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MEDICAL EDUCATION IN NIGERIA

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Abstract: Medical Education, Problems

This paper examined the problems facing medical education in Nigerian tertiary institutions. The paper depends on secondary data. The secondary data were collected from established medical libraries, print materials and online resources. The paper established that poor funding, inadequate academic staff, brain-drain, inadequate infrastructure facilities, inadequate medical research funds, limited space in medical colleges, outdated medical curriculum, management conflict among medical schools and teaching hospitals and strike actions are the major problems militating against medical education in Nigerian tertiary institutions. Based on these findings, this paper suggested an increment in the budgetary allocation of medical education. Adequate infrastructural facilities, increased academic staff employment, academic staff motivation, continuous curriculum evaluation, implementation of agreements consented with various union groups, and increased financing for medical research.

Key words: Medical Education, Tertiary institutions.

Introduction

The history of medical education is as old as the history of man. It is difficult to identify the origin of medical education; authorities usually consider that it began with the ancient Greeks' method of rational inquiry, which introduced the practice of observation and reasoning regarding disease. Rational interpretation and discussion, it is theorized, led to teaching and thus to the formation of schools such as that at Cos, where the Greek physician, Hippocrates is said to have taught in the 5th century BC and originated the oath that became a credo for practitioners through the ages. Later, the Christian religion greatly contributed to both the learning and the teaching of medicine in the West because it favoured not only the protection and care of the sick but also the establishment of institutions where collections of sick people encouraged observation, analysis, and discussion among physicians by furnishing opportunities for comparison. Apprenticeship training in monastic infirmaries and hospitals dominated medical education during the early middle Ages. A medical school in anything like its present form, however, did not evolve until the establishment of the one at Salerno in southern Italy between the 9th and 11th centuries. Even there teaching was by the apprentice system, but an attempt was made at systemization of the knowledge of the time, a series of health precepts was drawn up, and a form of registration to practice was approved by the Holy Roman emperor Frederick II. During the same period, medicine and medical education were flourishing in the Muslim world at such centres as Baghdad, Cairo, and Córdoba.

With the rise of the Universities in Italy and later in Cracow, Prague, Paris, Oxford, and elsewhere in western Europe, the teachers of medicine were in some measure drawn away from the life of the hospitals and were offered the attractions and prestige of University professorships and lectureships. As a result, the study of medicine led more often to a familiarity with theories about disease than with actual sick persons. However, the establishment in 1518 of the Royal College of Physicians of London, which came about largely through the energies of Thomas Linacre, produced a system that called for examination of medical practitioners. The discovery of the circulation of the blood by William Harvey provided a stimulus to the scientific study of the processes of the body, bringing some deemphasize to the tradition of theory and doctrine. Gradually, in the 17th and 18th centuries, the value of hospital experience and the training of the students' sight, hearing, and touch in studying disease were reasserted. In Europe, medical education began slowly to assume its modern character in the application of an increasing knowledge of natural science to the actual care of patients. There was also encouragement of the systematic study of anatomy, botany, and chemistry, sciences at that time considered to be the basis of medicine. The return to the bedside aided the hospitals in their long evolution from dwelling places of the poor, the diseased, and the infirm, maintained by charity and staffed usually by religious orders, into relatively well-equipped, well-staffed, efficient establishments that became available to the entire community and were maintained by private or public expense.

It was not until the mid-19th century, however, that an ordered pattern of science-oriented teaching was established. This pattern, the traditional medical curriculum, was generally adopted by Western medical schools. It was based upon teaching, where the student mostly listens, rather than learning, where the student is more investigative. The clinical component, largely confined to hospitals (charitable institutions staffed by unpaid consultants), was not well organized. The new direction in medical education was aided in Britain by the passage of the Medical Act of 1858, which has been termed the most important event in British medicine. It established the General Medical Council, which thenceforth controlled admission to the medical register and thus had great powers over medical education and examinations. Further interest in medicine grew from these advances, which opened the way for the discoveries of Louis Pasteur, which showed the relation of microorganisms to certain diseases, Joseph Lister's application of Pasteur's concepts to surgery, and the studies of Rudolf Virchow and Robert Koch in cellular pathology and bacteriology.

In the Nigeria, medical education was begun with the establishment of the University College Hospital, Ibadan as a College branch of the University of London in 1948. Following this, majority of the recent medical schools embraced the curriculum of the earlier medical schools which was developed on the standards and curriculum identical to British Universities, with minimal or no alteration (Ibrahim, 2007; Osoba *et al.*, 2021). From 1960 to 1972, medical schools were created at different parts of the country and medical education has since then expanded rapidly with the establishment of Universities in almost every state in the country consisting of Federal, State and Private Universities. The management of undergraduate medical education has continued to be under the oversight of the National Universities Commission (NUC) and the Medical and Dental Council of Nigeria (MDCN). Medical education in Nigerian tertiary institutions is plagued with many challenges. This paper is aimed to discuss the challenges facing medical education in Nigerian tertiary institutions in Nigeria.

Objectives of the Study

The purpose of this paper is to examine the challenges facing medical education in Nigerian tertiary institutions. The specific objective of this paper is:-

1. To discuss the various challenges facing medical education in Nigerian tertiary institutions.

Research Questions

The following research question is formulated;

1. What is the challenges facing medical education in Nigerian tertiary institutions.

Concept of Medical Education

There are many definitions of medical education by different authors. Medical education is education related to the practice of being a medical practitioner, including the initial training to become a physician and additional training thereafter (Wikipedia, 2023). Medical education and training varies considerably across the world. Britannic (2020) defined medical education as the course of study directed toward imparting to persons seeking to become physicians the knowledge and skills required for the prevention and treatment of disease. It also develops the methods and objectives appropriate to the study of the still unknown factors that produce disease or favour well-being.

Among the goals of medical education is the production of physicians sensitive to the health needs of their country, capable of ministering to those needs, and aware of the necessity of continuing their own education. It therefore follows that the plan of education, the medical curriculum, should not be the same in all countries. Although there may be basic elements common to all, the details should vary from place to place and from time to time. Whatever form the curriculum takes, ideally it will be flexible enough to allow modification as circumstances alter, medical knowledge grows, and needs change (Britannic 2020).

Methodology

This paper examined the problems facing medical education in Nigerian tertiary institutions. Secondary data from different sources were employed for the paper. The paper employed content analysis to analyze all literatures collected. Only those relevant to the topic were systematically selected. Exploratory method was adopted in the analysis. To ensure the reliability and validity of the study, multiple secondary sources were used to minimize the risk of error. The secondary data were collected directly from textbooks, journals, articles, newspapers and other local and international publications.

Discussion

Challenges facing Medication Education in Tertiary Institutions in Nigeria

There are many challenges facing medical education in Nigerian tertiary institutions. The challenges includes; poor funding, inadequate academic staff, brain-drain, inadequate infrastructure facilities, inadequate medical research funding, limited capacity space in medical colleges, outdated medical curriculum, management conflict among medical schools and teaching **hospitals** and strike actions.

Poor Funding

Poor funding is a major problem facing medical education in Nigeria. The Nigerian medical education is underfunded and this has affected the development of medical education. Medical education in tertiary education in Nigeria gets their allocation from ministry of education and federal ministry of health for both federal and states institutions. The funds from the federal and state ministry of education to the various tertiary institutions for the administration of medical education are not adequate to implement medical education. Funding from federal and state ministry of health is not also enough to guarantee effective implementation of medical education. The Punch (2019) revealed that Chief Medical Directors of federal universities' teaching hospitals have lamented the underfunding of the tertiary health institutions in the country. This, they said, had been stifling their operations. However, some of them said their health facilities had been relying on donations from foreign donors, alumni associations, well-meaning Nigerians and organizations. Punch (2019) analyzed the Federal Government allocation for 2017, 2018 and 2019 budgets for teaching hospital. A breakdown of the N475.37bn allocated to the Federal Government-owned

teaching hospitals showed that N140.68bn was allocated to them in 2017, while in the 2018 and 2019 fiscal years; they were allocated N158.24bn and N176.45bn, respectively. Further analysis showed that during the three-year period, the University College Hospital, Ibadan was allocated N37.12bn; LUTH, N20.96bn; Ahmadu Bello University Teaching Hospital, N21.19bn; UNTH, N32.09bn; while N24.92 was allocated to the University of Benin Teaching Hospital. Others are OAUTH, N25.59bn; University of Ilorin Teaching Hospital, N23.38bn; University of Jos Teaching Hospital, N21.26bn; University of Port Harcourt Teaching Hospital,N6.91bn; University of Calabar Teaching Hospital, N27.34bn; University of Maiduguri Teaching Hospital, N21.23bn; Usman Dan Fodio University Teaching Hospital N19.48bn; and Aminu Kano University Teaching Hospital, N22.16bn. These allocations are not adequate to ensure effective implementation of medical education in Nigeria. The low prioritization of the health sector in the federal government's budget is partially responsible for the low level of government health spending and has been a pattern over many years (Vanguard 2015; Punch 2019; Peter 2021).

Inadequate Academic Staff

Inadequate academic staff (trained medical professionals) is another problem facing medical education in tertiary institutions in Nigeria. Many medical colleges in Nigerian federal and state universities are faced with shortage of academic staff. This shortage has affected the development of medical education in Nigeria. Peter (2021) lamented shortage of medical lecturers in Nigerian tertiary institutions and this is responsible for poor quality of medical education and low lecturer to student's ratio. Studies by Adeyinks (2017); Yemi (2019); Peter (2021) revealed that Nursing School, Colleges of Basic Health and college of medicine of universities are faced with shortage of professional medical staff. The shortage of personnel in the medical education is linked to poor motivation and brain-drain. Atoyebi (2015) established that not less than 10 per cent of doctors produced in this country over the last 10 years have migrated to other countries in the quest for greener pasture. The payment in Nigeria compared with standard of living is not encouraging. Generally, tertiary institutions in Nigeria are facing problems of shortage of lecturer especially medical lecturers. For instance, NUC data, *Sunday Punch* reports that federal universities currently suffer a shortage of full-time professors. According to the data, no federal university scored up to 50 per cent in the ranking of full professors. This implies that no federal university has the required number of full professors they require. Some of the federal universities ranked in the top 10 are the Usmanu Dan-Fodiyo University, Sokoto, with 36.44 per cent; Obafemi Awolowo University, Ile Ife, 35.80 per cent; University of Ibadan, 29.04 per cent; Federal University of Technology, Akure, 27.28 per cent; Federal University of Agriculture, Abeokuta, 27.25 per cent; University of Abuja, 25.33 per cent; University of Benin, 23.26 per cent; University of Port Harcourt, 21.26 per cent; University of Calabar, 21.20 per cent; and University of Ilorin, 21.12 per cent. The NUC data also puts the number of academic staff in Nigerian universities at 100,000. "The entire system has about 2.1 million students and staff strength of about 170,000 non-teaching and 100,000 academic staff," the NUC stated. Reasons for health worker shortage in health facilities in Nigeria according to Osahon Enabulele include poor health human resource development plans; inadequate training infrastructure and health facilities to support the production of health human resource; migration of health workers (particularly medical/dental practitioners) due to insecurity and poor job satisfaction, particularly as a result of uninspiring workplace conditions, poor health infrastructure and equipment, inadequate remuneration and welfare conditions.

Brain-Drain

Brain-drain is another problem facing medical education in Nigerian tertiary institutions. Academic staff that are medical inclined are leaving the tertiary Nigerian tertiary institutions to other Countries. About one-fifth of African-born physicians and one-tenth of African-born professional nurses were working overseas in developed countries. Clemens & Pettersson in Ipinnimo, Ajidahun, & Adedipe, (2022) asserted that the nine most important destination countries where medical workers are migrating to include

the United Kingdom, United States, France, Australia, Canada, Portugal, Belgium, Spain, and South Africa. Tolu-Kolawole (2021) ascertained that about five thousand (4,528) Nigerian doctors moved to the United Kingdom between 2015 and 2021. As of November 2021, 8,983 Nigerian trained doctors were working in the United Kingdom, and another 727 licensed in just 5 months between December 2021 and April 2022, bringing the total to 9,710 with at least 12 Nigerian doctors employed in the United Kingdom every week (Tolu-Kolawole 2021). In addition, Joel (2021); Ipinnimo, et al (2022) agreed that about 3,895 Nigerian-educated doctors are licensed to practice medicine in the United State as of 2020, with Nigerians accounting for about 1 in 50 of all licensed physicians who were international medical graduates (Joel 2021). Imafidon (2018) and Ipinnimo, et al (2022) noted that the continuous reduction in the number of available medical doctors and other health professionals has a variety of direct impacts on the healthcare systems including burnout among HCW, work-related stress, and medical negligence, all of which influence negatively on patient experience and health outcomes as well as HCW job satisfaction. According to studies on medical brain drain conducted in Nigeria, the main issue is that health professionals leave Nigeria for other nations where their skills are in high demand and are well compensated (Ogaboh AAM, (2020). Ogunode and Atobauka, (2021); Ipinnimo, et al 2022); Ogaboh (2020) concluded that insufficient infrastructure facilities and a hospital's failure to supply necessary working equipment force medical professionals to relocate to other nations with similar facilities. This massive movement has affected health sector and especially the medical education in Nigerian tertiary institutions.

Inadequate Infrastructure Facilities

Inadequate infrastructure facilities is another major challenges facing medical education in the tertiary institutions across the country. Ogunode (2020); Ebehikhalu and Dawam (2016) viewed infrastructure facilities to include; libraries, laboratories, halls, offices, administrative blocks, hostels, roads facilities, water, electricity, internet etc. The availability of the infrastructural facilities in adequate quantities will support effective administration of educational institutions and the inadequacies will prevent effective administration of educational institutions. Many public universities in Nigeria do not have adequate lectures halls, laboratories and offices for both students and academic staff. The National Executive Council meeting of the Nigerian Medical Association held in Gombe State from 29th August to 4th September 2022, observed that bad healthcare infrastructure, a lack of adequate government commitment and support for the health sector, outdated equipment, poor pay for healthcare personnel, abuse of the referral system and professional competition are to blame for the large-scale exodus of HCW (National Executive Council meeting of the Nigerian Medical Association, 2022). The Medical and Dental Council of Nigeria (MDCN) fixes the number of students each college of medicine should admit. This quota is determined by a number of variables: staff strength, especially in pre-medical faculties; the carrying capacity of teaching and research facilities; and funds for renovation and expansion of facilities. Unfortunately, these parameters have not been adhered to - especially during periods of military rule, when arbitrariness and dictatorship were imposed on tertiary institutions (Ogunode and Jegede 2021).

Inadequate Medical Research Funding

Nigeria’s tertiary institutions medical research funding is poor. The inability to effectively and efficiently fund medical research in the various tertiary institutions is responsible for poor development of medical research. Research in Nigeria is donor driven and the fund is at 0.08 per cent as against the two per cent recommended by the World Health Organisation. Experts say there is need for the Nigerian government to invest more in various medical research institutes across the country to drive development in the healthcare space and most importantly, work towards turning research findings into actual strategies that can improve the sector. Okonofua (2021) maintained that Nigeria is currently one of the countries with the lowest health research funding in the world. It contributes 0.22% of Its GDP to research. The budget for

research was N5bn ($9.9mn) in 2019 under the National Research Fund. It was raised to N7.5bn ($14.85mn) in 2020 and is still the same this year. It is to this fund that N1bn ($1.98mn) has just been added.

Limited Capacity Space in Medical Colleges

Limited capacity space to admit large number of Nigerian seeking medical education is a major problem facing medical education in Nigerian tertiary institutions. Adeyemi (2018) asserted that majorities of tertiary institutions offering programmes in health related courses have limited space to admit many students. Ajobaju (2022) submitted that up to 323,782 candidates who applied to study medicine in Nigerian universities in the 2022 Unified Tertiary Matriculations Examination (UTME) are being left in the cold as there is no space for them, despite the huge demand for doctors. However, there are surplus vacancies in both education and agriculture courses as fewer candidates applied for them in the examination conducted by Joint Admissions and Matriculation Board (JAMB). About 367,499 applied to the department of medicine but only 43,717 slots are available in all Nigerian universities, public and private. This means only about 12 per cent who applied will get admission. JAMB data shows the highest percentage of the total 1.8 million candidates who applied for both UTME and Direct Entry this year chose medicine as their first choice of course of study. The data also shows the number of candidates who applied to study other courses and the slots available as follows: 1. Social science – 231,907 candidates (93,277 slots), 2. Science-related – 204,734 (132,796 slots), 3. Law-related – 81,653 (8,529 slots), 4. Technology-related – 103,891 (60,199 slots), 5. Arts and Humanities – 72,014 (48,744), 6. Education – 53,612 candidates (111,601 slots) and 7, Agriculture – 21,568 (31,217 slots).

Out Dated Medical Curriculum

Poor reviewing of medical education curriculum by respective institutions and professional bodies in Nigeria has also affected development of medical education in Nigeria. Silver, Glicken in Osoba et al (2021) observed that **t**he medical curriculum is not updated and as such, many new scientific developments and technological advancements may be alien to medical students who eventually do their residency program in developed countries. Of great concern is the fact that graduates from medical colleges in Nigeria may lack the necessary skill and aptitudes required for success in the changing practice environment of the 21stcentury. To adapt in foreign climes, most Nigerian-trained doctors have to unlearn old practices and learn conventional techniques to function effectively.

Management Conflict among Authorities for Medical Schools and Teaching Hospitals

Another problem affecting the development of medical education in Nigeria is the too much of regulatory institutions and professional bodies who always disagree on policies and roles to guide operational and administration of medical education in the tertiary institutions. For instance the National Universities Commission and external regulatory agency established by federal government to supervise universities education in Nigeria in many occasion have had issues and problems with other medical professional bodies who are also stakeholders in management of medical education. Olasoji (2014) noted that **s**ome medical schools and their accompanying teaching hospitals are managed and funded by different authorities creating a conflict of interest in funding of clinical training and medical research. For example, compensation for hospital consumables used for research, teaching and examinations may become a topic of dispute between a medical college and its hospital authorities. This poses challenges in teaching, research and utilization of facilities. Consequently, learning will be deterred or alternatively the medical student will be burdened with the responsibility to provide himself the materials needed. These factors will contribute to making the medical student despondent about acquiring the required knowledge to become a well-trained doctor (Osoba *et al.*, 2021).

Strike Actions

Strike action by trade unions in the tertiary institutions have affected effective medical education. Due to continuation strike actions many medical programme cannot be implemented as planned. Ogunode, Jegede, Adah, Audu & Ajape (2020) noted that strike actions in the Nigerian public universities is major problem facing the administration of public universities in Nigeria. The Nigerian public universities are known for continuous strike actions by different union groups in the public universities. The continuous strike actions by these different union groups are frustrating the administration of public universities in Nigeria. For decades, Nigerian public universities have been encountering challenges of poor funding, inadequate infrastructure, obsolete educational system, dilapidated structures and equipment, brain drain and successive governments have not been able to proffer solutions to these problems. ASUU, a trade union formed in 1978 to represent the interests of academic staff in all of the federal and state universities in the country, whose objectives include regulation of relations between academic staff and employers, has always been at loggerheads with the government. Under present government's administration, undergraduates in universities across the country have lost at least 13 months from their educational calendar owing to the recurring strikes by ASUU. Educationists say this explains why the products of Nigerian public universities are half-baked and certificates obtained from Nigerian universities are not rated high outside the shores of the country (Leadership 2022). The reasons for the strike actions by different union groups according to Ogunode, Ugochukwu & Jegede (2022) include; underfunding of the public universities, inadequate infrastructural facilities, poor implementation of agreement reached with union groups and poor working condition. The implications of the continuous strike actions on tertiary institution in Nigeria according to Ogunode, Akinjobi, & Musa (2022); Ogunode, Olatunde-Aiyedun & Mcbrown (2022) include; disruption in the academic programme, poor quality of education, bad image for the universities, poor ranking internationally and poor patronage of public universities in Nigeria. Strike action as affected implementation of programme in the Nigerian tertiary institutions. It has also affected programme accreditation in tertiary institutions. Lawan, & Ogunod (2021); Odim, Annastashia & Solomon (2018) acknowledged that during strike actions programme accreditation are suspended.

Conclusion

This paper discussed the problems facing medical education in Nigerian tertiary institutions. The paper concluded that poor funding, inadequate academic staff, brain-drain, inadequate infrastructure facilities, inadequate medical research funding, limited capacity space in medical colleges, out outdated medical curriculum, management conflict among medical schools and teaching **hospitals** and strike actions are the major problems militating against development of medical education in Nigerian tertiary institutions.

Recommendations

Based on these findings, the paper suggested

1. Increment in the budgetary allocation of medical education.
2. Provision of adequate infrastructure facilities,
3. Employment of more academic staff, motivation of academic staff,
4. Constant review of medical curriculum,
5. Implementation of agreement reached with different union groups and
6. Increment in medical research funding in tertiary institutions in Nigeria.

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