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Research Article

DRIVING FACTORS OF BRAIN DRAIN AMONG MEDICAL STUDENTS OF THE UNIVERSITY OF ABUJA COLLEGE OF HEALTH SCIENCES, NIGERIA

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Abstract

Brain drain which is the large-scale migration of highly trained professionals from low- and middle-income countries to wealthier nations, has emerged as a critical challenge to healthcare workforce stability in sub-Saharan Africa. Nigeria faces a particularly acute crisis, with medical students increasingly expressing the intention to migrate. To identify the key driving factors influencing the intention of medical students at the University of Abuja College of Health Sciences to emigrate after graduation. A cross-sectional descriptive study was conducted among 236 medical students selected via stratified random sampling. Data were collected using a structured, interviewer-administered questionnaire capturing socio-demographic characteristics, migration intentions, timing of intended departure, preferred destinations, and reasons for leaving or staying. Analysis was performed using SPSS version 26, with results presented in frequencies and percentages. A total of 73.7% of respondents expressed an intention to leave Nigeria after graduation, with 31.4% planning to do so within two years post-graduation. The most cited reason for migration was the pursuit of a safer and better working environment (30.1%), followed by higher salaries abroad (20.3%). The United Kingdom (19.5%), USA (16.9%), and Canada (16.5%) were the most preferred destinations. The migration intentions of medical students in Nigeria are driven primarily by poor working conditions, inadequate remuneration, and personal safety concerns. Urgent policy measures, including improved working environments, competitive remunerations, and strategic retention incentives, are required to avert further loss of the country's future healthcare workforce.

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Introduction

Introduction

Migration is an inherent characteristic of human societies, driven by the pursuit of improved living and working conditions. While migration can foster knowledge transfer and cultural exchange, it can also deplete the skilled workforce in source countries, particularly in the healthcare sector. The phenomenon known as "brain drain" describes the loss of highly trained professionals from low- and middle-income countries (LMICs) to wealthier nations, often resulting in critical shortages of skilled personnel in the source countries [1,2].

Nigeria's healthcare sector is disproportionately affected by brain drain, with thousands of physicians migrating annually. The push factors for this migration include

inadequate remuneration, unsafe working conditions, and poor access to essential equipment, and limited opportunities for career progression [3–5]. Pull factors in destination countries often include better salaries, advanced training opportunities, safer environments, and more stable political climates [6,7].

Previous studies in sub-Saharan Africa have identified medical students as a particularly vulnerable group for emigration intentions, with migration plans often forming before graduation [8–10]. In Nigeria, there is limited research exploring the specific factors influencing medical students' migration intentions, particularly within the context of the University Of Abuja College Of Health Sciences.

This study aims to identify and analyze the key drivers of brain drain intentions among medical students in this institution. Understanding these factors is critical for designing targeted interventions to retain future medical professionals in Nigeria.

Methods

Study Design and Setting

This study adopted a cross-sectional descriptive design and was conducted at the University of Abuja College of Health Sciences, Nigeria. Established in 1988. The university spans two campuses: the main campus at Airport-Giri Road and the mini campus in Gwagwalada, which houses the University of Abuja Teaching Hospital (UATH). The MBBS programme spans six years and broadly divided into pre-clinical and clinical phases.

Study Population

The target population consisted of all medical students enrolled into the MBBS programme from 100 to 600 levels. Inclusion criteria were enrolment in the College of Health Sciences and voluntary participation. Non-medical students were excluded.

Sample Size

The sample size (N=234) was determined using the Leslie-Kish formula, based on a prevalence of 84% intention to migrate from a similar Romanian study.[11]

Sampling Technique

Stratified sampling by year of study was followed by simple random selection within each stratum, yielding a total of 234 respondents after accounting for a 10% non-response adjustment.

Data Collection

A structured, interviewer-administered questionnaire was developed based on literature review and study objectives. It consisted of socio-demographic questions, migration intention variables, timing of intended migration, preferred destination countries, and reasons for leaving or staying.

Ethical Considerations

Ethical approval was obtained from the UATH Research Ethics Committee. Written informed consent was obtained from all participants. Confidentiality and anonymity were ensured throughout the study and participants were free to exit the study at any point without any punitive measures.

Data Analysis

Data were analyzed using SPSS version 26. Descriptive statistics such as frequencies, percentages were used to summarize the data.

Results

A total of 236 questionnaires were distributed and all were completed and returned, representing a 100% response rate.

Socio-demographic Characteristics

The majority of respondents (40.2%) were aged between 20–23 years, followed by 31.1% in the 24–27 age group.

There was a near-equal distribution of sex, with 51.3% male and 47.9% female participants. The Yoruba ethnic group comprised the largest proportion (41.5%), followed by “Others” (34.7%), Igbo (15.7%), and Hausa (6.8%).

Most respondents (95.8%) were single, with a minority married (3.8%) or widowed (0.4%). Regarding academic distribution, the largest group was 400-level students (33.1%), and the smallest was 300-level students (11.4%). Parental sponsorship dominated as the main source of financial support (82.2%), while self-sponsorship accounted for 8.5%, relatives 4.7%, and scholarships 3.8%. In terms of personal income, 37.7% earned less than ₦100,000 annually. The majority of respondents perceived themselves as middle class (86.4%). Academically, most reported average grades (71.2%), while 20.3% reported excellent grades and only 3.4% reported poor grades.

Intention to Leave Nigeria

About 180 (76.2%) of the respondents expressed an intention to leave Nigeria after graduation, while 56 (23.7%) intended to remain. Six participants (2.5%) did not respond to this question.

Among those intending to migrate, 31.4% planned to leave two years post-graduation, suggesting a transitional period for gaining local work experience before departure. Another 26.3% planned to leave immediately after graduation, 5.9% within four years, and 2.1% within six years. The “Other” category (8.5%) included participants citing flexible or indefinite timelines based on opportunities abroad.

When asked why they intended to leave, 30.1% cited the desire for a safer and better working environment, while 20.3% sought higher pay abroad. Academic aspirations (20.8%) were also notable, with a smaller number citing social influence (“because others are leaving” – 0.8%). “Other” reasons (2.5%) included dissatisfaction with governance, political instability, and family already residing abroad.

Preferred destinations were concentrated among a few countries: the United Kingdom (19.5%), USA (16.9%), Canada (16.5%), Australia (5.5%), and others (12.3%), including Germany, UAE, and South Africa.

For the minority intending to remain in Nigeria, the most common reason was family and social ties (7.2%), followed by the desire to “give back” to the Nigerian government (5.9%), difficulty in emigrating (1.3%), and satisfaction with working conditions (1.3%). “Other” reasons (2.1%) included patriotism and fear of cultural adjustment abroad.

Intention to leave the health sector

Although the majority intended to remain within the health sector, 23 (9.7%) of the respondents reported plans to leave the health sector entirely (Table 3). The most common reasons for leaving included loss of interest in the medical profession (3.8%), lack of equipment and supplies in hospitals (2.1%), low payment to doctors (1.3%), and overwhelming patient numbers (0.8%). A

small proportion (0.4%) cited unsafe working environments.

Those intending to leave the health sector most frequently mentioned switching to business (5.1%) or information communication technology (ICT) (3.4%), with smaller numbers interested in politics (0.4%) or other fields (1.3%).

Among respondents remaining in the sector, passion for the profession (45.3%) was the most cited reason, followed by job security (18.6%), prestige (5.1%), and influence by family and friends (0.8%). "Other" reasons (4.2%) included moral duty and religious calling.

Discussion

This study reveals alarmingly high migration intentions among medical students in Nigeria, aligning with reports from similar studies in Pakistan, Uganda, and Romania [7,8,9]. The predominant push factors are poor working conditions and poor salaries reflect systemic deficiencies in Nigeria's healthcare sector [3, 4].

The finding that the majority of intending migrants prefer the UK, USA, and Canada corresponds to trends in physician registration data from these countries, suggesting that established Nigerian diaspora networks may facilitate migration [3, 4].

Notably, over 26% of students plan to leave immediately after graduation, while another 31.4% aim to depart within two years, indicating a rapid post-training exodus that will severely impact workforce sustainability if not addressed urgently. Addressing this crisis requires multi-faceted strategies: improving remuneration to competitive regional standards, upgrading hospital infrastructure, offering clear career progression pathways, and introducing retention bonuses for early-career doctors. Additionally, integrating rural service incentives and targeted postgraduate training opportunities in Nigeria may help reduce early migration [3,4].

Conclusion

The intention to migrate among medical students at the University of Abuja is overwhelmingly high, driven primarily by poor working environments, low pay, and personal safety concerns. Immediate policy intervention is necessary to retain this critical future workforce.

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Ethical Approval

Ethical clearance has been obtained from the University of Abuja Teaching Hospital.

Inform Consent

Taken from Study Participants.

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Author Contribution

Both Authors contributed equally

Conflict of Interest

None Declared

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