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NURSES' MIGRATION AND ITS PERCEIVED EFFECTS ON HEALTHCARE SERVICE DELIVERY IN DELTA STATE, NIGERIA

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ABSTRACT

Nurse migration has emerged as a major health workforce challenge in Nigeria because of its adverse effects on healthcare service delivery, workforce stability, and patient outcomes. This study assessed nurses' migration and Dr. (Mrs) Augustina Isabu C its perceived effects on healthcare service delivery in selected hospitals in Delta State, Nigeria. A descriptive cross-sectional survey design was adopted involving 138 registered nurses selected from three hospitals in the state. Data were collected using a structured self-administered questionnaire that examined the perceived effects of migration, factors associated with migration, and possible retention strategies. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the data, while independent sample *t*-tests and one-way analysis of variance (ANOVA) were employed to test differences in perceptions at a 5% level of significance. The findings revealed that nurses perceived migration to have a moderate negative impact on healthcare service delivery (mean = 2.73, SD = 1.03). The major consequences identified included shortages of skilled nurses, increased workload among remaining staff, reduced mentorship opportunities, prolonged patient waiting times, and disruptions in continuity of care. Factors associated with migration included low employment opportunities, excess workload without compensation, economic hardship, poor remuneration, poor job satisfaction, and limited career advancement opportunities. Respondents identified scholarships, improved staffing levels, flexible work arrangements, mentorship programmes, and retention incentives as effective strategies for reducing migration. The study concludes that comprehensive workforce retention policies focusing on

improved remuneration, better working conditions, career development, and supportive work environments are essential for strengthening healthcare service delivery in Delta State, Nigeria.

KEYWORDS: Nurse migration; healthcare service delivery; workforce retention; nursing shortage; brain drain; Delta State; Nigeria.

1. INTRODUCTION

Healthcare systems depend heavily on nurses, who constitute the largest group of healthcare professionals and play indispensable roles in health promotion, disease prevention, treatment, rehabilitation, and palliative care. An adequate nursing workforce is therefore essential for achieving universal health coverage, improving patient outcomes, and strengthening health systems (World Health Organization, 2024). However, the global shortage of nurses continues to worsen because of increasing healthcare demands, population ageing, changing disease patterns, and the growing international migration of healthcare professionals (Buchan et al., 2022; World Health Organization, 2020).

Nigeria has become one of the leading source countries for internationally recruited nurses in sub-Saharan Africa. Thousands of Nigerian nurses migrate annually to countries such as the United Kingdom, Canada, the United States, and Australia in search of better remuneration, improved working conditions, career advancement opportunities, and enhanced welfare packages (Adejumo et al., 2023; Anyim et al., 2024). Although migration provides financial and professional benefits to individual nurses, the continuous loss of experienced personnel has created significant challenges for the Nigerian healthcare system. These include shortages of skilled nurses, increased patient-to-nurse ratios, excessive workload, burnout, reduced mentorship for junior nurses, and declining quality of healthcare services (Buchan et al., 2023; Okoroafor et al., 2022). Evidence indicates that inadequate nurse staffing is associated with delayed interventions, increased medication errors, prolonged hospital stays, higher patient mortality, healthcare-associated infections, and lower patient satisfaction (Griffiths et al., 2021; Rafferty et al., 2021). Consequently, nurse migration has implications that extend beyond workforce shortages to affect the efficiency, continuity, and quality of healthcare service delivery.

Delta State, one of the major healthcare hubs in southern Nigeria, has witnessed increasing migration of nurses from public and private health facilities, raising concerns about staffing adequacy and service delivery. Despite growing evidence on the determinants of nurse

migration, relatively few studies have examined nurses' perceptions of its effects on healthcare service delivery within the state. Understanding these perceptions is important for informing workforce planning and developing effective retention policies. Therefore, this study investigated nurses' migration and its perceived effects on healthcare service delivery among nurses in selected hospitals in Delta State, Nigeria.

2. Statement of the Problem

Nigeria continues to experience a substantial loss of skilled nurses through international migration (Adejumo et al., 2023; World Health Organization, 2023). Increasing numbers of registered nurses leave the country annually in search of better remuneration, improved working conditions, enhanced professional development opportunities, and greater economic stability (Anyim et al., 2024; Buchan et al., 2023). Although migration improves the socioeconomic status of individual nurses, the continuous depletion of experienced nursing personnel has generated serious concerns regarding the capacity of healthcare institutions to deliver safe, efficient, and high-quality healthcare services (Okoroafor et al., 2022). Healthcare facilities across Nigeria increasingly report shortages of qualified nurses, rising patient-to-nurse ratios, increased workload among remaining staff, burnout, prolonged waiting times, reduced continuity of care, and declining patient satisfaction (Griffiths et al., 2021; Shen et al., 2022). These challenges are particularly pronounced in tertiary and secondary healthcare institutions where nurses provide specialized services requiring clinical expertise and experience.

Delta State has not been exempt from these workforce challenges. Hospitals within the state continue to experience the migration of experienced nurses, thereby placing additional responsibilities on the remaining workforce. Despite these observations, there is limited empirical evidence regarding nurses' perceptions of how migration affects healthcare service delivery in Delta State. Existing Nigerian studies have primarily focused on migration intentions and determinants rather than the perceived consequences for healthcare delivery (Ameh et al., 2022; Okafor et al., 2022). Without adequate evidence describing these perceived effects, policymakers and healthcare managers may face difficulties in designing effective retention strategies and workforce planning interventions (Buchan et al., 2022; International Council of Nurses, 2023). This study therefore seeks to assess nurses' migration and its perceived effects on healthcare service delivery among nurses working in selected hospitals in Delta State, Nigeria.

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3. Literature Review

3.1 Concept of Nurse Migration

Nurse migration refers to the movement of nurses from one geographical location to another for employment, either within a country (internal migration) or across national borders (international migration) (Buchan et al., 2023; Okoroafor et al., 2022). International migration has become one of the most important health workforce issues globally because of increasing disparities in the distribution of healthcare professionals between developed and developing countries (Labonté et al., 2021). The demand for nurses in high-income countries has increased considerably due to ageing populations, expanding healthcare services, retirement of experienced nurses, and insufficient domestic production of nursing personnel (Organisation for Economic Co-operation and Development, 2023; World Health Organization, 2020). Consequently, countries such as the United Kingdom, Canada, the United States, Australia, New Zealand, and Saudi Arabia have increasingly recruited nurses from low- and middle-income countries, including Nigeria (Adejumo et al., 2023; Buchan et al., 2023).

Migration is often explained through the push-pull theory, where unfavorable conditions in the country of origin (push factors) combine with attractive opportunities in destination countries (pull factors) (Labonté et al., 2021). Push factors commonly include poor remuneration, inadequate working conditions, excessive workload, insecurity, limited career progression, and poor governance, while pull factors include higher salaries, improved working environments, opportunities for specialization, professional recognition, and better quality of life (Anyim et al., 2024; Okoroafor et al., 2022).

Although migration provides personal and professional benefits to individual nurses, its effects on healthcare systems in source countries are often detrimental (Buchan et al., 2022). The departure of experienced nurses weakens institutional memory, increases workloads among remaining staff, reduces mentorship opportunities for junior nurses, and compromises the continuity and quality of healthcare delivery (Griffiths et al., 2021; Rafferty et al., 2021).

3.2 Healthcare Service Delivery

Healthcare service delivery refers to the provision of effective, safe, accessible, equitable, and patient-centered health services by qualified healthcare professionals (World Health Organization, 2024). Effective healthcare delivery depends largely on the availability of competent health workers, adequate infrastructure, essential medicines, medical technologies, efficient management systems, and supportive health policies (World Health Organization,

2020). Within healthcare institutions, nurses constitute the largest proportion of healthcare providers and remain directly involved in patient assessment, medication administration, health education, infection prevention, rehabilitation, emotional support, documentation, and coordination of multidisciplinary care (Rafferty et al., 2021). Consequently, the adequacy of the nursing workforce significantly influences healthcare quality indicators, including patient safety, mortality, hospital-acquired infections, patient satisfaction, waiting time, and length of hospital stay (Griffiths et al., 2021; Aiken et al., 2021). When experienced nurses migrate, hospitals frequently experience shortages that increase patient-to-nurse ratios and reduce the time available for individualized patient care. Such workforce deficiencies may compromise healthcare quality and organizational performance (Buchan et al., 2022; Drennan & Ross, 2021).

3.3 Global Trends in Nurse Migration

International nurse migration has increased substantially during the past two decades (Buchan et al., 2023). The global shortage of nurses has encouraged developed countries to strengthen international recruitment strategies. Countries experiencing severe nursing shortages have adopted immigration policies that facilitate the employment of internationally educated nurses (Organisation for Economic Co-operation and Development, 2023). The World Health Organization (2020) estimates that the global shortage of nurses remains concentrated in low- and middle-income countries despite their bearing the greatest burden of disease. Africa accounts for a relatively small proportion of the global nursing workforce while simultaneously experiencing some of the highest disease burdens. Consequently, continued emigration of nurses from African countries further widens healthcare inequalities and limits progress toward Universal Health Coverage and the Sustainable Development Goals (Okoroafor et al., 2022; World Health Organization, 2023). Nigeria remains one of the principal source countries for internationally recruited nurses. Professional licensing organizations in destination countries continue to report increasing numbers of Nigerian-trained nurses obtaining international registration annually, indicating a sustained migration trend (Adejumo et al., 2023; Anyim et al., 2024).

3.4 Causes of Nurse Migration

The migration of nurses is multifactorial and influenced by personal, organizational, economic, and political factors (Labonté et al., 2021; Okoroafor et al., 2022).

Poor Remuneration: Salary remains one of the strongest predictors of migration intentions. Nigerian nurses often perceive remuneration as inadequate compared with international standards. Inflation and economic instability further reduce purchasing power, encouraging migration (Adejumo et al., 2023; Anyim et al., 2024).

Poor Working Conditions: Many healthcare facilities experience shortages of equipment, inadequate staffing, limited resources, irregular electricity supply, and poor occupational safety. Such conditions reduce job satisfaction and increase migration intentions (Effiong et al., 2022; Marufu et al., 2021).

Excessive Workload: Persistent staff shortages require remaining nurses to care for larger patient loads, work overtime, and perform additional administrative duties. Heavy workloads contribute significantly to burnout and emotional exhaustion (Shen et al., 2022; Griffiths et al., 2021).

Limited Professional Development: Many nurses perceive inadequate opportunities for postgraduate education, specialization, continuing professional development, and promotion within Nigeria. International employment often provides structured career advancement pathways (Anyim et al., 2024; Buchan et al., 2023).

Poor Leadership and Management: Ineffective supervision, limited staff participation in decision-making, poor communication, and perceived organizational injustice reduce organizational commitment and increase migration intentions (Marufu et al., 2021; Effiong et al., 2022).

Socioeconomic and Political Factors: Economic recession, insecurity, unemployment among family members, and declining living standards also encourage healthcare professionals to seek employment abroad (Okoroafor et al., 2022; Labonté et al., 2021).

3.5 Perceived Effects of Nurse Migration on Healthcare Service Delivery

The migration of nurses has multiple consequences for healthcare delivery.

Workforce Shortages: Migration substantially reduces the number of available nurses within healthcare institutions. Remaining staff frequently assume additional responsibilities, increasing occupational stress.

Increased Patient Waiting Time

Inadequate staffing reduces service efficiency, resulting in delayed consultations, slower treatment initiation, and prolonged waiting periods.

Increased Workload: Remaining nurses often manage more patients than recommended, increasing fatigue and reducing opportunities for comprehensive patient assessment.

Burnout: Continuous exposure to excessive workload contributes to emotional exhaustion, depersonalization, reduced job satisfaction, absenteeism, and staff turnover.

Declining Quality of Care: Staff shortages may reduce adherence to evidence-based nursing practice, compromise patient monitoring, delay interventions, and increase clinical errors.

Reduced Patient Satisfaction: Long waiting times, inadequate communication, reduced emotional support, and limited nurse availability negatively influence patient satisfaction.

Increased Healthcare Costs: Hospitals incur additional recruitment, orientation, and training costs while replacing experienced nurses. Frequent turnover also reduces organizational productivity.

3.6 Factors Associated with Nurse Migration

Several demographic and professional characteristics have been associated with migration intentions.

These include:

- Younger age
- Higher educational qualification
- Fewer family responsibilities
- Longer years of professional experience
- Urban practice location
- Previous international exposure
- Higher professional aspirations
- Burnout
- Job dissatisfaction
- Poor organizational commitment

However, findings regarding some demographic variables remain inconsistent across different studies, emphasizing the importance of context-specific investigations.

4. MATERIALS AND METHODS

Study Design

This study adopted a descriptive cross-sectional survey design to assess nurses' perceptions regarding migration and its effects on healthcare service delivery.

Study Area

The study was conducted in three selected hospitals in Delta State, Nigeria. Delta State is located in the South-South geopolitical zone of Nigeria and possesses a mixture of tertiary, secondary, and private healthcare institutions providing specialized services to urban and rural populations.

Study Population

The study population comprised all registered nurses employed in the selected hospitals during the study period.

Inclusion Criteria

- Registered nurses with current practicing licenses.
- Nurses who had worked for at least six months.
- Nurses who consented to participate.

Exclusion Criteria

- Student nurses.
- Intern nurses.
- Nurses on prolonged leave during data collection.

Sample Size

The required sample size should be determined using the Cochran formula for descriptive studies:

$$n = \frac{Z^2 pq}{d^2}$$

where:

- n = required sample size
- Z = 1.96 (95% confidence level)
- p = estimated prevalence (from previous literature)
- $q = 1 - p$
- d = 0.05 margin of error

A 10% allowance was added for non-response.

Sampling Technique

A multistage sampling procedure was employed. Hospitals were purposively selected based on their size and service capacity, while proportionate allocation and simple random sampling techniques were used to select eligible nurses from each hospital.

Instrument for Data Collection

Data were collected using a structured self-administered questionnaire comprising four sections:

- **Section A:** Socio-demographic information
- **Section B:** Perceived effects of nurse migration on healthcare delivery
- **Section C:** Factors associated with nurse migration
- **Section D:** Strategies for reducing nurse migration

Responses to Sections B–D were measured on a four-point Likert scale:

- Strongly Agree = 4
- Agree = 3
- Disagree = 2
- Strongly Disagree = 1

Validity of the Instrument

The questionnaire should undergo face and content validation by experts in nursing research, nursing administration, and health services research to ensure relevance, clarity, and comprehensiveness.

Reliability of the Instrument

A pilot study should be conducted among nurses in a hospital not included in the main study. Internal consistency reliability should be assessed using Cronbach's alpha, with a coefficient of 0.70 or above considered acceptable.

Data Collection Procedure

Following ethical approval and institutional permission, trained research assistants should administer the questionnaires during work shifts. Completed questionnaires should be checked immediately for completeness.

Data Analysis

Data should be entered into IBM SPSS Statistics (Version 27 or later).

Analyses should include:

- Frequencies
- Percentages
- Means
- Standard deviations

Inferential statistics:

- Chi-square tests
- Pearson Product Moment Correlation
- Binary logistic regression (where appropriate)

Statistical significance should be set at $p < 0.05$.

Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of the participating hospitals. Written informed consent was also obtained from all respondents. Participation was voluntary, anonymity maintained, and confidentiality strictly protected. Respondents were informed of their right to withdraw from the study at any stage without penalty.

RESULTS

Characteristics of the Study Sample

A total of 138 registered nurses from selected hospitals in Delta State participated in the study. Data were analyzed to determine nurses' perceptions of the effects of migration on healthcare service delivery, identify factors associated with nurse migration, examine strategies for mitigating migration, and test whether perceptions differed across demographic and workplace characteristics.

Perceived Impact of Nurses' Migration on Healthcare Service Delivery

Overall, respondents perceived that nurse migration had a moderate negative impact on healthcare service delivery (mean = 2.73, SD = 1.03). Approximately 61.1% of respondents agreed that migration negatively affects healthcare delivery, whereas 38.9% disagreed.

Among the perceived effects, the highest-rated items were:

- Nurse migration leads to shortages of skilled healthcare professionals (mean = 2.99, SD = 1.143).

- Nurse migration increases the workload of the remaining nurses (mean = 2.93, SD = 1.037).
- Loss of experienced nurses affects the training and mentorship of newly employed nurses (mean = 2.87, SD = 0.988).
- Outmigration negatively affects the quality of patient care (mean = 2.77, SD = 1.089).
- Migration contributes to longer patient waiting times and reduced access to healthcare (mean = 2.71, SD = 1.012).
- Migration disrupts continuity of healthcare services (mean = 2.70, SD = 0.933).

Although respondents agreed that migration negatively affects patient care quality and increases healthcare costs through dependence on temporary staff, these items received comparatively lower mean ratings (mean = 2.45).

Collectively, these findings suggest that while respondents perceived the effects as moderate, migration substantially affects workforce capacity, continuity of care, and service efficiency within the selected hospitals.

Factors Associated with Nurses' Migration

The most frequently identified factors influencing nurse migration were:

Factor	Percentage (%)
Low level of employment	85.5
Excess workload without compensation	82.6
Economic hardship	81.2
Poor remuneration	77.5
Poor job satisfaction	71.0
Better educational/career opportunities abroad	69.6
Better social and retirement benefits	68.8
High international demand for nurses	66.7
Limited educational opportunities in Nigeria	66.7
Job stability abroad	63.8
Political instability	53.6
Economic recession	53.6

These findings indicate that nurses' migration is driven by a combination of economic, professional, organizational, and sociopolitical factors rather than by a single determinant.

Strategies for Reducing Nurse Migration

Respondents identified several strategies that could help reduce nurse migration and strengthen workforce retention. The highest-rated strategies included:

- Scholarships or tuition reimbursement for higher education (mean = 2.61, SD = 1.046).
- Flexible work arrangements (mean = 2.58, SD = 1.048).
- Mentorship programmes for newly employed nurses (mean = 2.57, SD = 1.056).
- Increasing staffing levels to reduce workload (mean = 2.57, SD = 1.056).
- Providing safety and security resources for nurses (mean = 2.56, SD = 1.049).
- Offering retention incentives and bonuses (mean = 2.56, SD = 1.049).
- Partnerships with educational institutions for nurse training (mean = 2.55, SD = 1.064).
- Improving work-life balance through flexible scheduling (mean = 2.55, SD = 1.057).

Overall, respondents perceived these interventions as moderately effective (grand mean = 2.54, SD = 1.061) in mitigating the adverse effects of nurse migration.

Hypothesis Testing

Demographic Characteristics

Significant differences were found in nurses' perceptions of migration's impact on healthcare delivery based on:

- Age ($F = 2.974$, $p = 0.034$)
- Marital status ($F = 3.515$, $p = 0.017$)
- Educational qualification ($F = 3.818$, $p = 0.024$)

However, no statistically significant difference was observed based on gender ($t = -0.068$, $p = 0.468$).

Hospital-Related Characteristics

Among workplace characteristics, only the respondents' current role in the hospital significantly influenced perceptions of migration's impact ($F = 5.413$, $p = 0.002$).

No significant differences were observed based on:

- Type of hospital ($p = 0.071$)
- Years of working experience ($p = 0.348$)
- Department/unit ($p = 0.100$)

6. DISCUSSION

This study examined nurses' perceptions of the effects of migration on healthcare service delivery and the factors associated with nurse migration in selected hospitals in Delta State, Nigeria. The findings demonstrate that nurse migration is perceived to adversely influence healthcare delivery through workforce shortages, increased workload, reduced continuity of care, and diminished opportunities for mentoring junior nurses. The study also identified economic, organizational, and professional factors as major drivers of migration and highlighted several strategies that could improve nurse retention.

Perceived Impact of Nurses' Migration on Healthcare Service Delivery

The study found that nurses perceived migration to have a moderate negative impact on healthcare service delivery (mean = 2.73, SD = 1.03), with 61.1% of respondents agreeing that migration negatively affects healthcare services. Although the overall impact was rated as moderate rather than high, the findings indicate that migration has become a significant workforce challenge in the selected hospitals.

The highest-rated consequence was the shortage of skilled healthcare professionals (mean = 2.99), followed by increased workload for remaining nurses (mean = 2.93), loss of experienced mentors (mean = 2.87), deterioration in patient care quality (mean = 2.77), prolonged patient waiting times (mean = 2.71), and disruption of continuity of care (mean = 2.70). These findings demonstrate that respondents perceive migration not only as a staffing problem but also as a factor that affects the organization and quality of healthcare delivery.

These findings are consistent with recent international evidence showing that the emigration of experienced nurses contributes to reduced workforce capacity, higher patient-to-nurse ratios, occupational burnout, and diminished quality of care. Countries experiencing sustained nurse emigration often struggle to replace experienced personnel at the same rate, resulting in heavier workloads and increased pressure on the remaining workforce. Similar observations have been reported in Nigerian studies, where workforce shortages resulting from migration have been linked to longer waiting times, delayed service delivery, and reduced continuity of nursing care.

An important finding of this study is the perceived loss of experienced nurses who ordinarily provide supervision and mentorship for newly employed staff. This suggests that migration affects not only current service delivery but also the long-term development of the nursing workforce. The departure of experienced clinicians limits opportunities for clinical

mentoring, succession planning, and skills transfer, thereby affecting organizational learning and institutional memory.

Interestingly, respondents rated the impact of migration on healthcare costs (mean = 2.45) and patient care quality (mean = 2.45) relatively lower than other outcomes. This may indicate that although nurses recognize these consequences, they perceive the immediate operational effects of staffing shortages and increased workload more directly during routine clinical practice.

Factors Associated with Nurses' Migration

The findings indicate that nurse migration is influenced primarily by economic and workplace-related factors. Low levels of employment (85.5%), excess workload without compensation (82.6%), economic hardship (81.2%), poor remuneration (77.5%), and poor job satisfaction (71.0%) emerged as the strongest determinants of migration. Professional opportunities abroad, better retirement benefits, greater job stability, and high international demand for nurses were also identified as important motivating factors.

The prominence of poor remuneration supports extensive evidence that salary differentials remain one of the strongest push factors driving migration among nurses from low- and middle-income countries. However, the present findings demonstrate that financial incentives alone do not fully explain migration decisions. Respondents also emphasized professional development opportunities, educational advancement, and organizational conditions, suggesting that migration is shaped by multiple interacting influences.

The finding that excess workload without compensation was identified by more than four-fifths of respondents highlights the cyclical relationship between migration and workforce shortages. As experienced nurses leave, the remaining staff assume heavier workloads, increasing stress, reducing job satisfaction, and potentially encouraging additional nurses to emigrate. Unless staffing levels improve, this cycle may continue to undermine healthcare service delivery.

Similarly, economic hardship and political instability were identified as significant migration drivers, reflecting the broader socioeconomic context within which healthcare professionals make career decisions. These findings suggest that workforce retention strategies should extend beyond hospital-level interventions to include wider policy reforms addressing economic stability, employment opportunities, and public sector investment.

Strategies for Reducing Nurse Migration

Respondents perceived several interventions as potentially effective for reducing nurse migration. Scholarships and tuition support for postgraduate education received the highest effectiveness rating (mean = 2.61), followed by flexible work arrangements, mentorship programmes, increased staffing levels, workplace safety initiatives, retention incentives, and partnerships with educational institutions.

These findings emphasize that retention strategies should not focus exclusively on salary improvements. Opportunities for professional development, career progression, and supportive working environments appear equally important for encouraging nurses to remain within the Nigerian healthcare system. Mentorship programmes were also highly rated, indicating recognition of the importance of professional support for newly employed nurses.

The relatively moderate overall effectiveness rating (grand mean = 2.54) suggests that respondents do not view any single intervention as sufficient. Instead, they appear to support a comprehensive retention strategy combining financial incentives, educational opportunities, improved staffing, supportive leadership, and enhanced workplace conditions.

Influence of Demographic and Professional Characteristics

The study demonstrated statistically significant differences in nurses' perceptions based on age, marital status, educational qualification, and current hospital role. These findings indicate that personal and professional experiences influence how nurses perceive the consequences of migration.

Older nurses and those with higher educational qualifications may possess greater professional experience and organizational responsibilities, enabling them to appreciate the broader implications of workforce shortages. Similarly, differences according to current hospital role suggest that managerial and supervisory nurses may observe organizational consequences of migration more directly than frontline staff.

Conversely, no significant differences were observed according to gender, type of hospital, years of working experience, or department. This suggests that the challenges associated with nurse migration are experienced relatively consistently across different hospital settings and clinical departments.

7. Implications for Nursing Practice

The findings have several important implications for nursing practice, healthcare management, and health policy.

First, healthcare administrators should prioritize workforce retention as an essential component of healthcare quality improvement. Persistent shortages of experienced nurses increase workload, reduce continuity of care, and may compromise patient safety. Retention strategies should therefore be integrated into organizational workforce planning.

Second, governments should strengthen investment in the nursing workforce by improving remuneration, providing competitive welfare packages, ensuring timely promotion, and expanding opportunities for continuing professional development. Such measures may reduce migration intentions while improving job satisfaction and organizational commitment.

Third, healthcare institutions should strengthen mentorship programmes to facilitate knowledge transfer from experienced nurses to newly employed staff. Given that respondents identified the loss of experienced mentors as a major consequence of migration, structured mentoring systems may help preserve institutional expertise despite workforce turnover.

Fourth, nursing managers should implement evidence-based workload management strategies by maintaining adequate staffing levels and promoting supportive work environments. Improving nurse-patient ratios and reducing excessive workload may decrease burnout and improve both staff retention and patient outcomes.

Finally, policymakers should develop comprehensive national and state-level nurse retention policies that address economic, organizational, and professional determinants of migration rather than relying solely on salary adjustments.

8. STRENGTHS AND LIMITATIONS

A major strength of this study is that it provides empirical evidence from practicing nurses regarding the perceived effects of migration on healthcare service delivery within Delta State. The inclusion of both perceived impacts and associated migration factors offers a comprehensive understanding of the issue and generates findings with practical relevance for workforce planning.

However, several limitations should be acknowledged. The cross-sectional design limits the ability to establish causal relationships between migration and healthcare outcomes. Data were based on nurses' self-reported perceptions, which may be subject to response bias. Additionally, the study was conducted in selected hospitals within Delta State; therefore, caution should be exercised when generalizing the findings to all healthcare institutions in Nigeria.

9. CONCLUSION

The study demonstrates that nurses perceive migration as having a moderate but meaningful negative effect on healthcare service delivery in selected hospitals in Delta State. Respondents identified shortages of skilled personnel, increased workload, disruption of continuity of care, loss of experienced mentors, and reduced service efficiency as the principal consequences of migration. Economic hardship, poor remuneration, inadequate employment opportunities, excessive workload, and limited professional development emerged as the major drivers of migration. The findings underscore the need for comprehensive workforce retention strategies that integrate competitive remuneration, supportive work environments, professional development, mentorship, and evidence-informed health workforce policies. Such interventions are likely to improve nurse retention, strengthen healthcare service delivery, and contribute to the long-term resilience of the Nigerian health system.

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