Understanding the Gendered Challenges of Rural Health Worker Retention in Ghana with Lessons from Sub-Saharan Africa

By Lorinda Adu-Gyamfi
Ghana

61st Master of Public Health and Health Equity
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Vrije Universiteit Amsterdam (VU)

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A thesis submitted in partial fulfilment of the requirement for the degree of
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by
Lorinda Adu-Gyamfi

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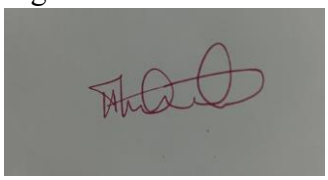

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Abstract

Introduction: Sub-Saharan Africa faces a critical shortage of health workers, with rural communities disproportionately impacted. In Ghana, retention of rural health workers remains low, particularly among women, despite various policy efforts. This thesis aims to investigate the gender-specific factors influencing rural health workforce retention in Ghana and draw comparative lessons from sub-Saharan Africa.

Methodology: A scoping literature review and policy analysis were conducted using the WHO retention framework, examining six key domains: personal, financial, career, community, working conditions, and mandatory service. A gender lens was applied throughout to identify factors specific to male and female health workers.

Results: Findings indicate that rural health workers in Sub-Saharan Africa face numerous challenges, including limited career advancement opportunities, inadequate infrastructure (such as staff housing and sanitation), and safety concerns, all of which have distinct gendered dimensions. Policies explicitly addressing these gender-specific issues are limited. Comparative evidence from Nigeria and Malawi highlights the effectiveness of gender-responsive interventions, such as localised training and providing incentives, in enhancing female retention. Ghana's revised National Health Sector Gender Policy demonstrates progress in recognising gendered challenges, but it lacks detailed implementation plans, costed activities, baselines, and funding mechanisms.

Discussion: This thesis concludes that without incorporating gender responsiveness, retention policies risk perpetuating workforce inequalities. It recommends targeted financial and non-financial incentives and embedding gender considerations within human resource policies, supported by robust monitoring and evaluation frameworks. Addressing gender disparities in rural health worker retention is essential to building equitable and sustainable health systems and advancing universal health coverage.

Keywords: *Health Workforce, Gender, Gender Responsiveness, Rural Health Workers, Health Worker Retention, Sub-Saharan Africa, Ghana*

Word Count: 11,087

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List of Abbreviations

AU – African Union
CHPS – Community-based Health Planning and Services
CMHO – Community Mental Health Officer
CMHW – Community Mental Health Worker
CPN – Community Psychiatric Nurse
DHIMS – District Health Information Management System
DHMT – District Health Management Team
GHS – Ghana Health Service
HRH – Human Resources for Health
HRIS – Human Resource Information System
LMICs – Low- and Middle-Income Countries
MMDAs – Metropolitan, Municipal, and District Assemblies
MoH – Ministry of Health
MSS – Midwives Service Scheme
NGOs – Non-Governmental Organisation(s)
NHSGP – National Health Sector Gender Policy
RoS – Return of Service
SDG – Sustainable Development Goal
SSA – Sub-Saharan Africa
UHC – Universal Health Coverage
WHO – World Health Organisation
WIFA – Women in Fertility Age

Glossary of Key Terms

Attrition

Attrition refers to the exits from the workforce over time due to reasons such as migration, resignation, illness, death, or retirement (75).

Gender

Gender refers to the social, cultural, and behavioural attributes and roles that societies assign to individuals based on their perceived biological sex. These roles influence expectations around what is considered masculine, feminine, or otherwise, and shape access to resources, decision-making power, and work opportunities. Gender norms also influence occupational segregation and the distribution of the rural workforce in health systems (76, 77).

Gender-responsiveness

Gender responsiveness is an approach that acknowledges gender roles and inequalities, aiming to ensure equal participation and equitable allocation of benefits among all genders (78).

Health Worker

A health worker refers to any individual involved in the provision of medical care, either through direct clinical roles, such as physicians and nurses, or indirect support roles, like laboratory personnel, aides, or sanitation staff (79).

Intersectionality

Intersectionality, introduced by Kimberlé Crenshaw (1989), is both a metaphor and an analytical framework that illustrates how overlapping systems of oppression (e.g., gender, class, race, and geography) interact to produce compounded disadvantage. For example, a rural, female, early-career health worker may experience the intersection of multiple inequalities that shape her retention outcomes. This thesis uses intersectionality to understand the complex and multifaceted vulnerabilities affecting rural health workers, particularly women (80, 81).

Healthcare Workforce Retention

Healthcare workforce retention refers to the capacity of health systems or organisations to sustain health workers in their roles over time. It encompasses both voluntary and involuntary continuation of service and is influenced by personal, financial, professional, and systemic factors. A key challenge in the literature is the inconsistent definition of retention periods. Some studies report short-term retention (1–2 years), while others report mid-term retention (3–5 years); long-term retention (>5 years) is rarely tracked. The lack of definitional consistency complicates comparison and policy design. This thesis documents retention periods wherever explicitly mentioned in studies and addresses this gap in the discussion (35, 82).

Policies

Policies are formal statements of intent by governments or institutions that set directions, priorities, and rules for decision-making and action. In the health sector, policies may determine how human resources are trained, deployed, retained, and supported. While policies create a framework for institutional action, they often require targeted strategies for implementation (83).

Programmes

Programmes are organised and coordinated frameworks comprising multiple interventions and strategies designed collectively to attract, support, and retain health workers in rural and remote areas. These programmes address broader systemic challenges such as professional isolation, resource limitations, infrastructure deficits, and community integration to sustain a stable and skilled rural health workforce (35).

Interventions
Interventions, in the context of rural health worker retention, are defined as specific, planned actions or strategies aimed at addressing factors that influence the attraction, support, and maintenance of health workers in rural and remote areas (84).

Strategies
Strategies are deliberate, actionable plans used to operationalise policy goals and achieve desired outcomes. Unlike policies, which are normative and broad, strategies are adaptive, contextual, and practical. Examples in rural health retention include bundled incentives, mentorship programs, flexible postings, and infrastructure improvements designed to address specific gender or location-based barriers (35, 83, 85).

Acknowledgement

First and foremost, I am deeply grateful to God for granting me the strength, guidance, and perseverance throughout this journey.

To my beloved family and friends: your unwavering support and encouragement have been my foundation. Truly, it takes a community to raise one person, and I feel blessed to be surrounded by such a wonderful and supportive group.

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Lastly, I wish to thank myself for showing up, for persevering, and for believing. This thesis is a testament to resilience and self-determination, and I am proud of the journey I have taken to reach this point.

Thank you to everyone who played a role in this accomplishment.

Introduction

My experience recruiting healthcare professionals across rural areas in Ghana, Nigeria, Rwanda, and Kenya sparked my interest in health systems and human resources for health. I observed that securing public sector employment and receiving regular salaries do not necessarily guarantee long-term retention in rural settings. In Ghana, for instance, despite an increase in the number of trained health workers, rural and underserved communities continue to experience chronic understaffing. Most physicians are concentrated in urban hospitals, leaving rural clinics with significant vacancies and limited service provision.

This distribution challenge has a pronounced gendered dimension. Women make up the majority of health workers in Ghana, especially in nursing and midwifery, yet they face particular barriers when deployed to rural areas. Social norms, caregiving responsibilities, safety concerns, and structural biases often restrict women's mobility and retention in remote locations. While existing research has addressed rural health worker shortages broadly, relatively few studies have examined how gender-specific barriers interact with health system factors to influence retention.

This research is particularly timely as Ghana begins implementing its revised 2024 National Health Sector Gender Policy, which recognises the gendered challenges within the health workforce. In this context, examining the gendered dimensions of rural health worker retention offers valuable insights to inform more equitable and effective human resource policies.

This thesis investigates the role of gender in shaping the retention of health workers in rural Sub-Saharan Africa, with a particular focus on Ghana. It seeks to identify the factors motivating health workers, both women and men, to remain in or leave rural postings, to evaluate the effectiveness of policies and programmes implemented elsewhere in the region, and to assess how Ghana's existing strategies tackle gender-related challenges. The conceptual framework guiding this analysis is the WHO Guideline on Health Workforce Development, Attraction, Recruitment, and Retention in Rural and Remote Areas. This global framework emphasises a bundle of interventions, including educational, regulatory, financial, and personal/professional support, tailored to the local context, and explicitly calls for considering gender, equity, and human rights in all workforce policies. Using this framework, we will examine to what extent Ghana's policies and strategies align with best practices in Sub-Saharan Africa and where gaps remain in addressing gender-specific challenges. Ultimately, I aim to propose actionable recommendations that support equitable retention strategies and contribute toward the achievement of gender equality in line with the Sustainable Development Goals.

Chapter 1

1. Background

1.1. Global and Regional Health Workforce Challenges

Health worker shortages and uneven distribution remain persistent global challenges. The World Health Organisation (WHO) projects a shortfall of 11 million health workers by 2030, primarily affecting low- and middle-income countries (LMICs) where health systems are already overstretched (1). These shortages are especially severe in rural and remote areas, notably across Sub-Saharan Africa (SSA), where health professionals often avoid underserved settings due to factors such as professional isolation, limited career advancement, inadequate infrastructure, and safety concerns (2). Despite ongoing reforms, Sub-Saharan Africa (SSA), home to approximately 15% of the global population, accounts for nearly a quarter of the global health worker shortage, 3.75 million out of 15 million in 2020 alone. It is further exacerbated by a maldistribution of the health workforce between urban and rural areas, with nearly half of SSA's rural populations having no access to basic health care. In some countries, urban areas enjoy health worker densities up to 10 times higher than rural areas (3).

1.2. Ghana: Political, Administrative, and Health System Structure

Ghana, a West African nation with an estimated 2025 population of 34 million, is recognised for its stable democracy and operates as a unitary presidential constitutional republic (4, 5, 6, 7). The country is divided into 16 regions and 261 districts, with decentralised administration managed by Metropolitan, Municipal, and District Assemblies (MMDAs) (7, 8). Local governance extends to service provision, including health and education, at the community level (7,8).

(Figure 1 illustrates Ghana's regional layout.)

Figure 1: Map of Ghana (8)

Ghana's health system is organised into three tiers: primary, secondary, and tertiary care. Primary care encompasses Community-based Health Planning and Services (CHPS), health centres, clinics, and district hospitals that provide essential and preventive services (9). Secondary care is offered through district and regional hospitals, which provide more specialised services and oversee referrals (9). Tertiary care is delivered by teaching hospitals and specialised centres located mainly in urban areas and serving as hubs for professional

training and research (9). The Ministry of Health and the Ghana Health Service coordinate the health sector, with services implemented through the decentralised MMDA structure.

1.3. Ghana's Health Workforce: Size, Distribution and Gaps

As of 2022, Ghana's health workforce on the government payroll included approximately 5,350 medical doctors and 62,643 nurses, corresponding to 0.17 doctors and 1.99 nurses per 1,000 population (10). The midwife-to-Women in Fertility Age (WIFA) ratio improved nationally to 3.09 per 1,000. However, regional disparities remain pronounced, with regions such as Bono and Upper West exceeding 4.0 midwives per 1,000 WIFA, while the North-East lags at 1.77 (10).

Despite significant growth over the past two decades, where health worker density rose from 16.6 to 41.9 per 10,000 population and nurse-to-population ratios surpassed WHO targets, the distribution of health personnel remains highly unequal (11-13). The Greater Accra Region's doctor-to-population ratio is more than 21 times higher than that of the North-East Region, while nurse densities vary similarly. For instance, 2.93 per 1,000 nurses in Ahafo versus 1.18 in the North-East (10). Vacancy rates for essential cadres regularly exceed 25% in northern regions, reflecting critical workforce shortages that undermine healthcare access in underserved areas (14-16).

Urban centres and tertiary hospitals continue to attract the majority of skilled health personnel. Nearly 42% of doctors are located in Accra, with over 60% employed in teaching hospitals concentrated in a few regions, while approximately 65% of the population lives outside these urban hubs. Between 2022 and 2023, the number of doctors in Greater Accra increased from 2,344 to 2,777, whereas the Northern Region saw a minimal rise from 298 to 300 doctors (13-14, 17-18).

These disparities highlight ongoing challenges in retention and equitable distribution, which are critical to strengthening primary healthcare delivery and achieving universal health coverage (UHC) goals in Ghana.

1.4. Gender and the Health Workforce in Ghana

Globally, women comprise almost 70% of the health and social workforce, yet they are underrepresented in leadership and overrepresented in lower-paid, lower-status roles (19-20). The trend holds true in SSA, including Ghana. In Ghana, women dominate nursing and midwifery, representing about 86% of that workforce, but only 35% of medical doctors are women. Women also face barriers to career advancement and leadership roles (21-22).

In rural and underserved settings, these gendered disparities intersect with infrastructural and policy gaps. Challenges such as caregiving responsibilities, community safety, limited housing, and lack of family support structures make rural postings particularly unattractive to female health workers (23-24). Studies in Ghana show that motivational factors differ by gender: women place more value on recognition, mentoring, and career development opportunities, while also being more likely to experience burnout when family and work responsibilities conflict (21, 24). Without supportive, flexible, and gender-responsive retention policies, female health workers may be more likely to avoid or leave rural postings.

Considering these intersecting challenges, that is, health workforce shortages, rural-urban disparities, and persistent gender inequities, this thesis explores the factors shaping rural health worker retention and investigates the extent to which gender-responsive policies or strategies are reflected in rural health worker retention policies in Ghana and selected SSA countries.

While gender is a socially constructed and evolving concept, this thesis adopts a binary framework (men/women) due to data limitations in national policies and statistics. All cited sources and government frameworks refer to binary categories, though the broader spectrum of gender identities is acknowledged.

Chapter 2

2. Problem Statement, Justification, Objectives

2.1. Problem Statement

Ghana continues to face acute shortages of qualified health workers in rural areas, despite policies aimed at balancing workforce distribution. Studies reveal reluctance among health workers to accept rural postings due to poor living and working conditions, inadequate social amenities, and limited career advancement opportunities (14, 21, 25). The inadequacy of supportive infrastructure, such as quality schools and secure housing, further reduces the appeal of rural postings (14, 21).

Gendered factors compound this challenge. Female health workers, who constitute the majority of nurses and an increasing proportion of doctors, face distinct barriers, including safety concerns in remote areas, difficulty securing spousal transfers or childcare, societal expectations to prioritise family responsibilities, and limited opportunities for leadership and professional support. While male health workers may be more willing to accept rural assignments, they tend to dominate decision-making roles, which can result in policies that insufficiently address women's specific challenges (14, 21).

Without deliberate, gender-responsive strategies to address these diverse barriers, rural health workforce retention policies risk being less effective and inequitable, undermining access to quality healthcare in underserved communities.

2.2. Justification

Women are the backbone of rural frontline healthcare in Ghana, particularly in culturally sensitive areas such as maternal and child health. Their presence in rural facilities is essential, especially in remote regions where social norms limit access to care from male providers (21, 26, 27). A shortage of female health workers in these areas is likely to decline maternal outcomes, and public trust in rural health care could be eroded.

The COVID-19 pandemic also brought gendered risks among rural healthcare workers into the limelight, heightening caregiving burden, personal safety, and work stress risks, issues that disproportionately impact women (28-30). These facts emphasise that gender equity lies at the heart of workforce sustainability and better health outcomes.

Initiatives like Ghana's proposed 20% rural wage premium are promising but insufficient without integration of gender-responsive measures (31). For instance, women's retention in rural roles often depends as much on factors like childcare availability, partner employment, and housing security as on wages.

Therefore, gender-responsive retention policies are essential not only for equity but also to strengthen health systems, align with the WHO's vision for gender equity, and support Ghana's progress toward Universal Health Coverage and the Sustainable Development Goals (20, 32).

Yet, little evidence exists on how national rural retention policies explicitly address gender-specific barriers, particularly in Ghana. Most existing research either generalises workforce challenges or has not disaggregated the experience of female versus male workers (20, 33, 34). This study aims to fill that gap by examining the inclusion and implementation of gender-responsive strategies in retention policies with a focus on rural health workers.

2.3. Overall Objective

The main objective of this thesis is to explore gender-related factors affecting rural health worker retention in Sub-Saharan Africa, identify gender-responsive HRH retention policies and interventions implemented in the region, and draw relevant lessons to inform the development or implementation of gender-responsive retention policies and strategies for rural Ghana.

Specific Objectives

- To investigate gender-related factors affecting rural health worker retention across SSA
- To identify and analyse policies and interventions from Sub-Saharan African countries that address gender-related factors or incorporate gender-responsive components in efforts to enhance rural health worker retention.
- To critically analyse the extent to which Ghana's existing HRH policies take gender-specific needs and inclusiveness into account.
- To propose evidence-based strategies to inform the development and implementation of gender-responsive retention policies for Ghana's rural health workforce.

Chapter 3

3. Methodology

3.1. Conceptual Framework

This study adopts the WHO Guideline on Health Workforce Development, Attraction, Recruitment, and Retention in Rural and Remote Areas as its conceptual framework (35). The guideline identifies six key factors influencing rural health worker retention: personal, financial, career-related, community-related, working conditions, and mandatory service. It emphasises the importance of multifaceted "bundles" of interventions addressing these factors, inclusive of gender considerations (see Figure 2).

Figure 2: WHO Guideline on Health Workforce Development, Attraction, Recruitment, and Retention in Rural and Remote Areas (35)

The framework recognises that retention experiences vary by gender, age, marital status, and rural background, highlighting the necessity for gender-responsive policies (see Table 1). It also structures the literature review by guiding the identification of common retention factors reported in Sub-Saharan African contexts, the extent to which these are gendered, and the availability of sex-disaggregated data, thereby revealing evidence gaps.

Table 1: Adapted from the WHO Guideline on Health Workforce Development, Attraction, Recruitment, and Retention in Rural and Remote Areas (35)

Factor	Description
Personal factors	Include intrinsic motivations, values, career stage, and social norms (e.g. altruism, rural background, and family ties). These often intersect with gender norms, such as caregiving roles or cultural acceptability of posting locations, and shape decisions to accept or remain in rural posts
Financial factors	Refer to salary, allowances, benefits (e.g., rural hardship pay, housing/transport subsidies), and opportunity costs of rural practice. These incentives directly affect attraction and retention, but their impact is shaped by context, gender, age, and career stage
Career and Education Factors	Encompass professional development opportunities, continuing education access, promotion pathways, and access to supervision or mentorship. Limited career progression or rural career ladders may drive attrition.
Community and Family Factors	Include quality of life in rural settings, social acceptance, spousal employment, children's schooling, and community integration. Cultural norms (e.g. gender norms in conservative regions) and security concerns may impact health workers' ability and willingness to work and stay in rural areas.
Working conditions	Refer to the quality and safety of work environments (e.g., availability of drugs, infrastructure, workload, housing, managerial support, and supportive supervision). Harassment, safety risks, or poor resources are disproportionately likely to affect certain groups, especially women and younger staff.
Mandatory service	Concerns government-imposed rural postings often tied to training/licensure. While these may improve distribution in the short term, their effectiveness depends on fairness, supportive measures, and respect for rights. Poorly implemented schemes can cause dissatisfaction or attrition.

3.2. Key Terminologies

In this thesis, terms such as "policies," "strategies," "programs," and "interventions" are used to describe various approaches and actions related to health workforce planning and retention. Given that different countries and sources often apply these terms with varying meanings, this study adopts consistent and clear usage throughout to enhance clarity and comparability. Detailed definitions of these and other key terms are provided in the glossary at the beginning of this thesis. Readers are encouraged to consult the glossary for precise meanings as applied within this work.

3.3. Literature Review Approach

This thesis employed a scoping literature review to explore gender-specific factors influencing rural health worker retention and to identify gender-responsive HRH policies in Sub-Saharan Africa, with an emphasis on Ghana. Following Grant and Booth's typology, a scoping review is suitable for mapping the extent, range, and nature of research in an emerging field (36). The review adhered to Arksey and O'Malley's five-stage framework: identifying the research

question, locating relevant studies, selecting studies, charting data, and collating and reporting results (37).

A comprehensive search was conducted for peer-reviewed and grey literature published between January 2015 and June 2025, encompassing research on rural health workforce retention, gender-related factors, and the effectiveness of retention interventions in Sub-Saharan Africa, with a focus on Ghana. This timeframe comprises key developments, including the impact of the COVID-19 pandemic on health workforce dynamics and the 2021 update to the WHO Guideline on Health Workforce Development, Attraction, Recruitment, and Retention in Rural and Remote Areas.

Searches were conducted in PubMed, Google Scholar, and the VU University Library database, utilising tailored search strings that combined relevant keywords and MeSH terms. The core search string was designed to capture literature on rural health workforce retention, gender-related barriers, and regional relevance to Sub-Saharan Africa. It was adapted to suit the search syntax of each database. An example version of the core search string is ("health worker retention" OR "rural health workforce" OR "rural health worker retention" OR "health workforce attrition" OR "health worker turnover") AND ("gender" OR "female health worker" OR "women in health workforce" OR "gender inequality" OR "intersectionality" OR "gendered barriers") AND ("Sub-Saharan Africa" OR "SSA" OR "Ghana").

Reference lists from key articles were also screened through snowball sampling. The full search protocol and database-specific queries are detailed in Annexe 1.

The inclusion criteria covered primary and secondary research focused on rural or remote health workforce retention in Sub-Saharan Africa, including studies that addressed gender-specific retention dimensions. Only English-language journal articles published within the timeframe were considered. Policy and strategy documents were reviewed separately in the policy analysis section.

Studies not primarily focused on Sub-Saharan Africa, exclusively addressing urban health workforce issues, or not available in English were excluded.

3.4. Search Strategy for Policies in Sub-Saharan Africa and Ghana

This study also undertook a targeted search and review of policy documents, strategy papers, and grey literature related to health workforce retention and gender equity in Sub-Saharan Africa and Ghana. Sources included official documents from multilateral agencies such as the World Bank, the World Health Organization, as well as national-level health sector strategic plans, HRH policies, and assessment reports. These were identified through targeted searches of institutional websites, online repositories, and Google using a Boolean search strategy. Search terms included combinations of keywords such as: "health workforce retention" AND "Sub-Saharan Africa", "gender" AND "HRH policy", "rural deployment" AND "health workforce", AND "rural retention" AND "health systems" (see Annexe 2).

The snowballing technique was used to identify additional documents by scanning reference lists of relevant policy papers, and Google Scholar's citation tracking was employed to find more recent sources that referenced key foundational documents. In cases where one national policy referred to others (e.g., gender policy linking to HRH strategy), the related frameworks were also retrieved and reviewed to ensure a comprehensive understanding of the policy environment. Three Ghana-specific policies were ultimately included and analysed.

The inclusion criteria for policy documents required that they focus on health workforce retention and/or gender in health systems, be specific to Ghana or the broader Sub-Saharan African region, and be available in English. This included government-issued frameworks, ministerial policy strategies, donor evaluation reports, and case-based country profiles.

Policy documents were excluded if they focused exclusively on urban health systems, did not address health workforce issues, or were unrelated to gender responsiveness.

Country Selection Rationale

Countries selected for comparative policy analysis, that is, Nigeria, Malawi, and Uganda, were chosen due to the relative availability of policy documents, programme data, and literature explicitly addressing gender-responsive approaches to rural health worker retention. These cases offered sufficient detail to enable meaningful analysis and illustrate diverse policy approaches within the Sub-Saharan African context. While other countries, such as Kenya and Ethiopia, may also have relevant strategies, the limited accessibility of data on the gendered dimensions of rural retention of health professionals influenced their exclusion from this thesis.

3.5. Data Processing and Analysis

3.5.1. Analysis of Literature Review on Factors

A two-stage screening process was used for peer-reviewed literature. First, abstracts were screened against the inclusion criteria. A full-text review was then assessed for relevance to gender and rural health workforce retention.

A thematic synthesis was conducted using the six-factor WHO Guideline on Health Workforce Development, Attraction, Recruitment, and Retention in Rural and Remote Areas, which includes personal, financial, career and education, community and family, working and living conditions, and mandatory service factors. Findings were organised under these categories. Where sub-themes overlapped (such as safety being both personal and workplace-related), thematic placement was based on analytical clarity, with cross-references provided where relevant. While mandatory service is a policy intervention by design, it is included here as one of the six categories to ensure comparability with established frameworks and to capture the full range of influences, both environmental and regulatory, on rural health worker retention.

Gender was analysed as a cross-cutting lens. Within each thematic category, the analysis examined how retention experiences differed by sex, including whether studies provided sex-disaggregated data or described gender-specific constraints. Intersectional dimensions, such as cadre, marital status, or rural origin, were also considered where available. Some factors were found to be interrelated and could not always be definitively classified under one category. For example, personal safety issues may overlap with both workplace and community determinants, and career development barriers may reflect system, manager, and individual-level issues. In such cases, thematic placement followed the results and dominant narrative of each study, with appropriate cross-references.

In the results section addressing these factors, the evidence is first introduced, and key findings are summarised. Detailed findings are then presented in two stages: first, evidence from Sub-Saharan Africa in general; and second, studies specific to Ghana. This approach enables both regional context and country-specific analysis, fostering a comprehensive understanding of gendered factors influencing rural health workforce retention.

3.5.2. Analysis of Policies

The policy, intervention, and strategy analysis aimed to identify if and how gender issues have been integrated into national and state-level programs to improve rural health worker retention in SSA, with specific reference to the Ghanaian context. The analysis cited key HRH policy documents, national health gender policies, and programme documents relevant to rural health workforce management.

At the regional level, policies and programmes from selected Sub-Saharan African (SSA) countries were analysed to illustrate how different countries adopt varied retention strategies. These case studies offer comparative perspectives on the incorporation of gender considerations into deployment, support, and career advancement measures for rural health workers within national health systems.

Particular attention was given to policies demonstrating clear gender-responsive language, targeting female or male health workers, and employing structural mechanisms that promote equity, such as training initiatives for women, housing provisions for female providers, or other

gender-responsive components relevant to rural retention. The analysis also considered the availability of implementation or evaluation data and alignment with at least one of the World Health Organisation's six categories of rural and remote health workforce retention strategies: financial incentives, personal/family support, working conditions, education, mandatory service, and career development.

A gender lens was applied throughout the policy analysis. Rather than scoring policies using a formal assessment scale, the analysis focused on the presence or absence of gender-responsive language, interventions targeting gender-specific barriers, and institutional mechanisms for equity. Attention was also given to the operational feasibility, monitoring structures, and relevance of interventions for rural female health workers.

In the Ghana-specific review, the analysis assessed if and how country-level frameworks aligned with the six retention domains outlined in the WHO retention framework: personal, financial, career and education, community and family, working conditions, and regulatory (mandatory service) factors. Evidence was sought regarding alignment with these domains and whether gender-related dimensions were addressed within each. The review assessed the extent to which policies addressed gender issues, defined interventions to support female health workers, and considered broader equity issues in workforce deployment and management.

The thesis also examined whether policy reports included transparent mechanisms for monitoring, evaluation, and accountability concerning gender responsiveness. Such mechanisms were deemed essential to ensuring that gender-focused strategies are not only proposed but also tracked, implemented, and adjusted based on evidence. More broadly, the analysis sought to establish both the presence and functional efficacy of gender integration throughout policy planning and implementation.

Chapter 4

4. Study Results/Findings

4.1. Factors Affecting Health Worker Retention in Rural SSA

This chapter brings together the findings from the literature review, applying the six-factor WHO Guideline on Health Workforce Development, Recruitment, and Retention in Rural and Remote Areas: (1) personal, (2) financial, (3) career and education, (4) community and family, (5) working and living conditions, and (6) Mandatory Service factors. Each section starts with a description of the evidence base, with the number of studies that considered the factor and the number of these that specifically addressed gender-related issues. As described in Chapter 3, the findings of the literature review are organised according to the six-factor WHO retention model. For each factor, the evidence base is introduced with a summary of key findings, followed by a detailed analysis drawing from studies across Sub-Saharan Africa and those specific to Ghana.

4.1.1. Personal and Family-Related Factors

Overview of Evidence

A total of nineteen studies discussed personal and family-related factors affecting rural health worker retention. These included seven qualitative studies, three quantitative surveys, seven mixed-methods designs, and two exploratory reviews, covering evidence from countries such as Ghana, Uganda, Mali, Senegal, Niger, and Nigeria. Among these, six studies explicitly incorporated gender-disaggregated analysis, exploring how familial obligations, social norms, and mobility constraints differently impact male and female health workers. The remaining studies discussed these factors more generally, without specific attention to gender.

Findings

In Ethiopia, Mali, Togo, Senegal, and other countries in the SSA region, women are primarily responsible for caregiving and household duties, including raising children and caring for extended family members. Hence, socio-cultural expectations around caregiving and domestic roles were found to limit women's ability to remain in rural postings disproportionately (38-40). For instance, a qualitative study in the Yélimané and Bafoulabé districts in Mali found that female health workers often experienced interruptions in rural service due to caregiving demands, such as caring for sick children and elderly relatives, and household management without external support. The lack of housing and childcare services made it difficult to maintain a consistent presence in rural facilities (39).

In Niger, cultural norms dictate that wives reside with their husbands. A mixed-methods study revealed that district managers faced difficulties assigning female health workers to rural areas because national policy allows reassignment if a spouse works elsewhere, typically in urban centres, leading to involuntary relocations and reduced retention in remote regions (41). In Uganda, female health workers (48% of the study population) from the Kamuli, Pallisa, and Kibuku districts expressed a strong "call to serve" their communities, viewing rural service as a moral obligation despite difficult conditions. Emotional commitment, family proximity, and community integration emerged as important motivators. Some preferred not to use staff housing to maintain boundaries between work and personal life, which aids stress management and reduces burnout (42).

Conversely, male health workers highlighted different factors, including proximity to family, engagement in farming, and opportunities to invest in local land or build homes, as common reasons for staying in the area. Among eleven male providers (13% of participants), three reported satisfaction with living and working in their home districts, which helped them fulfil family obligations while managing farms or building assets (42, 43). A qualitative study from

Senegal involving 176 health workers noted that separation from family was a major issue for male staff. One male worker described living a "double life," commuting between rural posts and an urban household, with the absence of suitable accommodation for his spouse causing emotional and physical strain (43).
Finally, a quantitative study in Lira District, Northern Uganda, involving 235 healthcare workers across professions found an overall retention rate of 71.5%. Co-residence with family significantly predicted retention; those living with their families were 1.33 times more likely to remain in their posts than those living separately (PR=1.33, $p<0.001$) (44).
A qualitative study in three deprived districts of Ghana found that gendered personal and structural challenges significantly affected female health worker retention. Women reported difficulties balancing rural postings with family responsibilities, including managing long-distance relationships, single-handed childcare, and limited access to maternity leave supports like feeding rooms and creches. By contrast, male health workers were often able to bring their families or find local partners (21). A literature review on health worker retention in Ghana highlighted persistent pressures from extended family commitments and gendered domestic roles that compete with professional demands, especially in isolated rural postings lacking social support networks (45).

4.1.2 Financial Factors

Overview of Evidence

Financial considerations emerged as the primary predictor of attrition and retention in rural health facilities across Sub-Saharan Africa (SSA). Seventeen studies comprising six qualitative studies, three quantitative surveys, four mixed-methods studies, and three literature reviews addressing financial issues in SSA countries, including Ghana, Ethiopia, Sierra Leone, Tanzania, Mozambique, and the Democratic Republic of Congo (DRC) were reviewed. Nine of these studies included gender-disaggregated findings. Across the literature, financial hardship due to low or irregular salaries, lack of allowances, and limited opportunities for income supplementation was consistently identified as a key driver of attrition. However, financial pressures affected men and women differently: women were disproportionately impacted by the absence of additional income opportunities, while men more frequently cited dissatisfaction with salary levels as a reason for leaving.

Findings

A rapid review titled "Intersectionality of gender in recruitment and retention of the health workforce in Africa" examined gender dynamics in health workforce retention across several SSA countries, including Ethiopia and Tanzania (23). The review found that male health workers were nearly twice as likely as female health workers to report intentions to leave their rural posts, with financial dissatisfaction cited as the primary driver. While financial incentives were important in both countries, female clinical officers—particularly in Tanzania—responded less strongly to monetary incentives aimed at retention. Instead, women placed greater value on non-financial factors such as personal safety, social acceptance, and work–life balance, which often outweighed salary considerations in their decisions (23).
In Sierra Leone, a qualitative study using life history interviews explored retention dynamics among rural health workers, 52% of whom were women. Participants expressed frustration with low and irregular salaries, particularly given the high cost of living and limited opportunities for supplementary income in rural areas. They reported that being unable to take on side jobs, unlike in urban postings, left them financially vulnerable (46). One participant noted that supporting a family in Freetown on a rural salary was unsustainable. Additionally, rural allowances were inconsistently paid, which was demotivating, as there was little financial difference between them and their urban counterparts. Men also expressed dissatisfaction with unreliable rural allowances and stagnant salaries, though they tended to frame these issues as broader economic challenges rather than personal hardship (46).

In Ghana, a qualitative study examining gendered retention challenges in three rural districts involved both male and female respondents. The findings highlighted acute economic deprivation experienced by female health workers. Most women reported difficulty accessing basic needs such as food, water, and transportation, often finishing the month without savings (21). Unlike their urban counterparts, rural female health workers lacked alternative income sources, such as locum work. They faced out-of-pocket expenses for work-related requirements, including workshops, interpreters, and patient transportation. Furthermore, the absence of occupational health insurance for risks such as motorbike accidents increased their financial vulnerability. These financial hardships, compounded by caregiving responsibilities and mobility limitations, created a cycle of stress that undermined retention (21).

4.1.3. Career and Education Factors

Overview of Evidence

Career development prospects, including promotion opportunities, training, and recognition, consistently rank among the top priorities for retaining health workers in Sub-Saharan Africa (SSA). This review identified fifteen studies addressing career-oriented determinants of rural retention, of which five included gender-disaggregated analyses. These studies comprised six qualitative, two quantitative, five mixed-methods designs, and two literature reviews. The literature highlights persistent gender disparities in the region, with female health workers facing greater structural and social barriers to career advancement, such as limited mobility, household responsibilities, and discrimination in access to training and performance evaluations.

Findings

Gendered access to leadership roles and training opportunities profoundly shapes career progression among health workers in SSA. Across several studies, female health workers were consistently underrepresented in middle and senior management positions, while overrepresented in operational or lower-tier management roles (47, 48, 49). For example, in Malawi and Zimbabwe, women were largely excluded from decision-making roles and disproportionately concentrated in mid- or lower-tier clinical positions such as midwifery and theatre nursing. Even when nominated for upgrading opportunities, some women were excluded due to previous job resignations related to family relocations. Women who gave birth expressed frustration at seeing juniors, both men and women without children, receive promotions ahead of them (50). Conversely, male health workers were more frequently promoted to supervisory or outreach roles that offered broader exposure and upward mobility (23, 50). This gender segregation limited women's access to diverse training pathways and leadership tracks (46, 50). Over one-third (35%) of female health professionals in the Zimbabwe study cited childcare responsibilities as a barrier to participating in training, which subsequently constrained their promotion opportunities. Many women prioritised their children's education above their career development, choosing to forego professional advancement to allocate resources to their children (46).

Qualitative evidence from Nigeria revealed that pregnancy and childbearing negatively influenced performance appraisals and promotional prospects, with some women demoted or overlooked based on assumptions about potential pregnancies (51). Similarly, in Uganda and Northern Nigeria, female health workers were often confined to local roles, while men undertook mobile outreach, supervisory duties, and patient transport. This division of labour curtailed women's exposure to training and responsibilities critical for career advancement (42, 44, 52).

In Mali, an obstetrician nurse described pursuing further education as an avenue to escape rural postings, framing professional growth as a means of exit:

"I want to go to school to become a midwife and leave here … I have already submitted my application for the next competition" (39).
In Ghana, a mixed-methods study of 205 community health nurses (CHNs) in rural areas found that only 9% anticipated remaining in the same role after five years, citing lack of training, supervision, and clear promotion pathways as major impediments to career progression (53).

4.1.4. Community and Family Factors

Overview of Evidence

Community-related factors, including social acceptance, safety, cultural adaptation, and family support, have a significant impact on rural health worker retention. Thirteen studies listed community-level determinants, including five qualitative studies, four mixed-methods studies, two quantitative surveys, and two narrative reviews. Five of these were systematically explored in terms of gendered experiences. The literature showed that female health workers are more likely to experience hostility, stigma, and community isolation, while occasional male workers face role-based cultural restrictions. These challenges are rooted in local gender norms, perceptions of professional roles, and deficiencies in rural infrastructure.

Findings

In multiple contexts, security, social acceptance, and family needs were closely intertwined with retention decisions, particularly for female health workers. A qualitative study in Niger found that midwifery students specifically cited access to quality education for their children and the approval of their spouse as key factors influencing their willingness to accept rural postings. Statements such as "if my children had access to school in the locality" (average rating 4.25/5) and "if my husband accepted" (average rating 4.17/5) ranked among the highest in concept mapping exercises (41). Local security concerns disproportionately affected women, with the fear of being alone in rural health facilities—especially at night—contributing to a sense of vulnerability:
"Health workers are often women. They are scared of living alone or being woken up at night." — (Local mayor) (41).
Cultural adaptation also influenced retention. In Senegal, a qualitative study reported that some female health workers initially struggled with language barriers and unfamiliar rural customs. However, community support and gradual integration over time helped alleviate these challenges (43).
In Ghana, a qualitative study spanning three rural districts documented frequent experiences of hostility, disrespect, and sexual harassment against female health workers by community members. Incidents included verbal abuse, attempted rape, and coercion in exchange for goods or services. Most women lacked awareness of formal reporting mechanisms and faced stigma discouraging disclosure. Some also reported being extorted with inflated prices due to perceptions of salaried government employment. These experiences severely impacted morale, safety, and retention (21).
In contrast, male health workers faced community integration challenges centred more on cultural role boundaries than personal safety. A national study of community mental health workers (CMHWs) in Ghana found that nearly all respondents (99%) perceived stigma attached to their roles, largely due to negative community attitudes toward mental illness, and between 16% and 28% reported considering resignation because of this stigma. Several workers described feelings of social isolation, undervaluation, and lack of family support despite their frontline public health roles (54).

4.1.5. Working and Living Conditions

Overview of Evidence

Eleven of the studies referred to working and living conditions as a rural health worker retention factor. These included four qualitative studies, three mixed-methods studies, two

quantitative surveys, and two narrative reviews. Six of these studies explicitly addressed gendered dimensions of workplace experiences. The literature showed that professional and community-level female health workers were more likely to cite safety concerns, inadequate infrastructure, and lack of managerial support as key dissuaders from rural postings.

Findings

Across the region, poor facility infrastructure, limited supplies, and administrative inefficiencies undermined health worker morale and retention (23, 55). In Senegal, female health workers identified the absence of fundamental infrastructure—such as water, electricity, essential drugs, and equipment—as a major barrier to delivering quality care, leading to professional frustration (43). Bureaucratic inefficiencies, including the need to travel to Dakar for administrative approvals and excessive documentation requirements, were described as time-consuming, demotivating, and discouraging continued service in rural areas. Male respondents in the same study acknowledged resource inadequacies and organisational shortcomings. However, they framed their concerns in terms of governance issues, advocating for decentralisation, efficient oversight, and stronger leadership to reduce systemic dysfunction (43).

A life history study in Sierra Leone offered vivid examples of these challenges. One male participant recalled living and working for five years in a rat-infested, unhygienic clinic lacking water and essential equipment. Others emphasised the scarcity of transportation and ambulances across difficult terrains, limiting service delivery and emergency referrals (46). Female health workers described long hours, night shifts without backup, and insufficient supervisory support contributing to burnout and emotional stress, particularly in understaffed rural facilities. These working conditions were physically demanding and posed safety risks, especially for women travelling alone at night (46).

In Ghana, a discrete choice experiment involving 302 fourth-year medical students found that working conditions significantly influenced preferences for rural postings. Students expressed strong preferences for jobs with improved infrastructure ($\beta = 1.42$) and supportive management ($\beta = 1.17$), valuing these attributes as much as, or more than, a 100% salary increase (54). Gender differences emerged: female students valued supportive management significantly more (interaction term $\beta = 0.40$), whereas male students prioritised superior housing (interaction term $\beta = -0.42$) (24).

A separate study of mental health professionals revealed that only 35.6% of Community Mental Health Officers (CMHOs) and 45.1% of Community Psychiatric Nurses (CPNs) felt supported by their District Health Management Teams (DHMTs). Significant gaps, including lack of transportation, office space, supervision, protective equipment, and risk allowances, were reported and attributed to low morale and increased intentions to leave rural posts (53). There was no sex-disaggregated data found.

4.1.6. Mandatory service

Overview of Evidence

Mandatory or compulsory rural service is a regulatory policy tool widely employed across Sub-Saharan Africa to address health workforce deficits in rural and underserved areas. These policies tend to mandate that newly graduated health professionals serve a designated period in rural or remote areas as a condition of licensure or in place of state-sponsored education. While implemented, the literature shows that the evidence for the long-term effectiveness of these interventions in retaining health workers in rural areas is variable, and the gendered dimensions of compulsory service are generally underexplored.

Findings

Several countries in Sub-Saharan Africa have implemented forms of mandatory service or work-back obligations to improve rural health worker retention. In South Africa, a one-year

compulsory community service program for young professionals, including doctors, dentists, and nurses, resulted in 55% of graduates being placed in rural areas, with 34% intending to remain at the same facility and 25% planning to continue working in rural or underserved communities (56). However, a retrospective cohort study evaluating government-run return-of-service (RoS) schemes in four Southern African countries (South Africa, Botswana, Eswatini, and Lesotho) found that overall contractual compliance was low: only 24.3% of beneficiaries fully completed their service obligations, while 66.7% defaulted before fulfilling their contracts (57). In South Africa, where provincial RoS schemes require year-for-year service, medical doctors were significantly more likely to default than dentists (risk ratio [RR] = 1.4; p = 0.021). Those who completed internships and community service outside their funding provinces had even higher default risks, with RR of 1.6 and 13.9, respectively (57).
Graduates generally reported positive experiences with supervision and mentorship during the service year, but also cited unsatisfactory accommodation (43%), concerns about personal safety (66%), and perceptions of unfair pay (46%) (57).
In Senegal, most health workers—both male and female—opposed blanket mandatory service. One midwife commented:
"If someone joins our team without personal engagement, the outcome will not be good." (43)
In Ghana, compulsory rural service policies are implemented through national service and internship postings, requiring newly graduated health workers, doctors, nurses, and midwives to serve in government-designated rural or underserved facilities as a condition of licensure (58). While the policy has been effective in supporting early placement to rural health facilities, current evidence suggests its impact on long-term retention is limited. The majority of health workers, after fulfilling their mandatory service, voluntarily seek transfers to urban centres due to dissatisfaction with rural working conditions, limited career prospects, and difficulties in being away from their families (14, 45). There was no sex-disaggregated data on this. For female health workers, these challenges may be exacerbated by security risks, poor living standards, and insufficient gender-responsive support systems, including a lack of spousal co-location and childcare assistance. Such factors undermine job satisfaction and long-term commitment to rural service.

Together, the reviewed literature suggests that a complex and interdependent set of factors influences rural Sub-Saharan Africa (SSA) health worker retention. These trends differ in various ways for men and women across different professions. For instance, female health workers were more likely to report challenges related to personal safety, family obligations, and limited training and leadership exposure. Male health workers more often identified economic discontent and limited promotion possibilities as causes of rural attrition. Structural inequalities—i.e., gender-disadvantaging access to education, lack of spousal accommodation strategies, and unequal application of supportive strategies like maternity leave or on-site safety policies—operate to increase gender gaps in rural health workforce retention.

4.2. Gender-Responsive Policies and Interventions in Sub-Saharan Africa

This section analyses national policies and externally funded interventions aimed at improving rural health worker retention in Sub-Saharan Africa through a gender lens. A combination of structural government-led strategies and donor-supported programs influences rural retention.
A total of thirteen policies and programs were identified across three countries: Nigeria, Uganda, and Malawi, through a comprehensive document review and analysis of program data. These countries were selected due to their diverse policy environments and availability of program information. From these, four interventions with clear gender-responsive features and sufficient data were selected for in-depth analysis (see Annexe 3 and 4 for more details).

4.3. Nigeria

In Nigeria, two significant initiatives, the Midwives Service Scheme (MSS) and the Women for Health (W4H) programme, offer critical insights into how gender-responsive approaches can shape rural health workforce retention.

The Midwives Service Scheme (MSS), launched in 2009, is an ongoing nationwide policy in Nigeria aimed at addressing rural workforce shortages by deploying midwives, predominantly women, to underserved primary health centres (59). In its initial phase, 2,488 midwives (45% unemployed, 44% newly graduated, and 11% retired) were deployed to 652 rural facilities across all 36 states and the Federal Capital Territory, increasing the national rural midwifery workforce by approximately 9% (60-61). Though not explicitly stated, the scheme implicitly targeted women, given midwives' gender demographics in Nigeria.

The MSS's three-tiered support system includes federal salaries, state allowances and supervision, and local government-provided accommodation, enhancing financial independence and addressing safety concerns related to remote postings (59-61). The scheme achieved a 5% to 7% point rise in antenatal care utilisation and skilled birth attendance at rural clinics (62).

However, retention beyond the compulsory one-year service remains problematic. Approximately 44% of midwives, mostly younger and newly graduated, leave rural posts after their service period, often relocating to home or urban areas, while retired midwives tend to stay longer (60). Retention suffers due to irregular salary payments, precarious employment, inadequate accommodation, limited career progression, and safety concerns. Only one-third of clinics retained the intended number of midwives five years after deployment, resulting in reduced antenatal care coverage in high-need areas (63). Furthermore, 27% of midwives exited postings within six months, citing poor accommodation, job insecurity, and unpaid salaries, with retention particularly low among those placed away from home regions (62). There was no identified government-led evaluation on the impact of MSS on retention. Despite these challenges, the MSS remains a critical component of Nigeria's rural health workforce strategy and offers important lessons for gender-responsive recruitment and retention policies.

In parallel, the Women for Health (W4H) program was a large-scale, donor-funded initiative implemented from 2012 to 2022 in five northern Nigerian states: Jigawa, Kano, Katsina, Yobe, and Zamfara. Funded by the UK Department for International Development (DFID) and led by Health Partners International, W4H was designed to address the shortage of female health workers in rural and underserved areas (64). It aimed to overcome personal and social barriers like early marriage, limited female mobility, and lack of family support. W4H provided academic preparation and life skills for young women, as well as residential pre-service training and community outreach activities to increase the acceptability of female workers (64).

A key component of W4H was the Foundation Year Programme (FYP), a preparatory track that equipped rural women with the academic and life-skills initiative designed to enable young rural women to qualify for nursing, midwifery, and community health extension training (64). By training women from their home communities and involving local families in the process, the program built both individual agency and community support systems (64). This initiative explicitly identified gender as a core objective and was designed to directly reduce gendered barriers to professional training and rural service. Between 2012 and 2020, over 8000 female students enrolled in health training programs through W4H, with 2,818 rural women supported through access courses and sponsorships to meet entry requirements. More than 1,551 graduates had completed their training at the time of reporting, with 38% employed in rural health facilities, a 134% increase in rural female deployment compared to baseline levels in 2012 (65).

Midwife retention rates improved significantly across the four participating northern states between 2013 and 2016. In Jigawa, Katsina, and Zamfara, retention increased steadily, rising from 69.2% to 98% in Jigawa, 53.3% to 100% in Katsina, and 42.8% to 100% in Zamfara. Yobe State also experienced a rise from 47% to 100% by 2015. However, this later declined slightly to 90% in early 2016 due to the departure of 27 midwives, attributed to worsening security conditions linked to insurgency in the region (66). A qualitative survey conducted by W4H among FYP participants, a revealed that 95% observed increased community support for women's employment, while 82% reported that the FYP helped them build careers and emerge as local role models (67). While early program reports emphasised increased training opportunities, subsequent evaluations focused on rural deployment and local service expansion. However, long-term outcomes related to retention and career advancement after deployment have been insufficiently evaluated (64).

4.4. Uganda

In Uganda, the Human Resources for Health Strategic Plan (2020–2030) explicitly acknowledges gender equity as a goal in health workforce planning and retention, calling for gender mainstreaming in recruitment, deployment, career progression, and the strengthening of leadership, data systems, and workplace protections (68).

The plan highlights persistent underrepresentation of women in leadership and notes the need to address discrimination and create equitable opportunities at all levels. It proposes collecting gender-disaggregated workforce data and developing strategies to ensure a safe, inclusive, and supportive work environment, with particular attention to workplace factors that affect retention, such as supervision and accommodation, which have recognised gendered dimensions in rural settings (68).

However, as of 2025, there is little publicly available evidence of concrete gender-responsive interventions being fully implemented or evaluated, particularly concerning rural health worker retention. Most documented action remains at the level of system strengthening and policy commitment, rather than the execution or assessment of measurable interventions and outcomes. Thus, while policy intent is clear, the demonstrated impact on gender and rural retention has yet to be realised.

4.5. Malawi

The Global AIDS Interfaith Alliance (GAIA) Nursing Scholars Program in Malawi, launched in 2005 and ongoing, is a highly targeted, gender-responsive initiative designed to strengthen the rural health workforce by supporting female nursing students (69). Since its inception, GAIA has awarded 862 scholarships, 74% of which have gone to women and 41% to orphans. Scholars commit to public sector service, matching the years of support they receive (69). To date, 98% of graduates have fulfilled their service commitments, 99% have remained in-country, and 78% are employed in the public sector, many in hard-to-reach districts (69-70). The nurse fellowship component has placed 342 graduates since 2016, including 90 in 2024 alone. GAIA's Nursing Scholars Program, spanning all 28 districts, blends academic preparation, financial aid, clinical rotations, and ongoing alum support (69-70).

Beyond workforce development, GAIA launched the Nursing Leadership Initiative in 2024 to advance women's leadership and help students upgrade their qualifications. Tracking data show that 61% of alumni have held leadership positions and 19% have pursued further training, demonstrating an impact on both deployment and women's career progression (69-70).

A recent mixed-methods evaluation, including 30 qualitative interviews and 56 surveys with program graduates from both urban and rural areas, with no data segregation specific to rural nurses, confirmed that 97% remained in the public sector, serving the most vulnerable, during their service term, with many staying at least two additional years (71). Participants identified job security, the desire to serve rural communities, and support from GAIA staff as key motivators. While low pay, insufficient housing, and scarce supplies posed significant

challenges, strong coworker and supervisor relationships, professional support, and a sense of obligation to "give back" to the community were key factors in retention (71). Notably, those with positive workplace relationships were markedly less likely to consider leaving their posts. These findings underscore the significance of non-financial strategies, such as respectful management, mentoring, and professional support, in retaining rural female health workers in the public sector.

4.6. HRH and Gender Policies in Ghana

This section critically examines three core policy instruments relevant to rural health worker retention and gender equity in Ghana: the 2024 National Health Sector Gender Policy (72), the 2007 national posting policies (73), and the 2023 Ghana Health Service (GHS) Promotion Guidelines (74). These policies collectively shape the environment in which health workforce retention, particularly for rural and female workers, occurs, and they form the framework for operationalising the Human Resources for Health (HRH) plan in Ghana.

4.7. Gender-Related Provisions in the National Health Sector Gender Policy

The NHSGP, revised in 2024, establishes a comprehensive framework to address gender disparities and promote equity across the health sector, with significant implications for HRH planning, deployment, and retention. It explicitly recognises ongoing barriers faced by women in the health workforce, including underrepresentation in leadership, safety concerns, domestic responsibilities, and exposure to discrimination and abuse. The policy prioritises dismantling these structural constraints as essential for strengthening the health workforce and achieving equitable participation at all operational levels (72).

A pivotal element of the NHSGP is its directive to enhance sector data systems for the collection and use of sex-disaggregated and gender-responsive data. This approach underpins evidence-based HRH planning and aligns with the national HRH plan's intent to optimise workforce management using robust, actionable information (72). Information platforms, such as the District Health Information Management System-2 (DHIMS-2) and the Human Resource Information System (HRIS), are earmarked for this purpose. However, operational gaps remain, as the translation of such data into targeted interventions for rural deployment, intersectional equity, or retention tracking is not yet fully articulated.

The NHSGP also identifies and addresses unique challenges of rural health worker retention connected to gender. Women posted to rural areas face heightened vulnerability regarding personal safety, balancing professional and domestic roles, and increased risk of harassment (38-40). In response, the policy advocates for both financial incentives (e.g., rural allowances) and non-financial strategies such as mentoring, career development, and supportive supervision tailored to gender-specific needs (72). These measures reflect an appreciation for the social and cultural barriers impacting rural deployment. They are consistent with the HRH plan's strategy to ensure effective recruitment, deployment, and retention in underserved areas.

The institutionalisation of gender mainstreaming, through the appointment of gender focal persons, integration of gender objectives across HRH functions, and emphasis on intersectoral collaboration, is another notable feature designed to facilitate ongoing progress and accountability. Nevertheless, challenges in policy dissemination, resource mobilisation, and technical capacity at institutional levels may hinder the practical realisation of these ambitions.

Policy objectives articulated in the NHSGP, and echoed in the broader HRH plan, include improving gender responsiveness across the health system, strengthening leadership and coordination for gender mainstreaming, addressing socio-economic and cultural barriers to equity, and ensuring sustainable financing for gender-focused initiatives (72). Each objective is accompanied by strategies such as revising workforce policies to enhance gender responsiveness, increasing women's representation in leadership, and integrating gender concerns into workforce data systems (72).

Despite a robust strategic vision, the NHSGP reveals significant gaps in operational specificity, particularly regarding measurable targets for rural female health worker retention and systems for routine reporting of sex-disaggregated HRH data.
Given the NHSGP's recent revision and rollout in 2024, no studies or data were identified assessing its impact on rural health worker retention to date.

4.8. Posting Policies and Spousal Considerations

According to the Ghana Health Service (GHS) Promotion Guidelines in 2023, health workers serving in designated deprived districts are eligible to be considered for promotion one year earlier than those in non-deprived areas (73). Eligibility is contingent on fulfilling the prescribed period of continuous service, demonstrating satisfactory performance, participating in one or more relevant in-service training programmes, maintaining a valid professional license, and having no record of major disciplinary offences (73). Importantly, the guidelines do not include monitoring requirements, and sex-disaggregated data on the impact of spousal co-location was not found in the reviewed policies. Consequently, while the policy incentivises rural service, it does not address or remediate gender-specific promotion barriers or analyse its differential impact on female workforce advancement or retention. Also, no evidence was identified relating spousal co-location posting provisions to rural health worker retention.

4.9. GHS Promotion Guidelines (2023)

Posting provisions in both the 2007 Ghana Health Service (GHS) and Ghana Public Service frameworks include clauses that allow for the co-location of married couples, subject to the availability of vacancies and operational needs (74). In the GHS policy, couples may be posted to the same station, where possible, provided that neither is in a core management position within the same facility. Similarly, the Public Service policy states that, where the exigencies of service allow, a public servant may be posted to the same or nearby location as their spouse upon request (74). These provisions are framed as conditional rather than guaranteed, and decisions are subject to the discretion of the institution. There is no requirement for monitoring the gendered impact of these provisions, nor is there any sex-disaggregated data on rural deployment or retention outcomes related to spousal considerations. No research was identified evaluating the influence of GHS Promotion Guidelines on the retention of rural health workers.

Collectively, these policies signal growing, but uneven, recognition of gender-specific needs within Ghana's HRH environment. The NHSGP provides the most comprehensive foundation for embedding gender responsiveness into HRH development and rural retention strategies, yet exhibits notable gaps in translating policy into operational measures, particularly in the utilisation of sex-disaggregated data and the targeted rural retention of female health workers. While the promotion and posting guidelines support rural retention incentives, they remain largely gender-neutral in scope and lack gender-disaggregated monitoring or evaluation frameworks.

Chapter 5

5. Discussion

5.1. Revisiting the Objectives

This thesis explored the multifaceted factors influencing the retention of health workers in rural Sub-Saharan Africa (SSA), with a particular lens on gender, and assessed if and how these factors are addressed in existing policies and interventions both regionally in SSA and nationally in Ghana. Applying the World Health Organisation (WHO) guideline on rural and remote health worker retention, which comprises personal, financial, career, community, working conditions, and mandatory service factors, has highlighted persistent gender disparities and structural challenges that differentially affect the retention of male and female health workers.

5.2. Evidence Base and Study Characteristics

The evidence reviewed comprised a mix of qualitative, quantitative, mixed-methods, and literature reviews, predominantly from Ghana, Nigeria, Uganda, Malawi, Mali, Senegal, and Sierra Leone. There was a bias toward qualitative and mixed-methods designs, often with small sample sizes, limiting generalizability. Studies were unevenly distributed, with more volume from countries like Nigeria and Ghana, and less from other SSA regions. Categorising studies strictly by the WHO six factors was often challenging due to overlapping influences (e.g., financial and career factors intersecting), reflecting the complex realities governing rural health worker retention. Gender-disaggregated data were inconsistently reported, complicating comprehensive gender analysis.

5.3. Factors

Personal Factors

Personal and family-related factors emerged as critical determinants, with evidence showing that women face disproportionate caregiving burdens, mobility constraints, and socio-cultural expectations that limit their ability to sustain rural postings. Male health workers more frequently benefit from opportunities to integrate family life, such as investing in local assets or bringing spouses to rural areas, which supports their retention and job satisfaction. This gendered dimension is partially recognised in SSA policies, as seen in programs like Nigeria's Women for Health (W4H), which explicitly addresses female mobility and familial support through community engagement and preparatory training. However, at the policy level in Ghana, while the National Health Sector Gender Policy (NHSGP) acknowledges the burden of domestic responsibilities on women, operational mechanisms to address spousal co-location and childcare support remain underdeveloped. Ghana's posting policies offer conditional co-location provisions but lack systematic gender-disaggregated monitoring, diminishing their potential to effectively mitigate these barriers.

Financial Factors

Financial incentives are widely recognised as pivotal to rural retention but have uneven impacts across gender lines. Low salaries, irregular payments, and lack of supplementary income opportunities drive attrition. Men tend to cite economic dissatisfaction as a chief motivation for leaving. At the same time, women are more sensitive to the unavailability of additional income sources and the compounded financial stress from caregiving roles. SSA-wide initiatives, such as Nigeria's Midwives Service Scheme (MSS) and Malawi's GAIA Nursing Scholars Program, incorporate financial support elements such as salaries, allowances, and scholarships to foster retention but continue to struggle with irregular payments and inadequate compensation. Ghana's NHSGP advocates for rural allowances and financial support but falls short of addressing gender-specific financial vulnerabilities, such as out-of-pocket expenses that disproportionately burden female workers.

Career and Educational Opportunities

Career and educational opportunities are pivotal yet unequally accessible. Female health workers experience systemic barriers, including limited access to leadership roles and training, and adverse appraisal practices influenced by pregnancy and household responsibilities. This results in curtailed career progression and reduced motivation to remain in rural assignments. While SSA programs like GAIA in Malawi incorporate leadership and career advancement components for women, such gender-responsive career development remains patchy. Ghanaian policies recognise career progression as a retention strategy but lack tailored affirmative action—specific, measurable steps to address past and present discrimination—to redress gender disparities and do not rigorously monitor promotion outcomes by sex, thereby limiting their effectiveness for women.

Community Factors

Community and social integration factors, including safety concerns, stigma, and acceptance, affect women more acutely. Female health workers face harassment, isolation, and cultural barriers that jeopardise retention. Men's community challenges tend to revolve around role-based stigma rather than personal safety. Interventions in SSA, such as Nigeria's W4H program, attempt to normalise female employment in rural communities through engagement and outreach, promoting social acceptance. The NHSGP in Ghana explicitly highlights safety and harassment issues, recommending non-financial supports such as mentoring and protective mechanisms. However, formal reporting and enforcement systems remain underdeveloped, limiting their impact.

Working Conditions

Working conditions, including infrastructure, managerial support, and workplace safety, universally influence retention. Women, in particular, emphasise safety and supportive management as essential retention factors. SSA retention programs incorporate efforts to improve working environments but face systemic resource constraints and administrative inefficiencies. Ghanaian policies indicate recognition of these issues through the NHSGP and workforce guidelines, with some acknowledgement of gendered preferences; however, infrastructural deficits and inadequate supervisory support persist as retention barriers, especially in rural facilities.

Mandatory Service

Mandatory service strategies are widely utilised but show mixed effectiveness. While compulsory rural service schemes place health workers in underserved areas, long-term retention remains low, especially among women who face additional risks and inadequate gender-responsive support. The evidence base and policy responses in SSA and Ghana reveal limited gender-responsive adaptation or evaluation of these schemes. Ghana's policies enforce mandatory service but do not comprehensively address gender-specific challenges that undermine sustained rural commitment.

5.4. Learning from SSA Policies to Inform Ghana

Promising models from Sub-Saharan Africa (SSA), such as Nigeria's Women for Health (W4H) and Malawi's GAIA Nursing Scholars Programme, combine financial, community, educational, and career support tailored to the specific needs of rural female health workers. For example, W4H recruited over 2,800 rural women, with 78% of graduates employed in rural health roles by program end. It emphasised social norm change, female-friendly accommodations, childcare support, mentorship, and mental health services, achieving notable improvements in women's training access and retention in the challenging settings of northern Nigeria. Malawi's

GAIA similarly integrated salary top-ups with housing and professional development, boosting recruitment and satisfaction.

Ghana could partner with donors and adapt these lessons by improving NHSGP implementation, expanding childcare and spousal support, making gender-responsive measures enforceable in recruitment and retention, and leveraging national data systems—particularly DHIMS-2 and HRIS—for gender-responsive policymaking.

Ghana is comparatively well-positioned to adapt these models due to several strengths. First, it has a long-standing commitment to health sector reform and gender mainstreaming, exemplified by the 2024 National Health Sector Gender Policy (NHSGP), which explicitly prioritises HRH. Second, the country has a robust digital health information management infrastructure, DHIMS-2 and HRIS, already embedded in its planning cycles, capable of generating sex-disaggregated data at scale. Third, Ghana's decentralised governance facilitates the piloting and scaling of retention schemes at the district level, with local adaptation potential. Fourth, Ghana has a relatively high female participation in nursing and midwifery compared to some of its SSA counterparts, forming a strong baseline for gender-focused interventions.

However, a critical missed opportunity in Ghana's HRH landscape is the treatment of gender as a discrete objective or sub-theme rather than embedding it systematically across recruitment, deployment, and retention strategies. This siloed approach impedes the dismantling of socio-cultural and structural barriers, such as family caregiving responsibilities, safety concerns, and limited career advancement prospects, that disproportionately affect female health workers.

While many SSA and Ghanaian policies address rural retention, they are often unevenly gender-responsive. Structural and social barriers disproportionately affecting women are explicitly targeted in integrated programs, such as Women for Health (W4H) and GAIA. In contrast, broader policies often only implicitly consider gender issues through general rural allowances or promotion incentives, which do not specifically address women's unique constraints. Ghana's NHSGP offers a strong strategic vision but lacks operational specificity, including costed plans, timelines, and accountability mechanisms. Although DHIMS-2 and HRIS provide technical capacity to track gendered outcomes, their practical use remains limited. Posting and promotion policies are gender-neutral, missing opportunities to proactively support rural female health workers through enforceable spousal co-location or gender-sensitive promotion pathways.

To fully realise its potential, Ghana must move beyond strategic vision to implementation, applying institutional strengths to embed gender responsiveness across the HRH lifecycle. This could include piloting integrated gender-responsive retention interventions modelled on W4H and GAIA in select districts, mandating actionable gender-disaggregated data use within DHIMS-2 and HRIS, establishing a dedicated gender desk within the Ghana Health Service to oversee implementation, and formalising enforceable, monitored spousal co-location and career progression policies tailored to the needs of rural female health workers.

5.5. Intersectionality Considerations

Furthermore, while this thesis primarily focuses on gender as a key differentiating factor, it is essential to acknowledge the intersectionality of gender with other social determinants, such as age, marital status, and socioeconomic background. For instance, young, newly graduated female health workers may face different challenges related to security and family support compared to older, married female health workers. Similarly, the financial pressures on male health workers may be exacerbated by broader societal expectations that they serve as primary providers. While the current findings hint at these complexities—e.g., the higher retention rates of retired midwives in Nigeria's MSS and the varying motivations of male health workers to invest in land—a more explicit intersectional analysis could provide deeper insights into the nuanced experiences of health workers in rural SSA.

In conclusion, although several factors affecting rural health worker retention are recognised in current policies across SSA and Ghana, explicit, comprehensive, and enforced gender-responsive strategies remain limited. Future policy and programmatic efforts should prioritise the systematic integration of gender-disaggregated data, targeted supports for women's caregiving and safety needs, equitable career advancement mechanisms, and robust evaluation frameworks to effectively reduce gender disparities and improve retention outcomes in rural health workforces. Effective gender-responsive rural retention requires more than symbolic commitments; it calls for enforceable mechanisms, dedicated resources, and intersectoral coordination. Aligning HRH policy with housing, transport, education, and gender equity agendas would strengthen support systems for female health workers in underserved areas and improve long-term retention.

5.6. Relevance of Framework

The WHO World Health Organisation (WHO) guideline on rural and remote health worker retention provided a valuable framework to categorise the determinants of rural health worker retention across personal, financial, career, community, working conditions, and regulatory domains. However, as noted earlier, many factors overlapped—for example, financial incentives intersected with personal and career considerations, highlighting the complex realities health workers face. This required a flexible interpretation to avoid rigid categorisation.

Importantly, the WHO framework does not explicitly prioritise gender or intersectionality, central to this thesis. To address this, gender and intersectionality were systematically overlaid during analysis. Gender-disaggregated data were extracted where available, and differences in the experiences of men and women across various domains were highlighted. Intersectionality was considered in terms of how age, marital status, and socioeconomic background further influence retention. This combined approach maintains the framework's organisational strengths while providing a nuanced, gender- and intersectionality-informed understanding of rural retention.

5.7. Study Limitations

1. Limited access to Ghana's most recent 5-Year Public Health Workforce Strategic Plan constrained policy analysis to older documents, which may not fully reflect current strategic priorities.
2. The literature review is skewed toward Anglophone countries and female health workers, limiting its generalizability across the diverse Sub-Saharan African region and male health worker perspectives.
3. The inconsistent availability of gender-disaggregated data necessitated interpretive assumptions, limiting comprehensive gender and intersectional analysis.
4. Many included studies employed qualitative or small-sample designs, which limited statistical power and the broader applicability of the findings.
5. The lack of rigorous, long-term evaluations of gender-responsive policies and programmes has reduced the ability to assess their real-world impact on rural health worker retention.
6. Potential publication and reporting bias may have led to an incomplete or overly optimistic portrayal of retention challenges and gender-related issues.
7. The inconsistent and overlapping use of terms such as policies, strategies, programmes, and interventions across the literature and documents complicated the analysis and synthesis of gender-responsive rural health workforce retention efforts.

Chapter 6

6. Conclusion and Recommendations

6.1. Conclusion

This thesis set out to examine gender-specific factors influencing the retention of health workers in rural Ghana, utilising the WHO rural health workforce retention framework and drawing comparative insights from other sub-Saharan African countries. The analysis showed that, while systemic barriers affect all rural health workers, women face a disproportionate burden due to entrenched gender norms, constrained career progression, safety concerns, and inadequate institutional support.

Findings from both national policies and regional programmes demonstrate that integrated, gender-responsive approaches, while more effective, are only partially realised in Ghana's current health system. Ghana's 2024 National Health Sector Gender Policy marks a significant step forward, but gaps remain in translating its intentions into meaningful and sustained change at the facility and community levels. Challenges persist in areas such as family-friendly infrastructure, workplace safety, and targeted professional support for rural female health workers.

A key insight is the value of adapting and contextualising successful programme elements from Nigeria and Malawi, where financial, professional, and community support have improved women's retention in rural health roles. However, persistent issues, such as the lack of intersectional data, inconsistent monitoring, and underrepresentation of women in leadership, highlight the need for deeper reform and sustained investment.

Several important questions remain: How can Ghana implement truly gender-responsive strategies in resource-constrained environments? What accountability mechanisms can ensure that gender responsiveness moves from policy intent to measurable impact? How do intersectional factors, such as age, marital status, or socio-economic background, shape health worker retention beyond gender alone?

These findings and open questions form the basis for the actionable recommendations presented in the following section, which aim to guide policy and practice toward more equitable and effective rural health workforce retention in Ghana.

6.2. Recommendations

For the Ministry of Health and Policymakers

- Operationalise NHSGP Targets: Develop clear, adequately funded, and time-bound implementation plans to translate NHSGP's gender-related goals into actionable strategies at the national, regional, and district levels. Establish accountability mechanisms and conduct regular progress reviews to ensure effective management.
- Design Gender-Responsive Incentives: Pilot financial and non-financial incentive packages tailored to the needs of female health workers, including flexible postings, childcare services, family housing, and rural hardship support.
- Invest in Gender-Responsive Infrastructure: Ensure rural facilities provide safe staff housing, childcare options, and adequate sanitation. Promote intersectoral collaboration with transport, housing, and education sectors to address broader structural barriers.

For Health Workforce Managers and HRH System Actors

- Promote Equitable Access to Career Development: Ensure transparent and equitable access to study leave and in-service training opportunities. Expand continuous professional development through online and remote modalities to overcome geographic barriers.

- Implement Gender-Responsive Supervision: Train supervisors and facility heads on gender equity, fostering a respectful workplace culture, and preventing harassment. Establish confidential reporting systems with protections for complainants.

For Research and Monitoring Bodies

- Evaluate NHSGP and Related Policies: Conduct implementation research to assess the effectiveness, reach, and challenges of Ghana's gender-related HRH policies at all administrative levels.
- Investigate Intersectional Retention Dynamics: Examine how gender interacts with marital status, professional cadre, geographic location, and caregiving roles (including among men) to shape retention outcomes.

For Donors and International Partners

- Support the Scale-up of Proven Models: Adapt and fund the expansion of proven gender-responsive initiatives, such as Nigeria's Women for Health and Malawi's GAIA Nursing Scholars program, in Ghana.
- Link Retention Strategies to Broader Development Agendas: Integrate health workforce retention efforts with rural infrastructure, education, transport, and women's empowerment policies to build sustainable rural retention systems.

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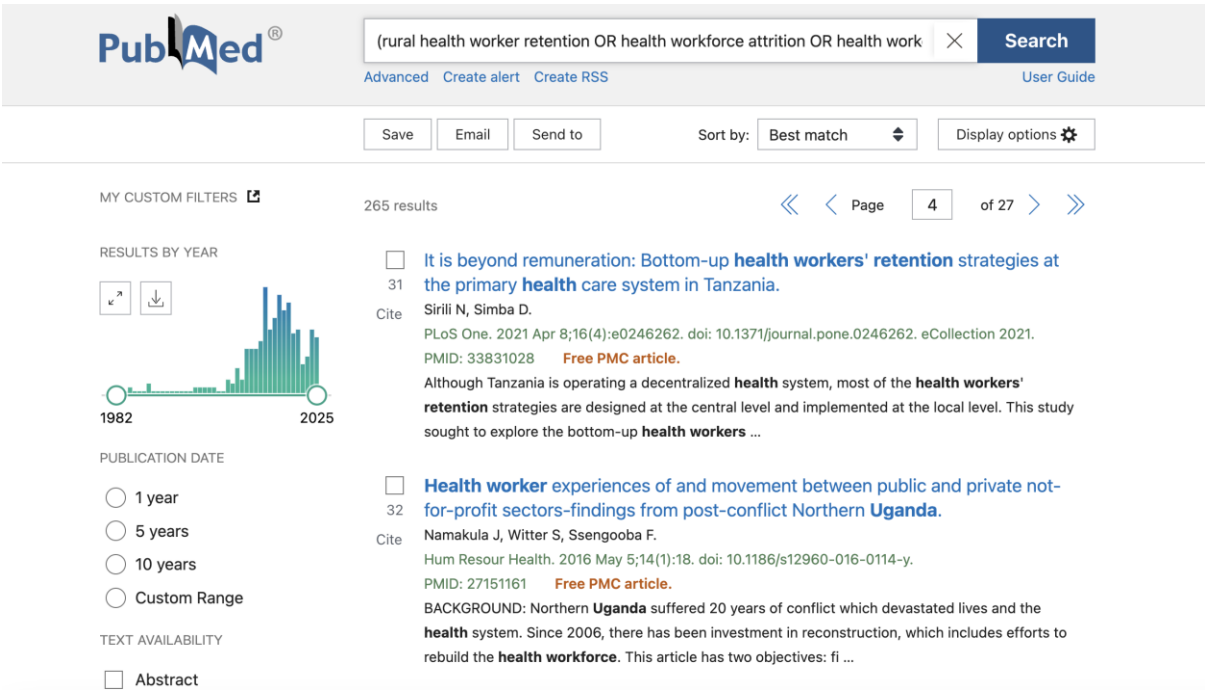
Annexe 1: Literature Search Strategy

Peer-Reviewed Literature Search Strategy

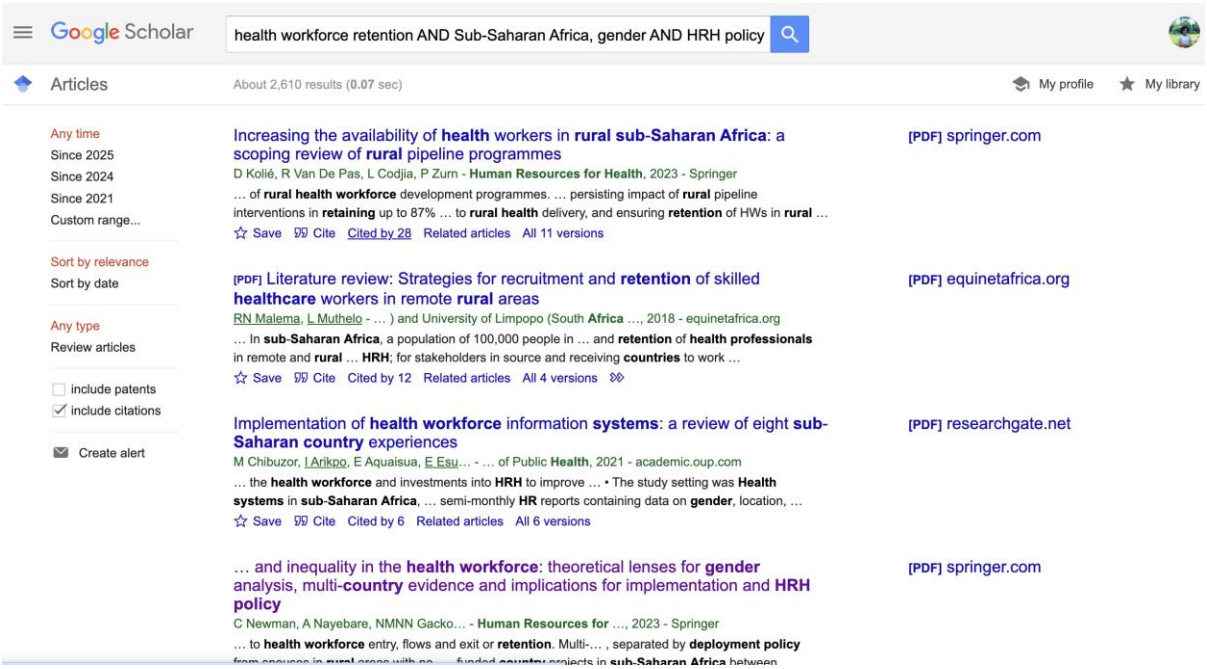
Component	Details
Databases	PubMed, Google Scholar, VU Library
Timeframe	January 2015 – June 2025
Search Terms	rural health worker retention, gender, health workforce attrition, Sub-Saharan Africa, Ghana, Nigeria, Malawi, Uganda, Rwanda
Boolean String	(rural health worker retention OR health workforce attrition OR health worker turnover) AND (gender OR female health worker OR gendered barriers) AND (Sub-Saharan Africa OR Ghana OR Nigeria OR Uganda OR Rwanda OR Malawi)
Language	English
Inclusion Criteria	Rural health worker retention; SSA region; gender-related; includes primary or review studies
Exclusion Criteria	Urban-only studies; outside SSA; no HRH focus; not in English
Other Techniques	Snowballing from key studies, Google Scholar citation tracking



Annexe 2: Policies/Strategies/Interventions Search Strategy

Policy and Programme Document Search Strategy

Component	Details
Sources	WHO, World Bank, Ministries of Health (Ghana, Nigeria, Malawi, Rwanda, Uganda), Google, Programme websites
Search Tools	Targeted Google searches, institutional repositories
Search Terms	health workforce retention, Sub-Saharan Africa, gender, HRH policy, rural deployment, health workforce, rural retention, health systems, Ghana, Nigeria, Malawi, Uganda, Rwanda
Boolean String	health workforce retention AND Sub-Saharan Africa, gender AND HRH policy, rural deployment AND health workforce, rural retention AND health systems
Inclusion Criteria	Government or agency-issued HRH/gender/retention policies relevant to SSA; available in English
Exclusion Criteria	Urban-focused only; documents unrelated to HRH or gender; documents not available in English
Other Techniques	Snowballing through document citations; cross-referencing between related policies (e.g. NHSGAP → HRH policy)



Annexe 3: List of Reviewed Policies

Country	Policy Title	Year	Issuing Institution	Gender-Relevant Focus
Ghana	National Health Sector Gender Action Plan (NHSGAP)	2024	Ministry of Health	Directly addresses gender equity in HRH with targets for leadership, gender-friendly infrastructure, and disaggregated M&E.
Ghana	GHS Promotion Guidelines	2023	Ghana Health Service	Offers early promotion for rural workers but lacks explicit gender responsiveness.
Ghana	GHS and Public Service Posting Policies	2007	Ghana Health Service / Civil Service	Allows for spousal co-location; framed as gender-neutral and discretionary.
Uganda	HRH Strategic Plan	2020–2030	Ministry of Health	Commits to gender mainstreaming in HRH recruitment, retention, and leadership.

Annexe 4: List of Reviewed Gender-Responsive Interventions and Programmes

Country	Programme	Implementing Body	Duration	Gender-Responsive Features
Nigeria	Women for Health (W4H)	Health Partners Int'l / DFID	2012–2022	Prepares rural women for health training; supports community acceptance, family engagement, and rural deployment.
Nigeria	Midwives Service Scheme (MSS)	Federal Ministry of Health	2009–present	Provides rural midwives with salaries, housing, and deployment support.
Malawi	GAIA Nursing Scholars & Fellows Programme	GAIA Global Health	2005–present	Scholarships and rural bonding for female nurses; includes mentorship and leadership pathways.

Annexe 5: AI Declaration Form

ANNEX X

KIT Institute (Masters or Short course) Participants
Declaration for Use of Generative AI (GenAI)

Please complete and submit this form as an annex on the last page of your assignment file; and not as a separate document.

Check the box that applies to your completion of this assignment:

☐ I confirm that **I have not used** any generative AI tools to complete this assignment.

☑ I confirm that **I have used** generative AI tool(s) in accordance with the ***"Guidelines for the use of Generative AI for KIT Institute Master's and Short course participants"***. Below, I have listed the GenAI tools used and for what specific purpose:

Generative AI tool used	Purpose of use
1. ChatGPT	For brainstorming purposes
2. Perplexity	For structuring research process
⋯ Grammarly	For correcting grammar