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Nurses Retention in Sub-Saharan Africa: A Critical Review of Systematic and Scoping Reviews

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ABSTRACT

Background: Nurse retention in Sub-Saharan Africa (SSA) remains a pressing concern, yet the body of systematic and scoping reviews addressing this issue is scattered across country-specific primary studies and inconsistently defined constructs, and no prior work has synthesized and critically appraised the systematic and scoping reviews on this topic. ***Objectives*:** This critical review sought to integrate evidence on the factors of nurse retention in SSA, evaluate interventions that promote retention, and reveal areas of knowledge that require further exploration for future research and policy initiatives. ***Methods*:** Following PRISMA guidelines, a comprehensive search was conducted across PubMed, Scopus, and Web of Science, supplemented by grey literature sources, Google Scholar, and the regional repository Africa Journal Online, to capture SSA-specific reviews published from January 2010 to March 2025. Two reviewers independently screened records and extracted data, with disagreements resolved by discussion or third-reviewer arbitration. Methodological quality was appraised using the JBI Critical Appraisal Checklist. Data was synthesized narratively across three domains: factors influencing retention, interventions, and knowledge gaps. The review was registered in Prospero with protocol number CRD420251241670. ***Results*:** Four reviews fulfilled the inclusion criteria. Country coverage varied widely, ranging from 39 to 50 SSA countries across the included reviews. The low quantity of qualifying reviews is a noteworthy result, indicating the fragmented nature of synthesis-level research on this subject in SSA, and it limits the confidence that can be placed in any downstream conclusions. Within this limited evidence base, retention was shaped by a variety of economic considerations, opportunities for professional growth, the nature of the work environment, the calibre of leadership, employment conditions, social dynamics, and systemic challenges. Effective interventions encompassed structured onboarding programs, mentorship, financial incentives, and nurses' involvement in decision-making. Critical analysis revealed significant gaps encompassing methodological constraints, inadequate documentation of implementation processes, a scarcity of research in rural and conflict-affected regions, and insufficient policy enforcement. ***Conclusion*:** The available evidence suggests that multifaceted interventions may improve nurse retention in SSA, but firmer conclusions, particularly on policy implementation, require stronger primary studies and additional review-level evidence with formal certainty assessment. ***Implications for Nursing*:** Strengthening nurse retention in Sub-Saharan Africa requires integrated nursing workforce strategies supported by effective leadership, sustainable financing, strong governance, and ethical international recruitment policies to improve workforce stability and healthcare delivery.

Keywords: Nurse retention, Sub-Saharan Africa, Retention interventions, Critical review.

What does this paper add?

1. This is the first critical review that brings together and critically appraises systematic and scoping studies on nurse retention in Sub-Saharan Africa, generating an evidence foundation that is both synthesized and analytically enhanced.
2. Recognition of retention drivers as categorized into seven principal domains: economic considerations, career advancement, workplace environment, leadership and management, employment circumstances, social and personal influences, and systemic challenges.
3. A systematic identification of significant knowledge gaps in methodological, intervention research, context-specific, migration research, workforce density, policy implementation, and educational system areas that hinder evidence-based policymaking.

Introduction

Nurses play a crucial role in ensuring that health systems throughout the globe are accessible, functioning, and strong (Kruger et al., 2025). They are the first point of contact for patients, their families, and healthcare organizations, and they make up a significant portion of the health workforce (World Health Organization [WHO], 2020). On a global scale, the World Health Organization estimated a deficit of around 6.2 million nurses in 2020 (WHO, 2020), which decreased to 5.8 million nurses by 2023, with an anticipated reduction to 4.1 million nurses by 2030 (WHO, 2025). This nurse reduction persists predominantly in low- and middle-income nations, especially in African and South-East Asian regions, where 78% of the global nursing workforce serves only 49% of the world's population (WHO, 2025). Sub-Saharan Africa (SSA) bears an inequitable burden of this global disparity: in contrast to the WHO's standard of 4.45 health professionals per 1,000 individuals necessary for Universal Health Coverage, the density of nurses and midwives in the region languishes below one per 1,000 individuals in numerous countries, significantly deviating from the established benchmark, and the deficit of nurses is both acute and enduring (WHO, 2020). Health systems throughout SSA encounter a complex web of challenges related to financing, infrastructure, and training capacity (Agyepong et al., 2017). Consequently, merely augmenting the number of nurses will not adequately address the existing deficit. This is of paramount importance, as nurses and midwives provide the preponderance of primary, secondary, and tertiary care within the region (Corley et al., 2016; Nygaard Moller, 2024), even as the region faces a disproportionate burden of maternal and child mortality, endemic infectious disease, and rising non-communicable disease (Agyepong et al., 2017).

Despite recognition of this problem, there is a lack of cohesion in the current research on nurse retention in SSA. While several studies have looked at what keeps nurses from leaving, their methods have been all over the place and have varied in terms of methodological rigour (Ayalew et al., 2021; Nigussie et al., 2023). Moreover, the conceptualization of "retention" itself lacks uniformity, as "intention to stay" is being used a proxy rather than measuring actual retention outcomes, complicating efforts to synthesize findings across the region (Worku et al., 2019). A substantial research vacuum is created by this dispersion of information. So far, there hasn't been a review that synthesizes and critically appraises all of the scoping and systematic research on nurse retention in SSA.

The retention of nurses refers to the capacity of a healthcare organization to maintain its nursing staff in employment over an extended period (Wardhani & Hariyati, 2023). The process entails sustaining a consistent workforce by mitigating turnover and attrition rates, thus guaranteeing that nurses retain their roles and decreasing the incidence of exits (Kiptulon et al., 2025). Turnover is the observed exit of nurses from a post, organization, or the profession. Intention to stay (or its inverse, turnover intention) is a psychological inclination to remain in or leave a job, and is a predictor of, but not equivalent to, actual retention (Worku et al., 2019). Migration refers specifically to nurses leaving their country of practice, which is one particular pathway by which retention fails at the national level (Pressley et al., 2025). According to Ren et al. (2024), the turnover rate for nurses worldwide was 16%, with individual rates ranging from 8% to 36.6%. A recent research indicates that the aggregated retention rate among nurses in SSA is roughly 53%, with an "intention to stay" rate of around 57%, implying that over a half of the nursing workforce is at risk of departing from their

present roles (Kiptulon et al., 2025). This high departure of the nursing workforce, however, do not manifest in a vacuum, as factors influencing nurse attrition are multifaceted, spanning individual, organizational, and systemic levels, including heavy workload, a lack of assistance, few prospects for growth, job satisfaction, conflict, financial compensation, and a feeling of belonging at work (Elfios et al., 2024; Fasbender et al., 2019; Yang et al., 2017). Considering the intricate relationship between these elements, tackling nurse retention is a complicated task that calls for focused interventions. On the other hand, improving nurse retention rates has far-reaching consequences that go beyond just a stable staff. Patient satisfaction, medical error risk, workloads for remaining personnel, and continuity of treatment are all negatively affected by high turnover rates (Husted et al., 2010; Jones et al., 2015). From a systems perspective, attrition adds to the growing costs of hiring, onboarding, and training, further pressuring healthcare budgets in settings with limited resources (Duffield et al., 2014).

Furthermore, this review is extensively guided by the Job Demands-Resources (JD-R) Model (Bakker & Demerouti, 2007), which posits that economic, leadership, and work-environment resources can mitigate job demands and thus enhance retention, whereas their lack increases the likelihood of turnover. Expanding upon this viewpoint and the identified factor domains from the included reviews, we present a simple conceptual framework wherein economic conditions, leadership quality, and the work environment serve as the primary upstream resources influencing nurse retention in SSA (Figure 1).

The lack of a critical synthesis constrains the grasp of general trends, moderating influences, and effective interventions that could be applied across various healthcare contexts within the region. As a result, those in positions of policy-making, administration, and nursing leadership find themselves without a foundation of evidence to guide strategic, evidence-based methods aimed at enhancing workforce retention. Therefore, addressing this gap is essential. A critical assessment will elucidate the determinants and interventions that effectively bolster nurse retention, pinpoint gaps in current evidence, and facilitate the development of sustainable policies in accordance with the WHO Global Strategy on Human Resources for Health Workforce (McIsaac et al., 2024). Thus, this review aims to critically appraise and synthesize available systematic and scoping reviews on nurse retention in SSA, providing a unified evidence base to guide policy, practice, and future research to build and sustain a resilient nursing workforce across SSA.

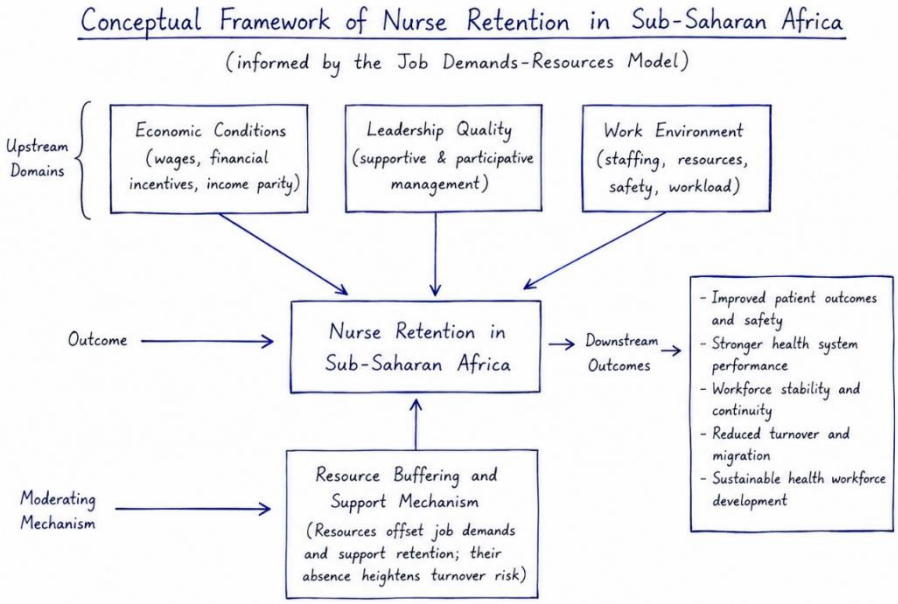


Figure 1. Conceptual framework of nurse retention in Sub-Saharan Africa, informed by the job demands-resources model

Aims of the Study

1. Critically synthesizing evidence on the factors influencing nurse retention across SSA.
2. Critically evaluating and appraising evidence from existing reviews on interventions and strategies reported to enhance nurse retention in SSA.
3. Analyzing and identifying knowledge gaps and priority areas for future research to strengthen understanding and policy responses related to nurse retention in SSA.

Materials and Methods

Study Design

This study is a critical review of systematic and scoping reviews, employing a systematic search strategy to identify and evaluate pertinent literature while emphasizing critical analysis and theoretical synthesis rather than exhaustive inclusion (Grant & Booth, 2009). A critical review is ideal for topics that need a thorough evaluation of quality, coherence, and consequences, yet have a little amount of evidence (Saunders & Rojon, 2011). The methodology adhered to the Joanna Briggs Institute (JBI) guidance for reviews (Aromataris et al., 2020) and complied with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 statement (Page et al., 2021).

Protocol and Registration

This review is registered in Prospero under protocol number CRD420251241670.

Eligibility Criteria

Population (P): The review encompassed investigations featuring registered nurses or professional nurses operating within various healthcare environments. Research that concentrated on alternative healthcare practitioners, such as physicians, or allied health workers, was omitted unless it was possible to extract data pertinent to nurses from it.

Concept (C): The primary concept of interest was nurse retention. Reviews examining actual retention outcomes (e.g., continued employment, retention rates, workforce stability) were included. For conceptual clarity, nurse retention was defined as the sustained employment of nurses within a healthcare organization or system over a defined period. Factors influencing nurse retention refer to conditions that affect nurses' decisions to remain in or leave the nursing workforce in Sub-Saharan Africa. Drivers of nurse retention refer to factors that encourage nurses to remain in their current positions or within the nursing workforce, and nurse retention strategies are interventions, policies, or practices designed to improve the retention of nurses in SSA. Reviews the reported outcomes of which were confined to turnover intention (the psychological inclination to leave one's job) with no actual retention or turnover outcome were excluded at review level. This exclusion applied to eligibility only. Where an included review's primary studies used intention-to-stay as a proxy measure alongside retention outcomes, or where intention-to-stay evidence was relevant to interpreting a retention finding, this was retained and discussed narratively, since the two constructs are conceptually linked; they are treated separately, not interchangeably, throughout this review (see Introduction for definitions).

Context (C): The scope was confined to nations within Sub-Saharan Africa, including healthcare establishments, like hospitals, community health centers, and primary care institutions.

Information Sources and Search Strategy

A comprehensive search was conducted across PubMed, Scopus, and Web of Science, supplemented by grey literature sources, Google Scholar, and the regional repository Africa Journal Online, to capture SSA-specific reviews published from January 2010 to March 2025. We therefore screened the first 200 relevance-ranked records in Google Scholar, a threshold commonly used in reviews to balance sensitivity against the platform's high proportion of duplicate and irrelevant hits beyond this point. Grey literature was identified using Google Scholar, AJOL and hand-searching of relevant websites. The same was screened using the same eligibility criteria and PCC framework as peer-reviewed records. The reference lists of the included reviews were also hand-searched to identify further eligible records. The methodology employed in the search was meticulously outlined in Table 1. Reviews published in English from January 2010 to March 2025 were exclusively considered to guarantee that the evidence is both contemporary and pertinent to current policy discussions.

Table 1. PRISMA search strategy

Database	Date Search	Search Strategy	Search Results (n)	Filters Applied
PubMed	July 2024	("systematic review" [Publication Type] OR "systematic review" [Title/Abstract] OR "meta-analysis" [Publication Type] OR "meta-analysis" [Title/Abstract]) AND (nurs* [Title/Abstract] OR "nursing workforce" [Title/Abstract] OR midwives*[Title/Abstract]) AND (retention[Title/Abstract] OR turnover[Title/Abstract] OR "intention to stay" [Title/Abstract] OR "intention to leave" [Title/Abstract] OR "job satisfaction"[Title/Abstract])	37	Publication date: January 2010-March 2025; Language: English; Study type: Systematic reviews Scoping reviews
Scopus	July 2024	TITLE-ABS-KEY ("systematic review" OR "meta-analysis") AND TITLE-ABS-KEY (nurs* OR "nursing workforce" OR midwi*) AND TITLE-ABS-KEY (retention OR turnover OR "intention to stay" OR "intention to leave" OR "job satisfaction")	4	Publication date: January 2010-March 2025; Language: English; Document type: Review
Web of Science	July 2024	("nurse*" OR "nursing staff" OR "registered nurse*" OR "professional nurse*") AND ("retention" OR "retain*" OR "turnover" OR "attrition" OR "intention to stay" OR "intention to leave") AND ("Sub-Saharan Africa" OR "Africa South of the Sahara" OR "West Africa" OR "East Africa" OR "Central Africa" OR "Southern Africa") AND ("systematic review" OR "scoping review" OR "umbrella review" OR "meta-analysis")	10	Publication date: January 2010-March 2025; Language: English; Study type: Systematic and scoping reviews
Google Scholar	July 2024	("nurse retention" OR "retention of nurses" OR "nursing workforce retention") AND ("Sub-Saharan Africa" OR "sub-Saharan Africa" OR Africa); ("nurse*" AND "retention" AND "Sub-Saharan Africa") AND ("systematic review" OR "scoping review" OR "meta-analysis")	444	Publication date: January 2010-March 2025; Language: English
Africa Journal Online (AJOL)	July 2024	(nurse* OR "nursing staff" OR "registered nurse*" OR "professional nurse*") AND (retention* OR turnover OR attrition OR "intention to stay" OR "intention to leave") AND ("Sub-Saharan Africa" OR "Africa South of the Sahara" OR "West Africa" OR "East Africa" OR "Central Africa" OR "Southern Africa" OR Nigeria OR Ghana OR Kenya OR Uganda OR South Africa OR Ethiopia OR Tanzania OR Zambia OR Zimbabwe) AND ("systematic review" OR "scoping review" OR "umbrella review" OR "meta-analysis")	4,217	Publication date: January 2010-March 2025; Language: English

Study Selection

We imported all the discovered records into Rayyan to remove duplicates and filter them systematically. Two reviewers separately used the PCC criteria to screen titles and abstracts, and then the full texts were reviewed. At both stages, the two reviewers attempt to resolve any disagreement through direct discussion, referring back to the PCC eligibility criteria; However,

a third reviewer was not invited to arbitrate, because the two primary reviewers eventually reached consensus after discussion. The review selection process was documented using a PRISMA flow diagram.

Data Extraction and Synthesis

A standardized JBI data extraction template was used to record, for each included review, its aim, design, search dates and databases, countries and settings covered, number and type of primary studies, participant/sample characteristics, quality appraisal outcome, and key findings relevant to the three review domains. Risk of bias at the level of the included reviews (rather than of their individual primary studies, which were not separately re-appraised) was assessed as part of the JBI Critical Appraisal Checklist described below, which incorporates items on the rigour of each review's own search, selection, and appraisal processes (Table 2). Where an included review reported a finding incompletely (for example, an effect size without a corresponding confidence interval or sample size), this was recorded as reported and flagged narratively as such in the relevant table and text, rather than estimated, imputed, or excluded; no quantitative pooling was undertaken, so no formal statistical method for handling missing results (e.g., sensitivity analysis) was required. A narrative synthesis technique was used to integrate and summarize the results, considering the predicted variation in review designs, demographics, and outcome measures. Theme generation followed a framework synthesis approach. The three top-level domains, (1) factors influencing retention, (2) interventions and strategies, and (3) knowledge gaps were defined deductively from the study objectives, while the specific factor and intervention sub-categories within each domain (e.g., economic factors, leadership and management) were generated inductively from the content of the four included reviews. Findings were examined for coherence, depth, application, and transferability across SSA settings by comparing reviews for convergence, divergence, and contextual variation.

Quality Appraisal

The methodological quality of the reviews included in this analysis was evaluated through the application of the JBI Critical Appraisal Checklist for Systematic Reviews and Research Syntheses (Aromataris et al., 2020). This is an 11-item checklist scored as "yes," "no," "unclear," or "not applicable" against criteria including clarity of the review question. Each review was assessed as low, moderate, or high quality according to its alignment with essential criteria, which included the clarity of objectives, comprehensiveness of the search, inclusion criteria, critical appraisal, and the approach to synthesis. The differences were settled through a collective agreement (Table 2).

Table 2. JBI critical appraisal checklist for articles on nurse retention in Sub-Saharan Africa

JBI Appraisal Criteria	Kiptulon et al. (2025)	Adam et al. (2025)	De Vries et al. (2023)	Saralegui-Gainza et al. (2022)
1. Is the review question clearly and explicitly stated?	Yes	Yes	Yes	Yes
2. Were the inclusion criteria appropriate for the review question?	Yes	Yes	Yes	Yes
3. Was the search strategy appropriate?	Yes	Yes	Yes	Yes
4. Were the sources and resources used to search for studies adequate?	Yes	Yes	Yes	No
5. Were the criteria for appraising studies appropriate?	Yes	Not explicitly stated	Yes	Not applicable - Not a systematic review of studies; used official WHO statistical data
6. Was critical appraisal conducted by two or more reviewers independently?	Yes	Yes	Yes	Not applicable - Statistical analysis of WHO data, not study appraisal
7. Were there methods to minimize errors in data extraction?	Yes	Yes	Yes	Not applicable - Direct extraction from WHO database
8. Were the methods used to combine studies appropriate?	Yes	Yes	No meta-analysis conducted -	Not applicable
9. Was the likelihood of publication bias assessed?	No - Not explicitly mentioned	No - Not explicitly mentioned	No - Not explicitly mentioned	Not applicable - Used official WHO statistics, not published studies

10. Were recommendations for policy and/or practice supported by the reported data?	Yes	Yes	Yes	Yes
11. Were the specific directives for new research appropriate?	Yes	Yes	Yes	Yes
Overall Quality Score	**10/11 (91%)** High Quality	**8/11 (73%)** Moderate Quality	**8/11 (73%)** Moderate Quality	**6/9 (67%)** Moderate Quality
Risk of Bias Assessment	**LOW RISK** - Comprehensive search, quality appraisal, independent reviewers, protocol registered (PROSPERO)	**MODERATE RISK** - No formal quality appraisal, publication bias not assessed, but extensive search strategy	**MODERATE RISK** - Limited database search, no publication bias assessment, but used MMAT	**LOW-MODERATE RISK** - Single data source, but official WHO statistics, appropriate statistical methods

Ethical Considerations

Ethical approval was not required, as this critical review synthesized data from published literature without involving human participants or primary data collection.

Results

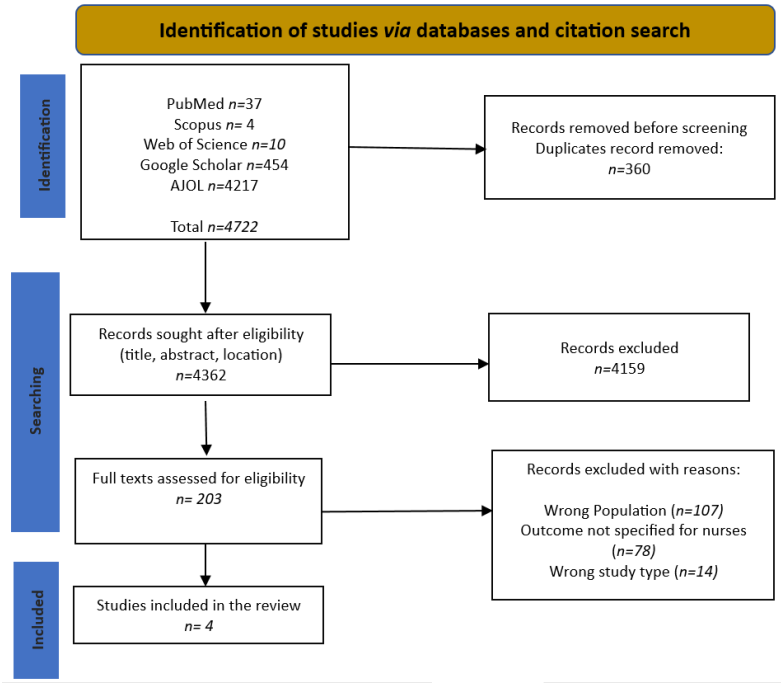


Figure 2. PRISMA flow diagram

Study Selection

A total of 4722 records were retrieved from all databases. After removing 360 duplicates, 4362 records were screened, and 4159 were excluded based on title, abstract, and location. Most excluded records at this stage were either primary studies rather than reviews, or were reviews outside SSA. Two hundred and three full-text articles were reviewed, of which 199 were excluded due to the wrong population (107), outcomes not focused on nurses (78), or inappropriate study design (14). Ultimately, four studies met the inclusion criteria and were included in the critical review (Figure 2). Given the limited scope of only four eligible reviews, which are derived from an overlapping and non-independent evidence base, the findings presented below should be interpreted as a reflection of the current state of the literature on nurse retention in SSA, rather than as a definitive or widely applicable conclusion.

Table 3. Summary of the characteristics of the included reviews

Author(s) and publication year	Countries	Study type	Databases searched and search period	Studies included	Sample size/Data	Quality Assessment Tool	Analysis Method
Kiptulon et al. (2025)	39 SSA countries (WHO Health Workforce Safeguards List 2023)	Systematic Review & Meta-analysis	PubMed, Ovid Medline, Embase, CINAHL, Scopus, Grey Literature (Inception to August 2024)	31 articles (21 peer-reviewed, 7 grey literature)	30,972 participants	Mixed-Method Appraisal Tool (MMAT) 2018	Random-effect model; I^2 statistics for heterogeneity
Adam et al. (2025)	SSA countries (migration destinations)	Scoping Review	Health and interdisciplinary databases (2000 onwards)	28 studies (21 peer-reviewed, 7 grey literature)	Not specified	Not specified	Narrative synthesis guided by JBI methodology
De Vries et al. (2023)	Global (with SSA focus)	Systematic Review	16 databases; CINAHL, Medline, Web of Science, Scopus, Embase, EBSCO, etc. (2012-July 2022)	55 records	Nurses: 46 studies (83.6%); Physicians: 4 studies (7.2%)	Mixed-Method Appraisal Tool (MMAT) 2018	Narrative synthesis (no meta-analysis due to heterogeneity)
Saralegui-Gainza et al. (2022)	50 sub-Saharan African countries	Trend Analysis	WHO African Health Statistics (2004-2016)	12 countries with ≥7 years data	50 countries; 12 analyzed for trends	Not applicable (secondary data analysis)	Join point regression

Table 3 summarizes the four reviews included in the critical review. These comprised two systematic reviews (one with meta-analysis), one scoping review, and one trend analysis, collectively covering evidence from 50 Sub-Saharan African countries and synthesizing findings from more than 100 primary studies and WHO workforce data.

Table 4. Factors influencing nurse retention

Factor category	Specific factor	Effect on retention	Freq. (n reviews)	Quality of source review(s) (JBI score)	Strength of evidence	Source studies
Economic Factors	Low salaries and inadequate remuneration	Negative - major driver of turnover	3	High-Moderate (73-91%)	Strong (convergent across 3 reviews)	Kiptulon et al. (2025), Adam et al. (2025), De Vries et al. (2023)
	Economic challenges and inflation	Negative - reduces purchasing power	1	Moderate (73%)	Limited (single review, narrative)	Adam et al. (2025)
	Income disparities with destination countries	Negative - drives international migration	2	High-Moderate (73-91%)	Moderate (2 reviews)	Adam et al. (2025), Kiptulon et al. (2025)
	Financial incentives and competitive salaries	Positive - improves retention	2	High-Moderate (73-91%)	Moderate-Strong (2 reviews)	Kiptulon et al. (2025), De Vries et al. (2023)
Career Development	Limited professional development opportunities	Negative - major push factor	3	High-Moderate (73-91%)	Strong (convergent across 3 reviews)	Kiptulon et al. (2025), Adam et al. (2025), De Vries et al. (2023)
	Access to training and education	Positive - enhances retention	3	High-Moderate (73-91%)	Strong (convergent across 3 reviews)	Kiptulon et al. (2025), Adam et al. (2025), De Vries et al. (2023)
	Career progression opportunities	Positive - significant retention factor	2	High-Moderate (73-91%)	Moderate (2 reviews,consistent direction)	Kiptulon et al. (2025), De Vries et al. (2023)
	Lack of training capacity	Negative - limits skill development	1	Moderate (73%)	Limited (single review, narrative)	Adam et al. (2025)
Work Environment	High workload and staff shortages	Negative - leads to burnout	2	High-Moderate (73-91%)	Moderate (2 reviews, consistent direction)	Kiptulon et al. (2025), De Vries et al. (2023)
	Poor working conditions	Negative - major determinant	3	High-Moderate (73-91%)	Strong (convergent across 3 reviews)	Kiptulon et al. (2025), Adam et al. (2025), De Vries et al. (2023)
	Supportive work	Positive - strong	2	High-Moderate	Moderate (2 reviews,	Kiptulon et al. (2025), De

	environment	retention factor		(73-91%)	consistent direction)	Vries et al. (2023)
	Safety and security concerns	Negative - drives migration	2	High-Moderate (73-91%)	Moderate (2 reviews, consistent direction)	Adam et al. (2025), Kiptulon et al. (2025)
	Adequate equipment and supplies	Positive - improves job satisfaction	2	High-Moderate (73-91%)	Moderate (2 reviews, consistent direction)	Kiptulon et al. (2025), De Vries et al. (2023)
Leadership & Management	Supportive, participative leadership	Positive - explains 23% variance in retention	1	High (91%)	Limited-Moderate (1 review, but quantitative single-study association from a high-quality, low-risk review)	Kiptulon et al. (2025)
	Poor management practices	Negative - reduces retention	1	High (91%)	Limited (single review, narrative)	Kiptulon et al. (2025)
	Transparent HR management	Positive - enhances stability	1	High (91%)	Limited (single review, narrative)	Kiptulon et al. (2025)
Employment Conditions	Job insecurity and temporary contracts	Negative - reduces retention	2	High-Moderate (73-91%)	Moderate (2 reviews, consistent direction)	Kiptulon et al. (2025), Adam et al. (2025)
	Permanent employment	Positive - provides stability	1	High (91%)	Limited (single review, narrative)	Kiptulon et al. (2025)
	High unemployment rates	Mixed - creates complex dynamics	1	Moderate (73%)	Limited (single review, narrative)	Adam et al. (2025)
Social & Personal Factors	Family ties and social networks	Mixed - can facilitate or prevent migration	1	Moderate (73%)	Limited (single review, qualitative)	Adam et al. (2025)
	Loss of professional recognition	Negative - drives migration	1	Moderate (73%)	Limited (single review, qualitative)	Adam et al. (2025)
	Community support	Positive - enhances retention	1	High (91%)	Limited (single review, narrative)	Kiptulon et al. (2025)
	Religious factors	Positive - contributes to retention	1	High (91%)	Limited (single review, narrative; single primary study, Senegal)	Kiptulon et al. (2025)
Systemic Issues	Inadequate healthcare funding	Negative - undermines system capacity	1	High (91%)	Limited (single review, narrative)	Kiptulon et al. (2025)
	Political interference	Negative - disrupts workforce stability	1	High (91%)	Limited (single review, narrative; strongest primary evidence from Nigeria)	Kiptulon et al. (2025)
	Poor governance	Negative - multiple negative effects	2	High-Moderate (73-91%)	Moderate (2 reviews)	Kiptulon et al. (2025), Adam et al. (2025)

The factors influencing nurse retention identified consist of both negative (push) factors and positive (pull) factors. Negative factors primarily drive turnover and migration, while positive factors strengthen retention. A few factors show mixed influence depending on individual or contextual circumstances (Table 4).

Table 5. Reported interventions and strategies for nurse retention

Intervention category	Specific strategy	Evidence of effectiveness	Country/study setting	Type & quality of evidence	Generalizability to SSA	Source studies
Onboarding Programs	Structured transition-to-practice programs	High retention (86% vs 80%, p<0.01)	Multiple non-SSA countries (review is global; ~71% of primary studies outside SSA)	Quasi-experimental/cohort; Moderate quality (De Vries, 73%)	Low - no SSA-based primary study identified for this specific strategy	De Vries et al. (2023)
	Extended orientation programs	Positive effect on retention	Multiple non-SSA countries	Mixed designs; Moderate quality (73%)	Low - non-SSA hospital settings	De Vries et al. (2023)
	Preceptorship programs	Variable results; depends on intensity	Mixed: non-SSA (De Vries) and multiple SSA countries (Kiptulon)	Mixed designs; High-Moderate quality (73-91%)	Moderate - partially supported by SSA evidence	De Vries et al. (2023), Kiptulon et al. (2025)
	One-year residency programs	Significant improvement (p<0.00)	Non-SSA (De Vries onboarding theme)	Quasi-experimental; Moderate quality (73%)	Low - non-SSA setting	De Vries et al. (2023)
Mentorship Programs	One-to-one mentoring	Higher retention (91% vs 66%, p=0.001)	Non-SSA (De Vries mentorship theme)	Cohort study; Moderate quality (73%)	Low - non-SSA setting	De Vries et al. (2023)
	Interpersonal mentoring	Increases affective commitment	Non-SSA (e.g., USA)	Cross-sectional; Moderate quality (73%)	Low - non-SSA setting	De Vries et al. (2023)

	Structured mentorship	Positive relationship with staying (r=0.61, p<0.01)	Mixed: non-SSA (De Vries) and multiple SSA countries (Kiptulon)	Mixed designs; High-Moderate quality (73-91%)	Moderate - partially SSA-supported	De Vries et al. (2023), Kiptulon et al. (2025)
Financial Interventions	Salary increments	2× more likely to take rural posting (OR=2.73, p<0.001)	Nigeria (Cross River State)	Cross-sectional workload/staffing study; High quality (91%)	High - SSA rural primary-care setting	Kiptulon et al. (2025)
	Housing allowance	3× more likely to stay (aOR=3.56, p<0.001)	Nigeria (Cross River State)	Cross-sectional; High quality (91%)	High - SSA rural setting	Kiptulon et al. (2025)
	75% rural bonus	1.8× more likely to stay (aOR=1.80, p<0.001)	Cameroon (rural districts)	Discrete choice experiment; High quality (91%)	High - SSA rural setting	Kiptulon et al. (2025)
	Competitive remuneration packages	Reported as essential	Multiple SSA and non-SSA countries	Mixed designs; High-Moderate quality (73-91%)	Moderate - broad but non-specific claim	Kiptulon et al. (2025), Adam et al. (2025), De Vries et al. (2023)
Rural Retention Strategies	Superior housing provision	2.04× more likely to choose rural jobs	Malawi	Discrete choice experiment; High quality (91%)	High - SSA rural setting	Kiptulon et al. (2025)
	Good hospital infrastructure	3.5-3.6× more likely to stay (aOR, p≤0.001)	Cameroon	Discrete choice experiment; High quality (91%)	High - SSA rural setting	Kiptulon et al. (2025)
	Guaranteed transfer after service	2.3-3.0× more likely to stay (aOR, p<0.001)	Cameroon	Discrete choice experiment; High quality (91%)	High - SSA rural setting	Kiptulon et al. (2025)
	Recruiting from rural areas	Improves rural retention	DR Congo; Cameroon	Qualitative/mixed methods; High quality (91%)	High - SSA rural setting	Kiptulon et al. (2025)
	Rural training programs	Positive effect	Multiple SSA countries	Mixed designs; High quality (91%)	High - SSA rural setting	Kiptulon et al. (2025)
Stress Management	Five-day stress-coping course	Reduced leaving ICU (4% vs 12%, p=0.04)	France	RCT; Moderate quality (73%)	Low - non-SSA, high-resource ICU setting	De Vries et al. (2023)
	Mindfulness programs (MEPRA)	Decreased turnover intention (p=0.05)	USA	Longitudinal pre-post; Moderate quality (73%)	Low - non-SSA setting	De Vries et al. (2023)
	Self-care guidelines	Non-significant reduction in intent to leave	USA	Quasi-experimental; Moderate quality (73%)	Low - non-SSA; also non-significant finding	De Vries et al. (2023)
	Creative arts therapy	Improvements in turnover intentions (p=0.001)	USA	Randomized trial; Moderate quality (73%)	Low - non-SSA setting	De Vries et al. (2023)
Work Environment Improvements	Supportive work environments	Strong positive association	Multiple SSA and non-SSA countries	Mixed designs; High-Moderate quality (73-91%)	Moderate - broad, multi-context	Kiptulon et al. (2025), De Vries et al. (2023)
	Improved physical facilities	Positive impact on retention	Multiple SSA countries	Mixed designs; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
	Adequate staffing and resources	Reduces intention to leave	Multiple SSA and non-SSA countries	Mixed designs; High-Moderate quality (73-91%)	Moderate - broad, multi-context	Kiptulon et al. (2025), De Vries et al. (2023)
	Safety improvements	Reduces migration intention	Multiple SSA countries	Mixed designs; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
Leadership Development	Participatory leadership	Explains 23% variance in retention	Rwanda	Cross-sectional; High quality (91%); single primary study	High - SSA-specific, but single study	Kiptulon et al. (2025)
	Transformational leadership	Explains 20.9% variance in retention	Ghana	Cross-sectional; High quality (91%); single primary study	High - SSA-specific, but single study	Kiptulon et al. (2025)
	Manager empowerment training	Reported as vital	South Africa	Qualitative; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
	Supportive supervision	Strengthens retention efforts	Multiple SSA countries	Mixed designs; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
Professional Development	Continuing education opportunities	Essential for retention	Multiple SSA and non-SSA countries	Mixed designs; High-Moderate quality (73-91%)	Moderate - broad, multi-context	Kiptulon et al. (2025), Adam et al. (2025), De Vries et al. (2023)

	Career advancement pathways	Major retention factor	Multiple SSA and non-SSA countries	Mixed designs; High-Moderate quality (73-91%)	Moderate - broad, multi-context	Kiptulon et al. (2025), De Vries et al. (2023)
	Specialization training	Positive effect	Multiple SSA countries	Mixed designs; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
	Conference and workshop attendance	Supports retention	Multiple SSA countries	Mixed designs; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
Nurse Involvement	High involvement in hospital affairs	Significantly higher retention (OR=100.11, p=0.001)	Rwanda (rural districts)	Cross-sectional; High quality (91%); single study, very wide/imprecise OR	High - SSA-specific, but effect size should be interpreted cautiously	Kiptulon et al. (2025)
	Participation in quality improvement	Significantly higher retention (OR=6.01, p=0.010)	Rwanda (rural districts)	Cross-sectional; High quality (91%); single primary study	High - SSA-specific, but single study	Kiptulon et al. (2025)
	Involvement in system establishment	Significantly higher retention (OR=10.95, p=0.001)	Rwanda (rural districts)	Cross-sectional; High quality (91%); single primary study	High - SSA-specific, but single study	Kiptulon et al. (2025)
Social Support	Listening to staff events	Turnover decreased 18.9% to 10.2%	United Kingdom	Mixed methods; Moderate quality (73%)	Low - non-SSA acute-care setting	De Vries et al. (2023)
	Social support text messaging	Increased sense of support	USA	RCT; Moderate quality (73%)	Low - non-SSA setting	De Vries et al. (2023)
	Community engagement	Positive impact	Multiple SSA countries (rural)	Mixed designs; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
Work Organization	Flexible work schedules	Associated with better retention	Multiple SSA and non-SSA countries	Mixed designs; High-Moderate quality (73-91%)	Moderate - broad, multi-context	Kiptulon et al. (2025), De Vries et al. (2023)
	Self-scheduling	Mixed results	Malaysia; USA	Quasi-experimental/descriptive pre-post; Moderate quality (73%)	Low - non-SSA settings; effect itself inconsistent	De Vries et al. (2023)
	Manageable workloads	Reduces intention to leave	Multiple SSA countries	Mixed designs; High quality (91%)	High - SSA-specific	Kiptulon et al. (2025)
Technological Innovations	Introduction of electronic health records	No significant effect found	USA	Retrospective analysis; Moderate quality (73%)	Low - non-SSA; null finding	De Vries et al. (2023)
Recruitment Strategies	Special rural recruitment tracks	More likely increased 3-year retention	Thailand	Retrospective cohort; Moderate quality (73%)	Moderate - non-SSA but comparable rural LMIC context	De Vries et al. (2023)
	Predictive staffing models	17.6% decrease in turnover over 4 years	USA (thoracic surgery department)	Longitudinal cohort; Moderate quality (73%)	Low - non-SSA, single specialised unit	De Vries et al. (2023)
	International medical graduate licensing	Did not result in long-term retention	Canada	Retrospective study; Moderate quality (73%)	Low - non-SSA; also a null/negative finding	De Vries et al. (2023)
Policy-Level Interventions	Government health workforce plans	Associated with increased density	50 SSA countries (ecological, WHO African Health Statistics, 2004-2016)	Joinpoint trend regression on secondary data; Moderate quality (67%); ecological, not causal	Uncertain - population-level association only, no individual-level causal evidence	Saralegui-Gainza et al. (2022)
	National strategic plans	Variable implementation	Multiple SSA countries	Narrative/mixed designs; High quality (91%)	High - SSA-specific, but implementation inconsistent	Kiptulon et al. (2025)
	Bilateral agreements	Poorly implemented in SSA	Multiple SSA and international	Narrative/mixed designs; High quality (91%)	High - SSA-specific, but poorly implemented in practice	Kiptulon et al. (2025)
	Ethical recruitment codes	Limited enforcement	International (recruitment/destination countries)	Narrative/scoping synthesis; Moderate quality (73%)	Moderate - concerns SSA source countries but evidence largely international	Adam et al. (2025)

Table 5 shows that a wide range of interventions positively influence nurse retention, particularly

structured onboarding, mentorship, financial incentives, rural-specific strategies, stress-management programs, supportive work environments, leadership development, professional growth opportunities, and flexible work arrangements. Most strategies demonstrate significant improvements in retention, though a few, such as self-scheduling and electronic health record introduction, show mixed or limited effects on nurse retention.

Table 6. Knowledge gaps and research significance

Gap Category	Specific Gap Identified	Implications	Source Studies
Methodological Gaps	Limited disaggregated data on nurse migration	Difficult to accurately gauge migration trends	Adam et al. (2025)
	Incomplete datasets across SSA countries	Prevents comprehensive regional analysis	Saralegui-Gainza et al. (2022)
	Lack of standardized methodologies	Hinders cross-country comparisons	Saralegui-Gainza et al. (2022)
	Limited longitudinal studies	Cannot track long-term retention trends	Kiptulon et al. (2025)
	Publication bias toward high-income countries	SSA-specific evidence is limited	Kiptulon et al. (2025)
Intervention Research Gaps	Limited physician-specific retention interventions	Almost all studies focus on nurses only	De Vries et al. (2023)
	Lack of cost-effectiveness analyses	Unknown economic viability of interventions	De Vries et al. (2023), Kiptulon et al. (2025)
	Limited multi-level intervention studies	Don't address interconnected factors	Kiptulon et al. (2025)
	Poor documentation of implementation processes	Difficult to replicate successful programs	Kiptulon et al. (2025), Adam et al. (2025), De Vries et al. (2023)
	Limited research on early career interventions in SSA	Gap in understanding onboarding effectiveness	De Vries et al. (2023)
Context-specific Gaps	Limited rural retention studies	Rural areas face unique challenges	Kiptulon et al. (2025)
	Insufficient data on regional variations within countries	Masks within-country disparities	Kiptulon et al. (2025)
	Limited research on conflict-affected areas	These areas face acute shortages	Adam et al. (2025)
	Lack of studies on private vs. public sector dynamics	Migration between sectors understudied	Kiptulon et al. (2025)
Migration Research Gaps	Limited data on intra-African migration	Most research focuses on international migration	Adam et al. (2025)
	Insufficient understanding of migration experiences	Need to understand transition challenges	Adam et al. (2025)
	Limited research on support systems in destination countries	Important for circular migration strategies	Adam et al. (2025)
	Lack of studies on return migration	Could inform reintegration policies	Adam et al. (2025)
	Unregulated recruitment practices	Leads to exploitation and trafficking	Adam et al. (2025)
Workforce Density Gaps	Missing data from multiple SSA countries	South Sudan, Eswatini, Rwanda had no data	Saralegui-Gainza et al. (2022)
	Limited data on nurse specialization distribution	Don't know specialty-specific shortages	Saralegui-Gainza et al. (2022)
	Insufficient tracking of nursing school capacity	Cannot predict future supply	Adam et al. (2025)
	Limited data on attrition during training	Represents hidden workforce loss	Adam et al. (2025)
Policy Implementation Gaps	Poor enforcement of WHO global code of practice	Ethical recruitment remains unregulated	Adam et al. (2025)
	Lack of mobility management strategies	No structured approaches documented	Kiptulon et al. (2025)
	Insufficient bilateral agreements	Need binding international agreements	Kiptulon et al. (2025)
	Limited policy evaluation studies	Don't know what policies work	Kiptulon et al. (2025)
	Gap between policy and implementation	National plans not translated to action	Kiptulon et al. (2025), Adam et al. (2025)

Table 6 highlights key research gaps in nurse retention in SSA, including limited high-quality longitudinal evidence, weak data systems, insufficient evaluation of interventions and policies, and inadequate evidence on rural, conflict-affected, migration, and workforce distribution issues.

Discussion

Findings established that the factors influencing nurse retention in SSA are more profound than mere individual preferences or organizational deficiencies. Economic factors featured consistently across the studies included in this review. This finding supports research conducted in Zambia and Nigeria, which indicated that financial incentives play a crucial role in the retention of healthcare workers (Okoroafor et al., 2021; Prust et al., 2019). However, this finding is in discordance with a South African study where a large-scale financial incentive policy targeting nurses produced negative consequences and did not achieve its

intended retention outcomes, largely because it was implemented without adequate consultation, planning, or administrative capacity (Ditlopo et al., 2013). In disagreement with the result of the index study, Diallo et al. (2025) found that performance-based financial incentives can, in some African contexts, crowd out intrinsic, prosocial, and public service motivation among healthcare workers, potentially undermining the very commitment that sustains long-term retention. The result of these cited studies in comparison with the index study may suggest that the positive financial-incentive findings synthesized in the current study may be well-implemented or short-term cases rather than a reliable general effect, and may not generalize to poorly resourced or poorly governed systems, which are precisely the settings most in need of retention solutions. Nonetheless, from the researchers' point of view, while nurses are essential to healthcare delivery, they are also economically vulnerable, torn between their professional responsibilities and the need to ensure their own financial survival. Economic insecurity stems from more systemic causes than just low wages, which may suggest healthcare underinvestment, conflicting national budget priorities, and the pervasive global inequality that allows high-income nations to effectively outsource their nursing shortages to settings with limited resources.

An underlying conflict in SSA nursing is shown by the career development factor domain. From the researchers' perspective, this could be due to the fact that nurses' career prospects and migratory potential are enhanced by the same training, education, and specialization that would develop them as individuals. Conversely, offering more options for professional growth may encourage nurses to leave for environments that pay more for their advanced training. Furthermore, adding both individual and social elements to the retention equation also brings up crucial cultural aspects that are typically ignored when designing the health care workforce. This is comparable to the result of Chang et al. (2025), which showed that cultural variables, in addition to individual ones, influence the turnover rate of nursing personnel. This body of evidence, in our view, rarely specifies mechanisms, as the cited study mentioned culture as a contributing factor without explaining how it operates, and we consider this a limit on how much weight the finding should carry.

Moving forward, inadequate healthcare financing, political intervention, and bad governance are some of the most fundamental systemic factors revealed in this study that contribute to retention problems. This finding aligns with the study conducted by Nwankwo et al. (2022) in Nigeria, where it was reported that governance-related factors, including political interference, significantly impact the retention of healthcare workers. This finding also corroborates Josiah et al. (2025) result that inadequate financing and subpar quality hindered the provision of services to an expanding populace in SSA. From the researchers' perspective, this recurrent alignment within the literature warrants a careful interpretation, as numerous included reviews may rely on the same primary studies, potentially leading to an inflated confidence in the findings rather than providing genuine confirmation.

The fact that many retention variables work in both directions is noteworthy. While heavy workloads, insufficient equipment, and unsupportive work environments all contribute to employee turnover, the inverse is true: a supportive work environment, sufficient personnel, and appropriate resources all work together to produce circumstances that encourage professional dedication and longevity. This may suggest that under optimal conditions, the workforce exhibits a responsive nature. This bidirectional pattern aligns with findings from Aiken et al. (2012) study revealing that enhancements in nurse staffing and work environments correlated with reduced burnout and a diminished intention to leave, indicating that these outcomes are interconnected rather than independent. However, not all reviews in our sample present the relationship in this manner; De Vries et al. (2023) reported various work-environment interventions (e.g., self-scheduling, electronic health record introduction) yielding mixed or null effects. This indicates that the bidirectionality observed for broad environmental factors does not uniformly apply to every specific intervention within that domain, suggesting that the mechanism connecting environment to retention is more intervention-specific than the general pattern would suggest.

This review also found several interventions to improve nurses' intentions. The onboarding and mentorship programs category showed solid evidence. These results need to be put into perspective because most of these interventions were carried out and assessed in hospitals that had enough resources, and as such, may not be applicable to low-resource contexts

that even need them most. On the other hand, mentorship is another intervention reported in this study, which can only be effective as an intervention strategy if there are experienced, skilled nurses available to serve as mentors. These results corroborate studies by Gularte-Rinaldo et al. (2023) and Naholi et al. (2023), which found that mentoring other nurses had a positive effect on mentees' decisions to stay in the field and helped alleviate the nursing shortage *via* retention efforts. As transformational and participatory leadership accounted for 20%-23% of the retention variance, the results of this research's successful mentoring intervention may also account for the beneficial leadership development treatments described in this study.

Moreover, financial interventions exhibit significant impacts. The impact of housing allowances on nurses' retention, making them three times more likely to remain in their positions, alongside the provision of superior housing, which doubles the acceptance of rural job offers, signifies some of the most substantial effect sizes documented in the retention literature. The finding of financial intervention to retain nurses in this review is consistent with studies conducted across the globe (Buykx et al., 2010; Ditlopo, 2016; Esu et al., 2021; Rapeane & Motsomotso, 2025; Verma et al., 2016). Nevertheless, these studies exhibited significant variability in their methodological rigour, and a limited number accounted for confounding variables, such as simultaneous leadership transitions or facility enhancements that might have coincided with the financial intervention. This raises the concern that some of the reported effect sizes could be exaggerated.

Findings from this review indicate that nurse involvement strategies, such as active engagement in hospital affairs, quality improvement, and system building, are effective. According to these results, one of the most effective ways to keep employees around is to give them more responsibility, more say in organizational decisions, and more opportunities to really make a difference. This finding concurs with the research conducted by Penconek et al. (2024), which demonstrated that a reduction in decision-making authority notably diminished nurse managers' intention to depart, whereas empowerment and autonomy played a crucial role in enhancing retention. This is closely related to Al-Hamdan et al. (2022), whose descriptive study of Jordanian hospital nurses revealed that shared governance and decision-making authority were notably constrained, especially in units with lower scores. Of the interventions reviewed, this finding rests on comparatively stronger evidence, drawing on longitudinal or comparative designs rather than single cross-sectional surveys, a distinction worth foregrounding given how much of the remaining evidence base relies on weaker designs.

What is particularly concerning is the clear inadequacy of interventions at the policy level. There is a significant chasm between the words and deeds of policy, as seen by the disjointed execution of bilateral agreements, the lack of strict enforcement of ethical recruiting norms, and the inconsistent execution of national strategic objectives. This finding is closely related to a 2024 WHO study of 150 bilateral agreements, which found that ministries of health were not involved during a significant number of negotiations, and that socio-economic imbalances and power dynamics favour recipient countries (WHO, 2024). In spite of the existence of the World Health Organization's Global Code of Practice on the International Recruitment of Health Personnel (Aistleithner & Pfabigan, 2016), unethical recruiting still happens. This trend suggests that the challenge lies not in the absence of policy frameworks, but rather in a deficiency of political will, administrative capabilities, and accountability mechanisms necessary to actualize these policies.

Conversely, this review uncovered many ongoing gaps that impact research on nurse retention in SSA. The evidence crisis that hinders effective regional synthesis and reliable causal inference is caused by methodological restrictions, such as inadequate datasets, lack of standardization, and insufficient disaggregated data. Publication bias toward high-income nations is another contributing factor. Because intentions and actions often differ, it is especially problematic, because the discipline relies heavily on cross-sectional research that measures "intention to stay" instead of actual retention. Lack of longitudinal studies prevents researchers from knowing if characteristics that keep experienced nurses around after 5, 10, or 20 years are different from those that keep freshly graduated nurses around, which is important information to have for career-stage-specific retention strategies.

It is difficult to comprehend why interventions succeed or fail or to identify which components were

crucial, and the research gaps around interventions show that implementation processes are poorly documented. The lack of knowledge on retention in crucial contexts is further highlighted by context-specific deficiencies. It is worth noting that conflict-affected regions are relatively understudied, whereas rural areas continue to face acute shortages. This suggests that the locations with the highest needs may have the poorest data. Just as diverse movement patterns need radically varied governmental responses, migration research demonstrates a deep lack of understanding about nurses' real experiences after leaving, how they adjust, whether they keep home country contacts, and under what conditions they would return. Another gap revealed is that policy implementation gaps, which expose the fundamental deficit, point to governance and implementation challenges that research alone cannot resolve.

Implications for Nursing

Integration and multi-level treatment emerge as essential conclusions drawn from the findings of this review. The most significant observed effects encompass individual (mentorship), organizational (supportive leadership), and structural (financial and housing incentives) dimensions simultaneously. No intervention targeting a single level achieved the magnitude of those employing a combination of approaches, indicating that these strategies are most effective when implemented in a synergistic manner rather than in isolation. Politicians and funders might prefer initiatives that concentrate on individuals due to their lower costs and quicker implementation. However, this approach risks merely addressing symptoms rather than the underlying causes. The systemic factors highlighted in this review, including insufficient funding, political interference, and inadequate governance, largely exist beyond the scope of what onboarding or mentoring can effectively resolve. Such initiatives may assist nurses in navigating flawed systems rather than addressing their underlying issues. Considering the extensively recorded challenges faced by SSA health systems in converting evidence into enduring, widespread application, we regard the disparity between the recommendations of the evidence and the actual implementations as more significant for retention than any lingering gaps in the research itself.

The structural reliance of high-income nations on health worker migration from low- and middle-income nations, as well as other global health workforce dynamics, must be considered in order to comprehend the retention difficulty. Without a halt to overseas recruitment, which is stealing the trained professionals that retention programs aim to keep on staff, there will be no long-term improvement in SSA nurse retention. Policymakers may consider strengthening international agreements on ethical recruitment and exploring compensatory mechanisms whereby countries that benefit from health-worker migration support workforce development in source countries. Future studies should evaluate whether such mechanisms are enforceable and effective in practice.

Limitations of the Study

The review was limited by the small number of eligible reviews, potential overlap of primary studies, heterogeneity in study designs and outcomes, lack of formal certainty-of-evidence assessment, reliance on review-level quality appraisal, and restriction to English-language publications, which may have limited the comprehensiveness and generalizability of the findings.

Conclusions and Recommendations

This critical analysis of four systematic studies shows that nurse retention in SSA is affected by a number of variables that are all interrelated, including economic, professional, organizational, and systemic ones. There is proof that planned onboarding, mentoring, financial incentives, and nurse engagement in decision-making are all good ways to help, but execution is still very weak because of a lack of resources, bad governance, and a lack of political will. Some important gaps in the evidence still exist, including those in methodology, context, workforce density, intervention studies, and policy implementation. This study's results highlight the need to enhance governance and accountability structures to better convert current research into sustainable practice and bolster implementation capability. Enhancing governance and accountability frameworks to effectively implement existing evidence into practice, in conjunction with international accords on ethical recruitment and compensatory assistance for source nations, represents a sound policy direction indicated by this evidence.

Availability of Data and Materials

For data and materials used in the research, contact the corresponding author.

Peer-review

This review was externally peer-reviewed.

AI Technologies

To ensure the highest level of clarity and readability, AI (ChatGPT) was utilized as an assistive tool for organizing ideas and refining the grammar of this article. The content, core ideas and insights are entirely the authors'.

Conflict of Interests

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