study, most nurses prefer working in urban areas due to personal growth and advancement opportunities, better social infrastructure, accessibility to technology, job opportunities, and easy access to learning institutions. Studies have shown that public healthcare organizations can improve nurse attraction and retention by offering incentives such as accommodation, transport, and better working conditions to nurses working in rural and remote areas (Krishnamoorthy et al., 2020).

### **6.2.2 Recommendation for Nursing Policy**

Strong and effective nurse support systems should be developed to ensure that the needs of nurses are met, as far as their practice is concerned. The findings of this study indicated that the majority of graduate nurses prefer working in urban areas. Rural areas are understaffed with a low number of health facilities, poor equipment, and infrastructural facilities.

This study recommends strategies to enable rural nurses' access to basic infrastructural facilities that enhance personal advancement to tackle this issue. Studies have shown that recruiting nursing students to rural areas has a positive impact in attracting and retaining nursing students to work in rural settings (Krisada *et al.*, 2017). This study also recommends using HRH interventions to increase job satisfaction, especially in nurses working in rural and public sectors. To achieve maximum retention of nurse graduates, this study recommends policymakers advocate for healthy working environments, nurse staffing, and good remuneration packages. Developing new policies to address existing issues is never enough if there are no strategic and innovative ways of implementing these policies (Kwansah *et al.*, 2011).

### **6.2.3 Recommendation for Nursing Education**

To ensure high retention of nursing graduates, we recommend that student selection and placement boards conduct thorough scrutiny to ensure the selection of only students who are likely to be dedicated to their profession. This study also recommends that student training adopt rural education and rural exposure. Studies have shown that student rural education and exposure to training may influence students' attitudes towards rural

settings (Krisada *et al.*, 2017). Some studies have indicated the impact of teaching altruistic and resilient values in school. These studies suggest that resilience can be acquired through learning (Ditlopo & Blaauw, 2016). Therefore, this study recommends learning institutions to teach resilient and altruistic values so that graduate nurses can cope with the challenges in primary health care upon graduation. Ditlopo and Blaauw (2016) suggest that altruistic and resilience values can be taught by discussing the concept of resilience, use of real-life experiences depicting resilience, and allowing final year students to share their nursing course experience with first-year students to enhance a realistic review of their journey in the graduate nursing profession.

#### **6.2.4 Recommendation for Future Research**

This study identified a big gap in research conducted in LMICs, specifically focusing on graduate nurses' career paths and career choice behaviors. In a systematic review, only two studies were identified focusing on graduate nurses in LMICs. This would be because graduate nursing is a new career, especially in Kenya, and few researchers are interested in this specific group. Nevertheless, adequate research in this area will illuminate the influencers of this group's career choices and provide much-needed insight into attracting and retaining these nurses in primary health care.

This study identified the factors influencing career choices, career pathways, job attraction, and retention of graduate nurses, especially in semi-urban settings. These findings provide insight into nursing areas that need reform and strategies that can be employed to bring about positive change. However, a wider view of this is important to bring together more ideas from various nurses in a longer follow-up to understand the

attrition and resilience of the graduate nurses. This can only be possible through a longer cohort follow-up study, incorporating larger sample sizes from various settings to compare pertinent influencing factors among these groups.

### **6.3 Conclusions of the Study**

This study sheds light on the critical issue of the existing shortage in human resources for health (HRH), with a particular focus on the scarcity of nurses in low- and middle-income countries (LMICs). The persistent shortage of nurses in LMICs has been identified as a significant factor contributing to poor health outcomes and hindering progress towards achieving universal health coverage. As nurses play a pivotal role in primary health care (PHC), their attraction and retention are essential in ensuring effective and sustainable healthcare systems.

The research investigated the factors influencing graduate nurses' decisions when choosing a career path in nursing after training, with a specific emphasis on LMICs. The findings of the study reveal valuable insights into the considerations and motivations that influence graduate nurses' career choices. Among the significant factors identified were mentorship and parental influence, highlighting the importance of guidance and support in shaping career decisions. Furthermore, the study uncovered intrinsic motivators such as the love of the physical nature of the nursing profession and the desire to be part of a noble vocation, demonstrating the profound impact of personal values and aspirations on career choices.

Moreover, the research identified critical factors affecting nurse retention. The presence of favorable working conditions and personal development opportunities emerged as key

factors that contribute to nurses' willingness to stay in their jobs. Conversely, the absence of growth opportunities, role ambiguity, a hostile work environment, and enticing external job prospects were found to increase the likelihood of nurse attrition.

The study also provided valuable insights into the work preferences of nurses, with most nurses opting for hospital services and preferring urban locations due to the availability of personal growth opportunities and job prospects. This finding underscores the importance of creating a supportive work environment and clear job roles in public healthcare settings, particularly in rural and remote areas, to increase nurse attraction and retention.

Based on the study's results, several recommendations have been proposed to address the challenges of nurse attraction and retention in LMICs. These recommendations include offering job security, personal growth opportunities, a supportive work environment, and incentives for nurses working in underserved areas. Implementing these measures is essential to ensure a sufficient and motivated nursing workforce that can effectively contribute to improving healthcare access and outcomes in LMICs.

The study's contribution to the literature is significant as it not only enhances the understanding of the factors influencing nurse career choices but also provides practical recommendations for policymakers and healthcare organizations to address the nurse shortage crisis. However, to deepen the understanding further and validate the findings, the study recommends a longer cohort follow-up study with larger sample sizes from various settings. Such research endeavors will enable a comprehensive comparison of the

pertinent influencing factors among different groups, leading to more informed and tailored policies for nurse attraction and retention.

In conclusion, this research contributes to the global efforts aimed at addressing the human resources for health crisis, particularly the shortage of nurses in LMICs. By investigating the factors influencing nurse career choices and retention, the study offers valuable insights that can guide evidence-based policies and interventions to build a resilient and sustainable nursing workforce. Ultimately, such efforts will play a pivotal role in advancing universal health coverage and improving health outcomes for populations worldwide.

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## APPENDICES

### Appendix I: Consent Information

**Dear participant**

You are invited to participate in a study seeking to "*understand the Factors Influencing Career Choices and Pathways of Graduate Nurses Trained in Rural Settings in Kenya*". This information page describes the project in a language that you can easily understand. **Please read the information provided before you decide whether to participate or not.** In case you have any questions, please contact the researcher.

**Who is involved in this study?**

This research is funded by IDEAL hosted by the KEMRI Wellcome Trust Research Programme. Mr. Samwel Nyamweya is undertaking it, as part of the master's requirement of the university of Jaramogi Oginga Odinga University of science and technology under the supervision of Dr. Benjami Tsofa (KEMRI), Dr. Nicky Mbuthia (Pwani University) and Prof. Fred Amimo (JOOUST).

To undertake this study, the researcher would want to sample from, and recruit bachelor of nursing (BSN) and bachelor of nursing and public health (BSNPH) nurses who have graduated from Pwani University to take part in this study.

**Why have you been approached?**

Since you are part of the group that graduated from Pwani University, you have been invited to respond to a survey questionnaire to help in understanding the factors

influencing career choices. Your participation in this survey will be completely voluntary and will be highly appreciated.

**If I agree to participate, what will I be required to do?**

After reading the consent statement, you will be asked to complete a questionnaire, which will take approximately 10 minutes to complete. The survey will require you provide contact information, which will be treated with confidence, and will require you to fill a questionnaire on career choices and pathways. You will be required to submit the questionnaire once complete

**What are the risks associated with participation?**

There are no risks associated with participation in this study. All the information you provide will remain confidential.

**What are the benefits associated with participation?**

It is hoped that better understanding of the factors influencing career choices of graduate nurses will, in the long-term, help in the attraction and retention of graduate nurses into primary health care, and consequently facilitate the attainment of universal health coverage especially in low and Middle Income countries(LMICs).

**What will happen to the information I provide?**

All the information collected will be stored securely and the researcher and supervisors can only access the data. The data collected will be analyzed The results will be

published in academic journals or conferences without including personal information that may identify you.

**What are my rights as a participant?**

Your participation in this study is voluntary. You have the right to withdraw your participation and have any questions answered at any time.

Due to the nature of this questionnaire, I am not obtaining a written informed consent. Consent will be implied by you completing and submitting this questionnaire.

**Whom should I contact if I have any questions?**

In case you have any questions, please contact the researcher [Somwenga@kemri-wellcome.org](mailto:Somwenga@kemri-wellcome.org) or his supervisors through the following addresses: [Btsofa@kemri-wellcome.org](mailto:Btsofa@kemri-wellcome.org), [amimofa@gmail.com](mailto:amimofa@gmail.com) and [n.mbuthia@pu.ac.ke](mailto:n.mbuthia@pu.ac.ke)

Yours Sincerely

Samwel Nyamweya Omwenga

---

Do you accept to participate?

Yes  No

## Appendix II: Questionnaire

Confidential

Page 1 of 3

### Questionnaire

Career Choices and pathways for graduate nurses

(self-administered questionnaire)

Please continue to complete the survey below.

#### DEMOGRAPHIC INFORMATION

Please answer the following questions, and for each of them SELECT the appropriate answer or FILL in the space provided.

Name

\_\_\_\_\_

Phone Number

\_\_\_\_\_

Email Address

\_\_\_\_\_

What is your gender

- Male  
 Female

Year of graduation:

- 2016  
 2017  
 2018

Type of entry

- Direct entry  
 Upgrading

In which year were you born?

\_\_\_\_\_

Age

\_\_\_\_\_

How would you describe the area where you spent most of your childhood?

- Very rural  
 Relatively rural  
 Urban (town)  
 Urban (city)

What is your marital status

- Single  
 Married (or with long-term partner)  
 Divorced/separated  
 Widowed

Was nursing your first choice as a career?

- Yes  
 No

What was your first choice?

\_\_\_\_\_

---

Who significantly influenced your choice of nursing?

- Parents
- Mentor (other than parent)
- Peers

---

How did you pay for your nursing training (there may be more than one answer, in which case, check all relevant answers)

- My parents or other members of my family supported me
- I received a salary
- I took a loan
- I was on study leave from the public sector (distance learning)
- I obtained a scholarship/bursary from the government
- I received a scholarship/bursary from the private sector
- Other

---

If other, specify

-----

---

What is your current employment status?

- Employed in Primary care
- Employed in Hospital Services
- Employed in Health Related Management Position
- Employed in Health Research/Teaching/Academia
- Employed in Other Health related job -Specify
- Employed in a Non-Health Related Job-Specify
- Internship
- Unemployed

---

Which type of facility are you currently working?

- Private Clinic
- Private hospital
- Public Primary Care
- Public Hospital
- Other

---

Specify the facility

-----

---

Which sector is the facility?

- Public sector
- Private for-profit sector
- Private not-for-profit sector / NGO/ FBO (mission)
- Academia/research
- Other

---

If other, specify the sector

-----

---

Are you employed Permanent, Part-time, Short-term contract at this facility?

- Permanent
- Part-time
- Short-term Contract

---

Please select characteristics that best describe your practice institution

- Is located in an urban area
- Is located in a rural or remote area

**Please indicate your likelihood of continuing or discontinuing to work by choosing one of the following responses for each scenario.**

**How likely is it that you will continue working in your CURRENT job:**

	Very Unlikely	Unlikely	Uncertain	Likely	Very Likely
for the next year?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
for the next two years?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
for the next five years?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
until the normal age of retirement of 65 years?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which of the following strategies would entice you to remain in your current job? (CHECK ALL that apply)

- Ample working conditions
- Opportunities for personal development
- Organizational support
- Satisfactory remunerations
- Good work life relationships
- Other, specify

If other, specify the reason to remain

\_\_\_\_\_

Which of the following reasons would make you think about leaving your current job? (select all that apply)

- External career opportunities
- Poor work life relationships
- Lack of opportunities for personal growth
- Poor remuneration
- Poor job/career satisfaction
- Role ambiguity
- Lack of organizational support
- Work-family conflict
- Poor working conditions
- Illness
- Other, Specify

If other, specify the reason to exit

\_\_\_\_\_

Would you like to be contacted for an in-depth interview regarding your career choice

- Yes
- No

## **Appendix III: interview Guide for Graduate Nurses**

### **The influence of life history on the career decisions of graduate nurses**

In the following questions, I would like to explore certain aspects of your social life including your childhood experiences, parental guidance and societal expectations that may have influenced your decision to choose a career in nursing. I'm interested in understanding in more detail how these factors may or may not have influenced your career trajectory.

#### **Past career experiences (for all participants)**

1. Thinking about your past, what informed your decision to pursue a nursing course/career?

Probe:

- *Influence of parental guidance and support, societal expectations, personal expectation*

#### **Experiences of job decisions (for those employed)**

2. What is your current career ( primary care nurse, hospital manager, researcher, businessman, tutors, private, public)
3. Tell me about your experiences in your current career?

Probe

- *What career challenges are you currently facing?*
- *What coping strategies and adjustment processes are you employing to cope with these challenges?*

- *Where do you get the courage to keep moving forward in dealing with these career challenges? Key people, groups that help cope with some of the challenges faced?*
  - *To what extent would you say you are or have experienced gender discrimination?*
4. What would you say are your 5-year career plans or goals if you have any?

**Decisions related to location choices (for the employed)**

5. Are you working in **-rural/urban area**?
6. What informed your decision to choose where (a/n **rural or urban**) facility and remain there?
- *Probe for enablers and barriers of the current profession [e.g. managerial influences, opportunities for growth etc.]*
7. To what extent would you say your marital status [single / married], having children, and age) influenced your decision?

***For those who have been working in the private sector immediately after training/internship up to date***

8. What informed your decision to move to the private sector immediately after completing training/internship and remain working there until now?
- *Probe for enablers and barriers for working in the private sector*

9. How does working in the private sector fit into your broader career plans or goals?

*For those who left bedside nursing to pursue a managerial or a leadership role within nursing*

10. What informed your decision to leave bedside nursing to pursue a managerial or leadership role in nursing?

- *Probe for enablers and barriers for leaving bedside nursing to managerial role*

11. How does your current position as a manager fit into your broader career plans or goals?

### ***Managing others***

12. To what extent would you say you were prepared to be a manager?

- *What support did you receive to prepare you for the management role and from whom? Formal, informal mentoring?*
- *What training did you receive? Formal, informal?*
- *What was most useful to you in developing your management skills*

### **Experiences of being managed by others**

13. Thinking about your current experience, what is the nature of your relationship with your current manager?

*Probe:*

- *Management style or approach adopted by the manager*
  - *Formal or informal, conversational or autocratic*
  - *Differences between female and male managers*

- *Frequency of engagement or meetings with your manager and nature of meetings*

14. To what extent would you say your current manager provide space for you to voice own opinion?

15. In your experience of being managed over the years, can you tell me about a positive encounter with one of your managers?

16. In your experience of being managed over the years, can you tell me about a negative encounter with one of your managers?

- *How did you deal with this?*

***For those who left nursing to pursue other professions***

17. What factors informed your decision to leave nursing to pursue your current profession?

- *Probe for enablers and barriers of the current other profession*

18. How does this profession fit into your broader career plans or goals?

***For those who did not enter primary health care at all***

19. What factors informed your decision not to practice nursing after training?

**Recommendations for Improving Graduate Nurses Attraction and Retention in Primary Health Care**

20. What do you think can be done to improve the retention of graduate nurses in primary health care?

- Probe for both *financial* and *non-financial incentives*

## Appendix IV: Data Access Request Letter



Initiative to Develop African Research Leaders

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To,

The Deputy Vice Chancellor,  
Research and Extension,  
Pwani University.

13<sup>th</sup> March 2019.

Dear Prof Tsanuo,

**Request to Access Contacts of Pwani University Nursing Students Graduates for a ‘Nurse Career Choices Study.’**

The Health Systems Group at the KEMRI Wellcome Trust Research Programme, under the leadership of Dr Benjamin Tsosa has been working on a broad project aimed *at examining and understanding routine challenges facing health systems in Low and Middle-Income Countries (LMICs), and exploring range of interventions which countries can undertake to address these challenges.*

One critical health systems challenge that the group has been studying – is the chronic shortage of health workers especially in Primary Care levels. In undertaking to critically examine the underlying causes of this challenge – the team, with the funding from IDeAL recruited a Masters Student (under the Supervision of Dr. Benjamin Tsosa – KEMRI and Dr. Nicky Mbuthia – Pwani University) to work on a project seeking *“to understand factors influencing career choices and pathways of nursing graduate nurses trained in rural settings in Kenya”*, which is one of the sub-objectives of the broader project as a master’s studentship project,

To undertake this project, the study team would want to sample from, and recruit Pwani University Nursing Graduates to request them to participate in this study. The group would like to thus request, through your students’ registration data base, to obtain contacts of all former Pwani University BSN and BSNPH graduates so that they can reach them out and request them to participate in this study. The purpose of this letter is to introduce Samuel Omwenga, the masters student working on this project, and request you to facilitate and enable him to access the said former students contacts.

Enclosed in the ethical approval of the broader project, a brief summary of the masters project and the draft data collection questionnaire to be administered to the participants who will consent to the study

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'S. Kinyanjui', written over a light blue horizontal line.

**Dr. Sam Kinyanjui**  
Head of Training and Capacity Building; &  
Director - IDeAL

cc. Head of Nursing Department  
cc. Dean School of Human and Health sciences

---

Hosted By:

**KEMRI** Wellcome Trust

230 - 80108, Kilifi | +254 709 983 676/7 | ideal\_info@kemri-wellcome.org | www.kemri-wellcome.org | Twitter: @IDeAL\_KEMRI\_WT

Appendix V: Ethical Approval Certificate



## KENYA MEDICAL RESEARCH INSTITUTE

P.O. Box 54840-00200, NAIROBI, Kenya  
Tel: (254) (020) 2722541, 2713349, 0722-205901, 0733-400003, Fax: (254) (020) 2720030  
E-mail: director@kemri.org, info@kemri.org, Website: www.kemri.org

**KEMRI/RES/7/3/1**

**November 07, 2018**

**TO: DR. BENJAMIN TSOFA,  
PRINCIPAL INVESTIGATOR.**

**THROUGH: THE DIRECTOR, CGMR-C,  
KILIFI.**

Dear Sir,

**RE: KEMRI/SERU/CGMR-C/099/3539 (REQUEST FOR ANNUAL RENEWAL):  
EXAMINING AND BUILDING HEALTH SYSTEM RESILIENCE USING A  
GOVERNANCE LENS: FOCUSING ON "EVERYDAY" STRESSORS, HEALTH  
MANAGER LEADERSHIP PRACTICES AND ORGANISATIONAL  
RELATIONSHIPS.**

*Forwarded  
11/17 4:12:18*

**DIRECTOR  
CENTRE FOR GEOGRAPHIC MEDICINE  
RESEARCH, COAST**

Thank you for the continuing review report for the period **November 16, 2017 to September 12, 2018**.

This is to inform you that the expedited review team of the KEMRI Scientific and Ethics Review Unit (SERU) conducted the annual review of the above referenced application and was of the informed opinion that the progress made during the reported period is satisfactory. The study has therefore been granted **approval**.

This approval is valid from **November 16, 2018** through to **November 15, 2019**. Please note that authorization to conduct this study will automatically expire on **November 15, 2019**. If you plan to continue with data collection or analysis beyond this date please submit an application for continuing approval to the SERU by **October 04, 2019**.

You are required to submit any amendments to this protocol and any other information pertinent to human participation in this study to the SERU for review prior to initiation.

You may continue with the study.

Yours faithfully,

**ENOCK KEBENEI,  
ACTING HEAD,  
KEMRI SCIENTIFIC AND ETHICS REVIEW UNIT.**



**Appendix VI: Evaluation Table**

Author (Year)	Conceptual Framework	Design/ Method	Sample/ Setting	Major Variables Studied (and Their Definitions)	Measurement	Data Analysis	Findings	Appraisal: Worth to Practice
Schmiedeknecht et al., 2015	None	Mixed methods,  Cross-sectional survey	Nurse graduates who were beneficiaries of a scholarship program in Malawi	Factors influencing choice of career in rural areas  Career paths	Self-administered questionnaires  Qualitative surveys	Dedoose software: Thematic analysis of qualitative data  Kruskal-Wallis, Spearman correlation, chi-square test: Quantitative data	<b>Distribution of workforce</b> 74%: Govt facilities 36%: Christian based facilities 3% NGO  <b>Themes for exiting:</b> lack of resources, Poor working relations with managers, salaries and remunerations, job security, working conditions, organizational support	<b>Strengths:</b> Level (vi) evidence  <b>Limitations:</b> Limited sample, not randomized,  <b>Feasibility of use:</b> application of scholarships in influencing retention in PHC

Ditlopo & Blaauw, 2016	None	Prospective-Longitudinal cohort study	South African Nursing graduates	Factors influencing job choice and retention	Self-administered questionnaires  Qualitative interviews	STATA and standard descriptive analysis  Duration analysis of job choices  Thematic analysis of qualitative data	<p><b>Factors influencing resilience:</b></p> <p>Opportunities for training, Appreciation by community Job flexibility Supportive supervision Age and gender</p> <p><b>Reasons for turn over:</b></p> <p>Inadequate salaries Lack of appreciation Starting a family</p>	<p><b>Strengths:</b> level (vi) evidence Longitudinal study, limits biases</p> <p><b>Limitations:</b> internet use might have favored respondents from urban areas</p>
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Source: Fineout-Overholt et al., 2010.

## Appendix VII: Synthesis of Outcomes

Author (Year)	Type of Study	Design/ Method	Study Population	Reported Reasons for Career Choices
Schmiedeknecht et al., 2015	Mixed methods study	Cross-sectional survey	Nurse graduates who were beneficiaries of a scholarship program in Malawi	Lack of resources Poor working relations with managers Low salaries job security poor working conditions Organizational support
Ditlopo & Blaauw, 2016	Qualitative study	Prospective-Longitudinal cohort study	South African Nursing graduates	<b>Factors influencing resilience:</b> Opportunities for training, Appreciation by community Job flexibility Supportive supervision Age and gender  <b>Reasons for turn over:</b> Inadequate salaries Lack of appreciation Starting a family

Source: Fineout-Overholt et al., 2010.

## Appendix VIII: Data Collection Letter



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE & TECHNOLOGY**  
BOARD OF POSTGRADUATE STUDIES  
*Office of the Director*

Tel. 057-2501804  
Email: [bps@joooust.ac.ke](mailto:bps@joooust.ac.ke)

P.O. BOX 210 - 40601  
**BONDO**

**Our Ref:** H152/4030/2018

**Date:** 19<sup>th</sup> April 2019

**TO WHOM IT MAY CONCERN**

**RE: SAMWEL NYAMWEYA OMWENGA– H152/4030/2018**

The above person is a bonafide postgraduate student of Jaramogi Oginga Odinga University of Science and Technology in the School of Health Sciences pursuing Master of Public Health. He has been authorized by the University to undertake research on the topic: *“Career Choices and Pathways of Graduate Nurses Trained in a Semi-Urban/Rural Setting in Kenya”*.

Any assistance accorded him shall be appreciated.

Thank you.

Prof. Dennis Ochuodho

**DIRECTOR, BOARD OF POSTGRADUATE STUDIES**

