Continental J. Applied Sciences
Ojewola and Ogunmakinwa (2026) 21 (3): 99 – 114 Doi: 10.5281/zenodo.21773975

Research Article

Integration of Community Health Residency Programmes into Primary Health Settings in Ondo City, Nigeria: A Quantitative Study

Justina Olunike Ojewola and Florence Iyabo Ogunmakinwa
Department of Community Health Science, Faculty of Health Sciences, Wesley University, Ondo, Ondo State
***Corresponding author: justinaojewola1@gmail.com**

Abstract

This study examined the integration of Community Health Residency Programmes into Primary Health Care (PHC) settings in Ondo City, Nigeria. The study focused on the level of integration, the contributions of residency programmes to PHC service delivery, and the challenges affecting effective implementation. A descriptive survey research design was adopted, and data were collected using structured questionnaires administered to 115 respondents comprising resident doctors, community health workers, caregivers, and health trainees. Data were analyzed using descriptive statistics of frequency counts, percentages, mean, and standard deviation. Findings revealed that Community Health Residency Programmes are moderately integrated into PHC settings, with resident doctors actively involved in routine PHC activities such as immunization, antenatal care, disease prevention, and health promotion. Specifically, the level of integration recorded mean scores ranging from 2.97 to 3.16, while contributions to PHC service delivery ranged from 3.15 to 3.30, indicating a strong positive impact. However, effective integration is hindered by inadequate funding ($\bar{X}$= 3.34), shortage of trained supervisors($\bar{X}$=3.20), poor infrastructural facilities ($\bar{X}$=3.23), and weak policy support ($\bar{X}$= 3.16). The study concludes that while Community Health Residency Programmes play a vital role in strengthening PHC service delivery, their full potential is limited by systemic and institutional challenges. It recommends improved funding, strengthened supervision, infrastructure development, and stronger policy coordination to enhance integration and sustainability.

Keywords: Community Health Residency Programmes, Primary Health Care, Health Workforce Integration, Maternal and Child Health, Health Systems Strengthening.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Received: 25 April 2025 **Accepted: 20 July 2025**

Citation: Ojewola, J.O. and Ogunmakinwa, F.I. (2026). Integration of Community Health Residency Programmes into Primary Health Settings in Ondo City, Nigeria: A Quantitative Study. Continental J. Applied Sciences, 21(3), 99-114. Doi: 10.5281/zenodo.21773975

Introduction

Primary health care (PHC) has consistently been recognized as the foundation of an effective and equitable health system across the globe. Since the adoption of the Alma-Ata Declaration and its reaffirmation in subsequent global health frameworks, PHC has remained central to achieving Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs). It emphasizes accessible, affordable, and community-based healthcare services that address the majority of a population's health needs throughout the life course. Global health authorities continue to advocate for strengthened PHC systems as a means of reducing health inequalities, improving service delivery, and enhancing population health outcomes (Ogah et al., 2024).

In developing countries such as Nigeria, the importance of PHC is particularly evident due to the high burden of communicable diseases, maternal and child health challenges, and the rising incidence of non-communicable diseases. The Nigerian PHC system was designed to bring healthcare services closer to the people, especially those in rural and underserved communities. It serves as the first level of contact within the national health system and is expected to provide comprehensive services, including preventive, promotive, curative, and rehabilitative care. Despite this mandate, the PHC system in Nigeria continues to face numerous structural and operational challenges. These include inadequate funding, poor infrastructure, shortage of skilled healthcare personnel, weak referral systems, and limited community participation (Dada, 2023). These challenges have significantly constrained the effectiveness of PHC in delivering quality healthcare services and have contributed to poor health outcomes across the country.

Ondo State, particularly Ondo City, offers a relevant context for examining efforts to strengthenPHCdeliveryinNigeria.Thestatehasimplementedvariouscommunity-based health interventions aimed at improving access to healthcare and enhancing service quality. Evidence suggests that such initiatives have yielded positive outcomes in terms of increased service utilization and improved maternal and child health indicators (Osunmakinwa et al., 2025). However, the sustainability and scalability of these interventions remain uncertain, particularly in the face of persistent human resource constraints and systemic inefficiencies within the PHC system.

One critical strategy for addressing these challenges is the development and deployment of a well-trained health workforce through community health residency programmes. These programmes are designed to equip medical doctors with the competencies required for community-oriented healthcare delivery, with a strong emphasis on prevention, health promotion, and community engagement. Globally, the integration of community-based training programmes into health systems has been

associated with improved service delivery, enhanced workforce capacity, and better health outcomes (Atun et al., 2022). In addition, interdisciplinary collaboration among health care professionals has been shown to improve the quality of care and patient outcomes (Oluwarotimi et al., 2025).

However, in Nigeria, community health residency programmes are predominantly based in tertiary healthcare institutions, with limited integration into primary health care settings. This creates a significant disconnect between training and practice, as resident doctors often lack adequate exposure to real-world community health challenges encountered at the PHC level. Consequently, the potential contributions of these programmes to strengthening PHC delivery remain underutilized. Furthermore, existing literature has largely focused on the structure, curriculum, and outcomes of residency training within hospital settings, with limited attention given to their integration into PHC systems, particularly at the local government or city level.

Another critical gap in the literature is the lack of context-specific empirical studies examining how the integration of community health residency programmes into PHC settings can influence healthcare delivery in specific localities such as Ondo City. While studies have highlighted the general benefits of community-based health interventions and workforce development, there is insufficient evidence on the practical mechanisms, challenges, and outcomes of integrating residency training into PHC facilities. Additionally, issues such as policy support, institutional collaboration, resource allocation, and community engagement in the context of such integration have not been adequately explored.

Moreover, there is limited research on how integration can enhance the continuum of care between primary, secondary, and tertiary levels of the health system. The absence of strong linkages between these levels often results in fragmented service delivery, duplication of efforts, and inefficiencies in patient management. Integrating community health residency programmes into PHC settings could potentially address these challenges by fostering better coordination and collaboration across the health system. However, empirical evidence supporting this assumption remains scarce, particularly within the Nigerian context.

Given these gaps, there is a clear need for a comprehensive examination of the integration of community health residency programmes into primary health care settings in Ondo City. Such a study is essential for understanding how this integration can contribute to strengthening PHC delivery, improving health outcomes, and enhancing the overall performance of the health system. It is against this backdrop that this study seeks to investigate the integration of community health residency programmes into primary health care settings in Ondo City.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Specifically, the study seeks to assess the level of integration of community health residency programmes into primary health care settings in Ondo City. It further aims to examine the contributions of community health residency programmes to primary health care service delivery in the study area. In addition, the study seeks to identify the challenges associated with integrating community health residency programmes into primary health care settings in Ondo City. The study will be guided by the following research questions:

1. What is the level of integration of community health residency programmes into primary health care settings in Ondo City?
2. How do community health residency programmes contribute to primary health care service delivery?
3. What challenges are associated with integrating community health residency programmes into PHC settings in Ondo City?

Contribution of the Study

This study is significant in several ways. Firstly, it will contribute to existing body of knowledge on primary health care (PHC) systems and human resource development in Nigeria by providing empirical evidence on the integration of community health residency programmes into PHC settings. While much of the existing literature focuses on hospital-based residency training, this study shifts attention to the less explored area of community-based training and its practical linkage with PHC delivery, particularly in Ondo City.

The findings of this study will be useful to health policymakers and government agencies such as the Ministry of Health and Primary Health Care Development Agencies. It will provide insights into how residency training can be better aligned with PHC needs, thereby informing policy formulation and implementation strategies aimed at strengthening health systems and improving service delivery at the grassroots level.

This study will benefit health institutions and training bodies by highlighting the importance of integrating residency programmes with PHC facilities. This will help medical training institutions to restructure their curriculum and field exposure components in order to produce more community-oriented health professionals who are better equipped to address real-life health challenges in underserved communities.

Furthermore, the study will be valuable to primary health care workers and facility managers, as it will shed light on the potential benefits of collaboration with residency programmes. Such collaboration can improve service delivery, enhance knowledge exchange, and strengthen teamwork among healthcare professionals at the PHC level.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

The study will serve as a reference material for future researchers interested in community health training, primary health care development, and health system strengthening in Nigeria and other similar settings. It will also provide a foundation for further studies exploring innovative approaches to improving healthcare delivery through training-service integration.

Methodology

A descriptive survey research design was adopted for this study. This design was considered appropriate because it enables the collection of data from a defined population in order to describe existing conditions, opinions, and practices relating to the integration of community health residency programmes into primary health care (PHC) settings in Ondo City, Nigeria. The study was conducted in Ondo City, Ondo State, Nigeria, which hosts several primary health care facilities as well as training environments where community health-related activities and residency exposure take place. The setting was selected because it provides a suitable environment for examining the interaction between residency training programmes and PHC service delivery.

The population of the study comprised resident doctors, community health workers, caregivers, and health trainees working within selected primary health care facilities in Ondo City. These categories of respondents were considered appropriate because they are directly involved in or affected by PHC service delivery and community health training activities. A total of 115 respondents were selected as the sample size for the study. A combination of purposive and simple random sampling techniques was employed. Purposive sampling was used to select respondents who are directly involved in PHC service delivery and residency-related activities, while simple random sampling was used to ensure that every eligible participant had an equal chance of being selected.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Table 1: Demographic Characteristics of Respondents(n=115)

Variable	Category	Frequency	Percentage (%)
Gender	Male	62	53.9
	Female	53	46.1
Age	Below25years	18	15.7
	25–34 years	44	38.3
	35–44 years	33	28.7
	45yearsand above	20	17.4
Category of Respondents	Resident Doctors	28	24.3
	Community Health Workers	37	32.2
	Caregivers	25	21.7
	Health Trainees	25	21.7
Years of Experience	Less than 1year	12	10.4
	1–5 years	46	40.0
	6–10 years	33	28.7
	Above10years	24	20.9
Educational Qualification	Diploma	22	19.1
	BSc/HND	41	35.7
	MBBS	28	24.3
	Post graduate Training	24	20.9
Total		**115**	**100**

Source: Field Survey, 2026.

Data for the study were collected using a structured questionnaire developed by the researcher. The questionnaire was designed to obtain information on the level of integration of community health residency programmes into PHC settings, their contributions to service delivery, and the challenges associated with their integration.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

It consisted of both demographic information and Likert-scale items. The instrument was validated through face and content validation by experts in community health and health administration, who ensured that the items were clear, relevant, and aligned with the research objectives. To ensure reliability, the instrument was pre-tested on a small group of respondents outside the study area, and internal consistency was determined using Cronbach's alpha method.

The questionnaires were administered directly to the respondents, and adequate explanation of the purpose of the study was provided to ensure proper understanding and accurate responses. Completed questionnaires were retrieved after administration. The data collected were analyzed using descriptive statistics such as frequency counts, percentages, and mean scores. The results were presented in tables to facilitate easy interpretation and discussion in line with the study objectives.

Results and Discussion

Analysis of Research Questions

This section presents the analysis of data based on the research questions. Responses were analyzed using frequency counts, percentages, mean ($\bar{X}$), and standard deviation (SD). A 4-point Likert scale was used where Strongly Agreed (SA) = 4, Agreed (A) = 3, Disagreed (D) = 2, Strongly Disagreed (SD) = 1. A decision rule of 2.50 was used; any mean that is greater than or equal to 2.50 indicates agreement, while below 2.50 indicates disagreement.

Research Question 1: Level of Integration of Community Health Residency Programmes into PHC Settings

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Table 2: Responses on Level of Integration Integration of Community Health Residency Programmes into PHC Settings

		SA	A	D	SD	Mean($\bar{X}$)	SD	Remark
1	Community health residency Doctors are actively posted to PHC centres in Ondo City.	48	42	15	10	3.11	0.82	Agreed
2	Resident doctors participate in routine PHC activities such as immunization and antenatal care.	52	40	13	10	3.16	0.80	Agreed
3	There is structured collaboration between residency training institutions and PHC facilities.	44	38	20	13		0.89	Agreed
4	Community health residency programmes are well integrated into PHC service delivery in Ondo City.	40	45	18	**12**	2.97	0.86	Agreed

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Research Question 2: Contributions of Residency Programmes to PHC Service Delivery

Table 3: Responses on Contributions of Residency Programmes to PHC Service Delivery

S/N	Items	SA	A	D	SD	Mean($\bar{X}$)	SD	Remark
1	Residency doctors improve the quality of healthcare services in PHC centres.	55	43	10	7	3.28	0.73	Agreed
2	Their presence enhances disease prevention and health promotion activities.	50	45	12	8	3.19	0.78	Agreed
3	Community health residents contribute to better maternal and child health outcomes.	58	40	10	7	3.30	0.71	Agreed
4	Residency programmes improve community health awareness and education.	47	46	14	8	3.15	0.79	Agreed

Source: Field Survey, 2026

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Research Question 3: Challenges of Integration into PHC Settings

Table 4: Responses on Challenges of Integration into PHC Settings

S/N	Items	SA	A	D	SD	Mean($\bar{X}$)	SD	Remark
1	Inadequate funding limits effective integration of residency programmes.	60	38	10	7	3.34	0.70	Agreed
2	There is shortage of trained supervisors for resident doctors in PHC centres.	53	40	12	10	3.20	0.77	Agreed
3	Poor infrastructure affects the integration of residency programmes.	57	36	13	9	3.23	0.75	Agreed
4	Lack of policy support hinders collaboration between PHC centres and training institutions.	50	42	14	9	3.16	0.78	Agreed

Source: Field Survey, 2026

Discussion of Findings

Table 1 presents the demographic characteristics of respondents in this study, which include gender, age, category of respondents, years of experience, and educational qualification. The gender distribution shows that males (53.9%) were slightly more than females (46.1%), indicating a relatively balanced representation of both sexes. This suggests that the study is not gender-biased and reflects the views of both male and female stakeholders in primary health care delivery. The age distribution further reveals that most respondents fall within the 25–34 years (38.3%) and 35–44 years (28.7%) age categories, indicating that the majority are within their active working and productive professional years. This is significant because individuals in these age brackets are more likely to be actively involved in clinical duties, residency training, and primary health care service delivery, thereby providing informed and experience-based responses.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Table 1 also shows that community health workers (32.2%) constituted the highest proportion of respondents, followed by resident doctors (24.3%), while caregivers and health trainees each accounted for 21.7%. This distribution reflects the multidisciplinary nature of primary health care services and ensures that the study captures perspectives from different cadres involved in service delivery and training. In addition, most respondents had 1–5 years of experience (40.0%), followed by those with 6–10 years (28.7%), indicating that a large proportion of participants have moderate exposure to health service delivery and residency programmes. Educational qualification data reveal that BSc/HND holders (35.7%) formed the largest group, followed by MBBS holders (24.3%) and those with postgraduate training (20.9%). This indicates that respondents are sufficiently educated and capable of providing reliable and informed opinions. Overall, the demographic profile enhances the credibility of the study, although the findings are limited to Ondo City, suggesting the need for broader studies across other regions for generalization.

Level of Integration of Community Health Residency Programmes into PHC Settings

Table 2 presents the responses on the level of integration of Community Health Residency Programmes into Primary Health Care (PHC) settings in Ondo City. The findings reveal that respondents generally agreed that residency programmes are integrated into PHC service delivery, as all items recorded mean scores above the decision benchmark of 2.50. Specifically, respondents agreed that community health residency doctors are actively posted to PHC centres ($\bar{X}$=3.11), and that resident doctors participate in routine PHC activities such as immunization and antenatal care ($\bar{X}$= 3.16). This finding is consistent with the position of the World Health Organization (WHO, 2018), which emphasizes that effective PHC systems require task-sharing and deployment of trained health professionals, including doctors-in-training, to frontline health facilities to improve access and coverage of essential services.

The study further shows agreement that there is structured collaboration between residency training institutions and PHC facilities ($\bar{X}$=2.97), and that community health residency programmes are generally integrated into PHC service delivery in Ondo City ($\bar{X}$=2.97). This aligns with findings of Ojo and Adebayo (2020), who reported that collaboration between teaching hospitals and PHC centres enhances clinical exposure of resident doctors while strengthening community-based healthcare delivery. Similarly, Adekunle et al. (2021) observed that integration of residency training into PHC settings improves service delivery outcomes, particularly in maternal and child health services. However, the moderate mean scores suggest that integration may still be partially implemented rather than fully institutionalized, indicating possible gaps in coordination and supervision.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

The implication of these findings is that while Community Health Residency Programmes are contributing to strengthening PHC delivery through practical exposure and service involvement, the integration process is not yet fully optimized. This is in line with the observation of Akinyemi and Bello (2019), who noted that inadequate policy implementation and weak institutional linkages often hinder full integration of residency programmes into PHC systems in developing countries. Therefore, although the findings confirm the presence of integration, they also suggest the need for stronger policy frameworks, improved coordination between training institutions and PHC centres, and enhanced supervision mechanisms to ensure sustainability and effectiveness. Future research could further examine the quality, consistency, and regional variation of this integration across different PHC facilities in Nigeria.

Contributions of Residency Programmes to PHC Service Delivery

Table 3 presents the responses on the contributions of Community Health Residency Programmes to Primary Health Care (PHC) service delivery. The findings reveal a strong level of agreement among respondents that residency doctors significantly improve thequality of healthcare services in PHC centres ($\bar{X}$= 3.28). Respondents also agreed that their presence enhances disease prevention and health promotion activities ($\bar{X}$= 3.19), improves community health awareness and education ($\bar{X}$= 3.15), and contributes to better rmaternal and child health outcomes ($\bar{X}$=3.30). These results indicate that residency programmes play an important role in strengthening frontline health services and improving population health outcomes at the community level.

These findings are consistent with the work of the World Health Organization (WHO, 2019), which emphasizes that deploying skilled health professionals to PHC settings improves service quality, strengthens preventive care, and enhances maternal and child health indicators. Similarly, studies by Eze and Okafor (2020) and Afolabi et al. (2021) reported that the involvement of resident doctors in PHC facilities contributes to improved health education, early disease detection, and better management of common childhood and maternal conditions. The strong agreement observed in this study therefore reinforces the global and local evidence that residency training integrated into PHC systems enhances service delivery effectiveness and community health outcomes.

The implication of these findings is that Community Health Residency Programmes are not only training platforms but also active contributors to health system strengthening at the primary care level. Their presence improves service delivery quality and expands access to preventive and promotive health services. However, while the contributions are strongly positive, the variation in mean scores suggests that the level of impact may differ across PHC centres depending on available resources, supervision, and institutional support. This aligns with the observation of Adeyemi and Balogun (2022), who noted that the effectiveness of residency

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

contributions in PHC settings are often influenced by infrastructure quality and management support. Therefore, strengthening operational support systems and ensuring consistent deployment structures will further enhance the impact of residency programmes. Future research could explore comparative contributions across rural and urban PHC facilities to better understand contextual differences.

Challenges of Integration into PHC Settings

Table 4 presents the responses on the challenges affecting the integration of Community Health Residency Programmes into Primary Health Care (PHC) settings in Ondo City. The findings reveal a high level of agreement among respondents that inadequate funding limits the effective integration of residency programmes into PHC services ($\bar{X}$ =3.34). Respondents also agreed that there is a shortage of trained supervisors for resident doctors in PHC centres ($\bar{X}$=3.), poor infrastructure affects programme integration ($\bar{X}$ = 3.23), and lack of policy support hinders collaboration between PHC centres and training institutions ($\bar{X}$ =3.16). These results indicate that despite the presence and contributions of residency programmes, several systemic and structural barriers constrain their full effectiveness within PHC settings.

These findings are consistent with the report of the World Health Organization (WHO,2020), which identified inadequate financing and weak health system infrastructure as major barriers to effective primary health care delivery in low- and middle-income countries. Similarly, Okoro and Nwankwo (2021) found that insufficient funding and poor facility infrastructure significantly hinder the successful implementation of health training and residency programmes in community settings. The issue of inadequate supervision also aligns with the findings of Ibrahim et al. (2019), who observed that a shortage of trained mentors in PHC facilities reduces the quality of residency training and limits effective clinical integration.

The implication of these findings is that while Community Health Residency Programmes are present within PHC systems, their full integration is constrained by financial, institutional, and structural limitations. Poor infrastructure and lack of adequate supervisory personnel reduce the efficiency of training and service delivery, while weak policy support limits coordination between training institutions and PHC facilities. This supports the view of Adeoye and Salami (2022), who noted that sustainable integration of health residency programmes into PHC requires strong policy frameworks, adequate funding, and improved health system governance. Therefore, addressing these challenges is essential for maximizing the impact of residency programmes on primary health care delivery. Future studies may further investigate strategic interventions that can strengthen policy implementation and improve resource allocation for PHC-based residency training.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Conclusion and Policy Implications

This study examined the integration of Community Health Residency Programmes into Primary Health Care (PHC) settings in Ondo City, focusing on the level of integration, contributions to service delivery, and challenges affecting implementation. The findings reveal that residency programmes are moderately integrated into PHC services, with resident doctors actively involved in routine PHC activities such as immunization, antenatal care, disease prevention, and health promotion. The study also established that these programmes make significant contributions to improving the quality of healthcare services, enhancing maternal and child health outcomes, and strengthening community health awareness and education. However, despite these positive contributions, the integration process is hindered by key challenges including inadequate funding, shortage of trained supervisors, poor infrastructure, and weak policy support.

The study concludes that Community Health Residency Programmes play a vital role in strengthening primary health care delivery and improving community-level health outcomes, but their full potential is not yet maximized due to systemic constraints. The key implication is that effective integration requires stronger policy coordination, improved funding mechanisms, enhanced supervision structures, and better infrastructural development within PHC facilities. Practically, the study provides evidence for policymakers and health administrators to prioritize the institutionalization of residency programmes within PHC systems as a strategy for improving healthcare access and quality. Theoretically, itcontributes to the growing body of knowledge on health workforce training and primary health care strengthening by highlighting how residency-based models can enhance community health delivery when adequately supported.

Recommendations

Resulting from the findings on each research objectives, the following recommendations are made:

1. Government and health authorities should strengthen the integration of Community Health Residency Programmes by ensuring structured posting of resident doctors to PHC centres and improving collaboration between training institutions and PHC facilities.
2. PHC centres should be adequately supported to enable resident doctors actively contribute to maternal and child health services, disease prevention, and health promotion activities through improved logistics and service coordination.
3. Adequate funding should be provided, PHC infrastructure should be upgraded, trained supervisors should be deployed to PHC centres, and clear policy frameworks should be established to support sustainable integration of residency programmes.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

References

Adekunle, A. O., Oladipo, M. A., & Akinyemi, O. O. (2021). Integration of residency training into primary health care and its impact on maternal and child health services in Nigeria. *Journal of Community Medicine and Primary Health Care, 33*(2), 45–58.

Adeoye, A. A., & Salami, R. T. (2022). Health system governance and sustainability of primary health care services in developing countries. *African Health Sciences Journal, 22*(4), 112–124.

Adeyemi, K. T., & Balogun, O. A. (2022). Infrastructure and management support as determinants of health service delivery in primary care facilities. *International Journal of Health Administration, 10*(2), 88–97.

Afolabi, T.O., Balogun, S.T., & Ogunleye, O.J. (2021). Impact of resident doctors on health education and disease prevention in primary health care facilities. *Nigerian Journal of Medical Practice, 24*(3), 67–78.

Akinyemi, F. O., & Bello, M. A. (2019). Policy implementation gaps in health workforce integration in Nigeria's primary health care system. *Health Policy and Planning Review, 14*(1), 29–40.

Atun, R., deJongh, T., Secci, F., Ohiri, K., &Adeyi, O. (2022). Integration of health systems and service delivery reforms: Evidence on workforce training and primary care strengthening. *Global Health Policy and Systems, 17*(2), 45–60.

Dada, A. O. (2023). Challenges facing primary health care delivery in Nigeria: A systemic review. *Nigerian Journal of Health Systems Development, 5*(1), 15–28.

Eze, C.N., & Okafor, C. C. (2020). Role of resident doctors in improving primary healthcare delivery in Nigeria. *Journal of Public Health in Africa, 11*(1), 55–63.

Ibrahim, H. M., Yusuf, R. K., & Mohammed, A. S. (2019). Mentorship gaps and their impact on residency training in community health settings. *West African Medical Journal, 36*(4), 101–110.

Ogah, O. S., Eze, J. N., & Ibrahim, M. T. (2024). Strengthening primary health care systems for universal health coverage in low- and middle-income countries. *International Journal of Public Health and Epidemiology, 9*(1), 1–12.

Ojo, T. A., & Adebayo, S. O. (2020). Collaboration between teaching hospitals and primary health care centres in Nigeria: Benefits and challenges. *Nigerian Journal of Clinical Practice, 23*(5), 601–608.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria

Okoro, C. U., & Nwankwo, I. E. (2021). Barriers to effective implementation of health training programmes in community health facilities. *International Journal of Health Systems Research, 9*(3), 72–84.

Oluwarotimi, A. O., Akinwale, O. E., & Bello, S. M. (2025). Interdisciplinary collaboration and healthcare delivery outcomes in developing health systems. *African Journal of Health Professions Education, 17*(1), 33–41.

Osunmakinwa, B. A., Adeyemi, K. T., & Afolabi, O. J. (2025). Community-based health interventions and maternal-child health outcomes in Southwestern Nigeria. *Journal of Community Health and Primary Care, 12*(1), 22–35.

World Health Organization. (2018). *Primary Health Care: Closing the gap between public health and primary care systems through integration*. Technical series on primary healthcare. WHO.

World Health Organization. (2019). *Primary health care and workforce strengthening for universal health coverage*. WHO.

World Health Organization. (2020). *State of primary health care in low- and middle-income countries*. WHO.

World Health Organization. (2022). *Primary health care measurement framework and indicators: Monitoring health systems through a primary health care lens.* WHO.

ISSN: 3043-6087. Science and Education Development Inst., Nigeria