



Review Article

Advances in Nursing Education in Nigeria: Challenges and the Way Forward

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ABSTRACT

Skilled and long-lasting healthcare professionals are needed in Nigeria and nursing education is critical to this. The Nigerian nursing education has witnessed tremendous improvements in the last few years, including the proliferation of university-based nursing programs, more training opportunities, curriculum reform, competency-based education, e-learning, simulation-based learning, continuing professional development, and increased emphasis on artificial intelligence and digital health. This has been driven by the need to strengthen the nursing workforce in Nigeria and the rising healthcare demands of the country. However, there remain significant barriers affecting the access and quality of nursing education. These include insufficient infrastructure, lack of clinical training chances, lack of financing, poor internet connectivity, lack of digital resources, migration of nurses and educators and the continuous theoretical practice gap. Fast developments in artificial intelligence both opportunity and ethical challenges to nursing education. The paper presents a critique of the present trends in nursing education in Nigeria, its major impediments and solutions in the long run. It argues that increased student enrolment must be accompanied by investment in teachers, facilities, clinical education, technology, research and quality control. Nursing education should be enhanced to develop trained, morally upright, digitally savvy and patient-centred nurses capable of meeting the changing health demands of Nigeria.

Keywords: curriculum, e-learning, simulation, artificial intelligence, clinical education, nursing workforce, Nigeria, nursing education, nurse educators

INTRODUCTION

Education in nursing has a great influence on the quality of healthcare available to all people. Nurses are the largest professional group in the global health workforce. They are vital in health promotion, disease prevention, primary health care, emergency care, maternal and child health, chronic disease management, rehabilitation and palliative care. Thus, the quality of nursing education has implications not just for educational institutions but also for patient safety, health outcomes, workforce sustainability and universal health coverage (World Health Organization [1]). The WHO's State of the World's Nursing 2025 report stresses the need for sustainable investment in nursing education, employment, leadership and service delivery to alleviate nursing shortages and strengthen health systems [2]. In Nigeria, the increasing population, the growing need for healthcare, changes in the pattern of diseases and the shortages and uneven distribution of health professionals have made nursing education even more important. Despite improvements in reported workforce figures, the density of Nigeria's nursing professionals remains below what is needed to address the health needs of the population, according to the latest data on the health workforce in Africa [2]. There has also been a large number of nurses migrating abroad in Nigeria during the same period. Recent data showing a marked increase in the number of Nigerian nurses registering to practise in the UK [3] is indicative of the strain that migration continues to exert on the domestic nursing workforce.

In Nigeria, nursing education has been traditionally offered through many routes including university-based programs, and schools and colleges of nursing. The expansion of university education has increased the alternatives for training for bachelor, master and doctoral , in addition to increasing the academic, research and leadership aspects of the profession .

However, qualified instructors, infrastructure, clinical placements and technical resources have not kept pace with educational expansion. This raises a serious policy dilemma: while student enrolment needs to be expanded to ease the employment crisis, rapid growth without appropriate educational capacity may risk quality [4]. Recently, the Nigerian government has showed increased commitment to the development of the nursing and midwifery professions. The Nigeria Strategic Directions for Nursing and Midwifery 2025-2030 is a national framework to improve education, workforce capacity, leadership and service delivery. The policy also names competency-based education, continuous professional development, and the growth and upgrading of training facilities within the key government pronouncements [5].

Nursing education is also being affected by technological progress. Since the COVID-19 pandemic, e-learning and blended learning have increased, and nursing education uses simulation, mobile applications, virtual learning environments and digital health more and more. More recently, artificial intelligence (AI) – and especially generative AI – has surfaced as a potentially transformative instructional tool. A recent study in Nigeria revealed that nursing students possessed very limited knowledge of artificial intelligence (AI) but showed great interest in acquiring more knowledge about it, which suggests great potential for curricular improvement [6].

Hence, this study aims to assess the major developments in nursing education in Nigeria, examine the challenges to their effectiveness and proffer practical recommendations to improve nursing education. Special attention is paid to curriculum reform, competency-based education, digital learning, simulation, artificial intelligence, faculty development, clinical education, migration and policy implementation.

Advances of Nursing Education in Nigeria:

An important development in Nigerian nursing education is the rise in the number of training alternatives. The increasing numbers of students entering nursing and midwifery courses is a sign that the government is trying to ease the shortage of health workers. The growth is important as Nigeria requires a sufficiently large and well-trained nursing staff to meet the health-care needs of its growing population. However, with the increase in the number of students, the quantity of suitably competent educators, clinical instructors, learning facilities and clinical placement opportunities [7]. A second important reason is the emergence of nursing education in the universities. University programs allow nurses to earn bachelor's, master's and doctorate degrees. More college education improves research, leadership, evidence-based practice and professional development. The postgraduate nursing education is especially required for the education of nurse educators and researchers. However, postgraduate nursing education still faces the difficulties of limited human and educational resources [8]

Curriculum reform has also improved the development of nursing education. Modern nursing education is also moving from an emphasis on the acquisition of academic knowledge alone to competency-based education. Competency-based education is centred around the ability of graduates to demonstrate clinical knowledge, practical skills, communication, critical thinking, ethical conduct, leadership and evidence-based decision-making. The Nursing and Midwifery Council of Nigeria has an important role to play in the regulation of nursing education and the preservation of authorised educational standards.

Also, the use of novel teaching approaches has increased. Student-centred strategies such as problem-based learning, case-based learning, team-based learning, flipped classrooms and others promote active involvement and critical thinking. There is evidence that team-based learning may enhance nursing students' knowledge, practical skills and core competencies [9]. These strategies can be used as an adjunct to regular lectures to assist learners in developing abilities needed in complex clinical environments.

Digital technology has become quite important in nursing education in Nigeria. E-learning and blended learning surged during the COVID-19 pandemic and its aftermath. With online learning, students can access lectures, e-books, scientific journals, videos and other educational tools. It also offers a chance for continued professional development. However, Nigerian students have identified limited access to the internet, financial constraints, inadequate devices and lack technical skills as barriers to effective online learning [9].

An viable solution would be a blended learning strategy of theory online along with face to face classroom, laboratory and clinical teaching. Therefore, digital learning should be used as a complement rather than a substitute for actual clinical encounters.

The education with simulations is another big step ahead. Simulation gives a safe environment for trainees to practise clinical procedures, communication, decision making and emergency management skills, before caring for real patients. Simulation has been shown to improve knowledge, clinical skills, confidence and decision making of nursing students in systematic reviews [10]. Simulation is especially significant in Nigeria as students are exposed to crowded clinical environments with limited hands-on opportunity. When the employment of expensive high-fidelity equipment is not feasible, low-cost simulation, role-play, task trainers and standardised patients can be employed.

Artificial Intelligence (AI) is an emerging technology that may have implications for nursing education. Artificial intelligence can assist with individualised teaching, simulated clinical situations, research, feedback and the development of training materials. However, Nigerian nursing students may not have enough knowledge of AI. Poor knowledge of AI was found in nursing students in Nigeria, although they have a reasonable willingness to be instructed on AI. Thus, AI literacy comprising data protection, prejudice, misinformation, academic integrity and professional accountability should be incorporated in nursing curricula[11].

Electronic health records, telemedicine, mobile health, and digital information systems are being used more and more in healthcare systems, and this necessitates digital health competences. Nursing students should develop competencies in electronic documentation, information management, digital communication, data interpretation, and safe use of technology [12].

Challenges Facing Nursing Education in Nigeria

There are still many obstacles in Nigerian nursing education despite much progress. One of the most critical is the lack of skilled nurse educators. The rapid increase in student numbers raises the demand for lectures, clinical instructors and supervisors. If there aren't enough faculty, teachers could be overburdened and have less time to give personalised attention to students. The shortage is aggravated by the migration of experienced nurses and academics. Another big issue is lack of infrastructure. Some nursing institutes need well-equipped classrooms, skills laboratories, libraries, simulation centers, computers and internet facilities. Effective implementation of competency-based education and digital learning necessitates suitable infrastructure[13, 14].

Clinical education also continues to be hard. Many hospitals are overcrowded, understaffed and have limited resources, but nursing students need enough opportunity to practise clinical operations under supervision. Students may consequently watch procedures without sufficient opportunities to perform them. This is one of the reasons for the persistent theory-practice gap[15,16].

Theory-practice gap is the problem of applying what is learned in the classroom to actual clinical conditions. Research from Nigeria has identified resource restrictions, environmental variables and inadequacies in the link between educational institutions and clinical settings as key drivers to the gap [17]. Therefore, it is important to strengthen clinical mentorship, simulation and collaboration between nursing schools and health institutions. Funding is one of the other big challenges. Quality nursing education needs constant investment in infrastructure, equipment, teacher development, libraries, ICT facilities and student assistance. With little funding, equipment can become outdated and instructional resources may be unavailable.

The possible advantages of e-learning are also limited by digital inequalities. Students can encounter unstable electricity, pricey internet services, poor network connectivity and limited access to computers or cellphones. These types of difficulties may be more common among students from economically poor homes.

Another important problem is the migration of nurses. More Nigerian nurses are leaving for jobs abroad, lured by higher salary, working conditions and career chances. There is evidence of increased migration of African nurses including Nigerian nurses to nations such as the United Kingdom [18]. Migration may lead to a reduced supply of experienced nurses and educators in Nigeria. So, increasing student enrolment without addressing retention could create a vicious circle of Nigeria training nurses who then leave the country.

The way forward

The primary objective should be sustainable investment into nurse education. The government should make sure that there is enough financing for classrooms, laboratories, simulation facilities, libraries, ICT infrastructure and faculty development. Investment should be targeted not just at raising enrolment but also at ensuring that institutions have the capacity to deliver outstanding education.

Second, Nigeria needs a holistic strategy to the development and retention of nurse educators. Scholarships should be provided for master and doctoral education, and mentorship, research and continuing professional development should be strengthened. Better pay, conditions and career growth will also assist to retain skilled nurses and academics.” Third, nursing courses should be revised routinely. The focus needs to be increased on digital health, artificial intelligence, nursing informatics, research, evidence-based practice, leadership, patient safety, mental health, noncommunicable illnesses, emergency preparedness and primary healthcare. It is important that curriculum creation includes educators, physicians, students, regulators and healthcare employers.

Fourth, extend simulations. Nursing schools should have functional skills laboratories and simulation programs. Expensive high fidelity simulations are useful, but not the sole choice. Simulation, role-play and standardised patients can also be a great low-cost learning experience.

Fifth, Nigeria should have a unified digital nursing education approach. This should include internet connectivity, energy, digital learning platforms, digital libraries, cybersecurity and digital literacy in general. Faculty members should be trained to teach and assess online.

Sixth, artificial intelligence should be brought into nursing education in a responsible manner. Students should learn to utilise AI critically, comprehending its limitations, ethical consequences and potential biases. AI should augment, not replace, human clinical reasoning.

Seventh, there is a need for improved collaborations between nursing schools and health care institutions. Clinical nurses must be prepared to serve as preceptors and mentors and academic educators must be closely linked to the clinical environment. Joint curriculum development and assessment might bridge the gap between theory and practice. Lastly, the execution of the Nigeria Strategic Directions for Nursing and Midwifery 2025–2030 should be strengthened. The policy provides an important foundation for education, workforce development, leadership, and service delivery [5]. For successful implementation it needs enough finance, clear targets for measurement, monitoring and collaboration between government, regulatory agencies, educational institutions, health care organisations and professional groups.

CONCLUSION

Nursing education in Nigeria has been greatly improved by the growth of training possibilities, university-based education, curriculum reform, competency-based education, e-learning, simulation and digital health, and the emergence of artificial intelligence. These improvements offer crucial possibilities to educate nurses who are clinically competent, technologically proficient, and capable of providing evidence-based care.

However, shortages of nursing educators, inadequate infrastructure, insufficient clinical opportunities, restricted funding, digital inequality, migration, and the theory-practice divide continue to be important impediments. The future of Nigerian nursing education consequently demands a transition from the current emphasis on the number of students trained to a holistic quality-oriented strategy.

Government and educational institutions need to invest concurrently in students, educators, infrastructure, technology, clinical education and research. Nursing schools and health care organisations must increase collaboration, and regulatory bodies must maintain effective quality assurance. Technology needs to be utilised wisely to support learning, not do away with the human touch and clinical judgement, which are the heart of nursing. In the long term, improving nursing education is an investment in the healthcare system of Nigeria. A well trained, sufficiently supported and technologically capable nursing workforce may make considerable contributions to primary health care, illness prevention, maternity and child health, emergency treatment, chronic disease management and universal health coverage. The success of nursing school changes should therefore be measured not just by the quantity of nurses produced, but by the competence, professionalism, adaptability and quality of care exhibited by graduates.

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