

## REVIEW ARTICLE

### Brain Drain in Nigerian Health Sector: An Unsung Epidemic

Olowolaju OF\*, Akpor OA, Adeoluwa, OA

Department of Nursing, Afe Babalola University Ado Ekiti, Ekiti, Nigeria

**\*Corresponding author:**

Olowolaju OF, Department of Nursing, Afe Babalola University Ado Ekiti, Ekiti, Nigeria. E-mail Id: olowolajuof@pg.abuad.edu.ng

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#### Abstract

Brain drain in the Nigerian health sector is a critical issue that has drained Nigeria of skilled and competent healthcare professionals, thereby placing a heavy burden on the Nigerian healthcare system. The paper aimed to describe some factors responsible for the increase in brain drain and thereby offer possible solutions to the problem. The theory of push and pull factors was used to describe the phenomenon. Push factors are unfavourable conditions that push people out of their domain country, while pull factors are favourable conditions that attract citizens to migrate to developed countries. The consequences of brain drain in the health sector led to the shortage of skilled healthcare workers, which places a heavy burden on those who remain, leading to increased workload and burnout. The paper also highlighted various efforts the Nigerian government had put in place to mitigate the effects of brain drain in Nigeria, such as implementation of the national health policy, increased funding for the health sector, and strengthening of healthcare institutions. Unfortunately, the efforts are yet to yield positive impacts. However, this paper has several possible recommendations aimed at reversing brain drain in the health sector, which include improvement of working conditions and remuneration, development of retention strategies to retain healthcare professionals, and addressing socioeconomic factors that contribute to brain drain. The study concluded that brain drain in the Nigerian health sector is a significant challenge that requires urgent attention and a multifaceted approach. Only then can Nigeria hope to alleviate the unsung epidemic of brain drain in its health sector.

**Keywords:** Brain drain, Brain gain, Health sector, Unsung epidemic, Developing countries

#### Introduction

The phenomenon of brain drain specifically within the health sector has emerged as an unsung epidemic in Nigeria. It is referred to as the emigration of highly skilled and trained healthcare professionals from Nigeria to other countries, primarily developed nations.<sup>1</sup> This phenomenon has had a significant impact on the Nigerian healthcare system, resulting in a shortage of qualified personnel and a decrease in the quality of

healthcare services provided.<sup>2</sup> In recent years, there has been a growing body of research highlighting the reasons behind this brain drain and its consequences for the Nigerian health sector.

According to Ipinnimo T *et al.*, brain drain is the migration of highly skilled professionals from developing nations to developed countries, driven by the pursuit of improved living standards, higher wages, access to advanced technologies, and more stable political and

working environments.<sup>3</sup> Throughout the 20th century, many educated and skilled professionals had left their home countries in search of better economic and social opportunities abroad.<sup>4</sup> A national statistical report published by the UK government in August 2022, along with data from the Migration Policy Institute (2015), indicates that Nigerians make up the largest population of African migrants in the United States. According to George G, around 376,000 Nigerians reside and work in the U.S.<sup>5</sup>

The migration of people from rural to urban areas in search of improved living conditions does not negatively affect the progress of those societies. However, the large-scale movement of human capital from poorer countries to wealthier ones has started to place certain pressures on the human resources available in developing nations.<sup>6</sup>

Uzuegbunam I *et al.*, noted that global migration has risen by nearly 5%, with approximately 221 million migrants in 2010 and 232 million in 2013.<sup>7</sup> Recently, international migration has continued to grow, with most migrants concentrated in just 10 countries, including the United States, which hosts around 20% of all international migrants (United Nations, 2014). Migrants are spread across Europe, the Americas, Canada, and Asia, particularly in the Gulf States of the Arab world. In contrast, Nigeria and other African nations, as well as the Gulf States, have relatively few international migrants.<sup>8</sup>

Dumont GF highlighted that migrants have contributed to development in various ways within their host countries.<sup>9</sup> They help fill labour shortages, complement the skills of native workers, create jobs, and even send remittances that support social welfare and pensions in their home countries. However, despite these positive impacts, migration can negatively affect the development and sustainability of nations, particularly the developing countries like Nigeria, where sectors such as healthcare, education, and science and technology may suffer.

The ongoing brain drain in Nigeria has resulted in insufficient and mismatched manpower, hindering both development and sustainable progress. Urbański M explained that emigration initially occurred on a smaller scale, with individuals leaving in small numbers to pursue personal growth through advanced education in the well-established academic systems of developed countries.<sup>4</sup> This had a positive impact on Nigeria, as it significantly improved the quality of the nation's human capital.

However, modern emigration differs significantly in its nature, as it has become much more widespread and is primarily driven by personal motives related to survival and escaping the socio-economic and political challenges of the home country.<sup>1</sup> This trend has profound consequences, depleting the nation's critical human capital, particularly in key sectors such as education and healthcare, which are essential for national and sustainable development.

According to a recent study by Raji AA, the brain drain in Nigeria's health sector is a complex issue that stems from various factors such as poor working conditions, inadequate remuneration and limited career opportunities, pushing healthcare professionals to seek better prospects abroad.<sup>10</sup> The lack of infrastructure, medical equipment and resources further exacerbates their frustration. Additionally, low salaries and delayed payments also contribute to their decision to leave the country.

Furthermore, in a recent study by Ipinnimo T *et al.*, political instability, insecurity and corruption in Nigeria create an unfavourable environment for healthcare professionals to thrive.<sup>3</sup> They often face challenges such as violence, lack of personal safety and limited access to essential resources. These factors make it difficult for them to provide quality care and lead fulfilling professional lives. Ogaboh AA noted that brain drain has significantly depleted Africa's healthcare workforce, placing a tremendous strain on Nigeria's healthcare system.<sup>11</sup> As a result, the healthcare needs of the population are not being fully addressed, making it challenging for the country to achieve universal health coverage due to the shortage of medical professionals.

The consequences of brain drain in the health sector are far-reaching. The shortage of skilled healthcare workers places a heavy burden on those who remain, leading to increased workloads and burn-out.<sup>12</sup> This ultimately affects the quality of care provided to patients, resulting in sub-standard healthcare services.<sup>3</sup> Moreover, the departure of highly skilled professionals leaves a gap in specialized medical fields, limiting the country's ability to address complex health issues. This includes areas such as oncology, cardiology, and neurology where expertise is crucial for effective treatment. The trend of brain drain in recent times has been compromising the future generations if not checked.<sup>12</sup>

To combat this issue, Nigeria needs to implement comprehensive strategies. These may include improving working conditions and remuneration packages for healthcare professionals, investing in infrastructure and medical improvement, and addressing political instability and corruption. Additionally, creating opportunities for professional growth and development within the country can help retain skilled individuals. Efforts should also be made to encourage diaspora engagements where Nigerian healthcare professionals abroad can contribute their expertise through collaborations and knowledge-sharing initiatives. By creating an enabling environment for healthcare professionals, Nigeria can begin to reverse the brain drain and strengthen its health sector.

### Objectives of the Seminar

The objectives of the seminar were:

1. To highlight the factors responsible for the brain drain escalation.
2. To determine the prevalence of brain drain.
3. To identify the consequences of brain drain.
4. To describe the measures taken by the Nigerian government to curb the country's brain drain.
5. To proffer possible solutions to the problem of brain drain.

### Literature Review

#### *Concept of brain drain*

The term 'brain drain' initially referred to the emigration of technological workers from a country. However, its meaning has since expanded to encompass the migration of educated and professional individuals from one country, economic sector, or field to another, typically in pursuit of better pay or living conditions.<sup>1,6</sup> Brain drain is particularly common among skilled professionals such as doctors, pharmacists, nurses, medical laboratory scientists, industrial chemists, and pilots. It also affects computer scientists, engineers, university lecturers, researchers, technologists, and lawyers.<sup>8</sup> Urbański M explained that brain drain involves the movement of knowledge, experience, skills, and expertise from one region or country to another.<sup>4</sup> This phenomenon has expanded due to advances in modern electronic information technology, the growing disparity between the Global South and North, and the spread of corporate globalization. Additionally, increasing political instability, civil wars, and social and religious conflicts in

many Southern and African countries, including Nigeria, have contributed to this trend.<sup>13</sup>

A term closely associated with brain drain is 'brain waste', which occurs when foreign nationals or workers are employed in positions for which they are overqualified.<sup>14</sup> For example, many Nigerian doctors and European scientists work as taxi drivers in major U.S. cities, such as New York, Chicago, Texas, Michigan, and Washington. This situation clearly illustrates how Nigeria is missing out on the valuable contributions of these highly skilled professionals, who are significantly underutilized in the U.S.<sup>15</sup> If these individuals were in Nigeria, they could be making meaningful contributions to the country's development. Essentially, the overall benefits of skilled individuals migrating to a host country are often referred to as 'brain gain', while the costs incurred by the home country are termed 'brain drain'.<sup>16</sup>

According to Onyekwere J *et al.*, Nigeria ranks among the top 13 African countries whose citizens seek to emigrate to Europe and other nations due to poverty and hardship.<sup>17</sup> Professionals from various fields, particularly in healthcare and education, are frequently leaving Nigeria for developed countries in search of better opportunities. Industrialized nations such as the USA and UK often serve as destination countries for registered nurses from donor countries, which negatively impacts the efficiency of healthcare systems in developing nations.<sup>2</sup> Recently, it was reported that at least 5,405 Nigerian-trained doctors and nurses are currently employed by the National Health Service (NHS) in the United Kingdom.

#### *Historical overview of brain drain*

Brain drain has been a phenomenon observed throughout history. The term was first used in the 1960s to describe the emigration of highly skilled professionals from developing countries to developed countries. However, the concept of brain drain can be traced back to ancient times. Brain drain refers to the emigration of highly skilled and educated individuals from one country or region to another, often in search of better opportunities or quality of life.<sup>4,6</sup>

In the olden days, our fore-fathers (able bodied men) were driven away under compulsion to unknown lands; in millions they were forced out of their homes, with just few males, women and children remaining.<sup>8</sup> During this time, our land became desolate, development was stale, and the act was called 'the trans-Atlantic slave trade',

the slave trade of the rich endowed continent. After over 200 years, this migration has resurfaced in another form, as against the former in which they were carted away under compulsion.<sup>15</sup>

The latter represents a deliberate effort to find a way out of Nigeria, occurring in two ways. First, educated individuals seek opportunities to apply their expertise due to the unfavourable conditions in their home country, a phenomenon known as 'brain drain'. Second, there are those who migrate in search of better opportunities, even if they lack qualifications or skills to contribute to the destination country, which is referred to as 'migration'.<sup>4</sup> Brain drain has roots dating back to ancient times when philosophers, scholars and craftsmen would often migrate to centres of knowledge and culture. For instance, ancient Greece attracted scholars from various regions to its intellectual atmosphere.

The term brain drain gained prominence after World War II when many European scientists and intellectuals fled to the United States to escape political turmoil and contribute to scientific advancements. After World War II, the United States became a magnet for scientific and technological talent, with the influx of scientists and engineers contributing to its post-war economic growth. In 1950s-1960s, the brain drain phenomenon expanded beyond Europe as professionals and academics from developing countries, particularly in Asia and Africa, began to migrate to western countries for better job prospects and educational opportunities.<sup>18</sup>

In the mid 20th century, many developing countries experienced brain drain as their best educated professionals left for better economic prospects in western countries. This phenomenon was particularly pronounced in fields like medicine and engineering. In the late 20th century, the rise of the technology industry in the United States, particularly in Silicon Valley attracted talent from around the world, contributing to the brain drain of tech experts.<sup>19</sup>

After the collapse of the Soviet Union in the early 1990s, a significant brain drain occurred as scientists, engineers and professionals from former soviet republics sought opportunities in the west. The 21st century has seen brain drain as a global issue, affecting countries across the world. Skilled workers including doctors, engineers and nurses continue to migrate to developed countries for better wages and living conditions.<sup>18</sup>

According to Glinos I, some countries have implemented policies to reverse brain drain, offering incentives

and opportunities to attract back their skilled diaspora contributing to brain gain.<sup>20</sup> In recent years, brain drain has been exacerbated by factors such as political instability, economic crises and the increasing demand for skilled workers in the globalized economy.<sup>18</sup> Some argue that brain drain can also have positive effects as it fosters global knowledge exchange and can lead to the return of skilled individuals with new experiences and perspectives.

### ***Prevalence of brain drain***

Nigeria has experienced a significant migration of nurses and doctors to foreign countries in recent years due to various factors such as better job opportunities, higher pay and improved working conditions abroad.<sup>12</sup> Annually, millions of people from around the world immigrate to other countries to become citizens.<sup>4</sup> Statistics show that over 57,000 nurses migrated from Nigeria for greener pastures abroad within a period of five years, spanning from 2017 to 2022.

According to a report from the American Journal of Nursing (2022), the International Centre on Nurse Migration (ICNM) estimated that over the next decade, 10.6 million new nurses will be needed to address the existing nurse shortage and replace the 4.7 million nurses who are expected to retire. According to a national statistical report issued by the UK government in August 2022, over 13,609 healthcare professionals left Nigeria for the United Kingdom between 2021 and 2022.<sup>21</sup>

These important factors that contribute to brain drain have been largely stable over the past fifty years and have not changed among geographical regions or among health workers who have migrated or those who intend to migrate.<sup>22</sup> Anetoh BC *et al.*, made an observation that the rate of migration of the professional skilled staff is on the rise, creating a missing gap in virtually all the sectors, most importantly healthcare, oil and gas industry sectors.<sup>23</sup> In fact, Atte F reported a shortage of over 4.3 million healthcare staff, based on the report by WHO, 2016 and it was found that Sub Sahara nations were the most affected by the shortage because they had 3% of the world health workers but burdened by 24% of the global disease.<sup>24</sup>

### ***Different types of emigration***

There are several types of emigration, which includes:

**Economic emigration:** This type of emigration occurs when individuals of families move to another country

in search of better opportunities such as higher wages, better job prospects or improved living standards.<sup>4</sup>

**Political emigration:** This refers to the individual or groups which leave their own country due to political persecution, human right abusive or political instability. These individuals often seek refuge or asylum in other countries.<sup>4</sup>

**Family reunification:** These occur when individuals move to other countries to join their family members who have already emigrated. This type of emigration is commonly seen in cases where one family member has an established residency or citizenship in another country.<sup>4</sup>

**Educational emigration:** This involves individuals who move to other countries to pursue higher education or specialize training. They may choose to stay in the host country after completing their studies or return to their home country with enhanced skills and knowledge.<sup>4</sup>

**Environmental emigration:** This is a relatively new type of emigration that occurs due to environmental factors such as natural disasters, climate change, or ecological degradation. People may be forced to leave their home and seek refuge in other countries due to these environmental challenges.<sup>4</sup>

**Retirement emigration:** This refers to individuals or couples who choose to move to another country to spend their retirement years. They may be attracted by factors such as lower cost of living, better health care, favourable climate or a desire for a change in lifestyle.<sup>4</sup>

### ***Different types of brain drain***

Brain drain can manifest in various forms depending on the specific skills or professions affected. The following are different types of brain drain.

**Medical brain drain:** This is also known as healthcare workers brain drain. This refers to emigration of highly skilled medical professionals, such as doctors, nurses, and other healthcare personnel from their home countries to foreign nations in search of better opportunities.<sup>22</sup> This phenomenon is often driven by factors such as higher wages, improved working conditions, access to advanced technologies and better career prospects in destination countries. According to Olorunfemi O *et al.*, medical brain drain can have significant consequences for the source country's healthcare system.<sup>25</sup> It may result in a shortage of trained medical staff, reduced healthcare services, and overall strain on the healthcare

infrastructure. This phenomenon can also impact the availability and quality of medical care for the population in the source country. In destination countries, medical brain drain can also be beneficial as it helps to meet the demands of health care, professionals and may contribute to the diversity of medical expertise.

**Engineering brain drain:** This refers to the emigration of highly skilled and trained engineers, scientists and technical professionals from their home countries to foreign nations, often due to better opportunities, higher wages, improved working conditions, or enhanced career prospects in the destination countries.<sup>26</sup> This phenomenon can have several consequences such as loss of technical expertise, impact on infrastructure and development, innovation and economic growth, and educational institutions.

**Information Technology (IT) brain drain:** Similar to other forms of brain drain, this refers to the immigrations of highly skilled IT professionals, computer scientists, software developers and experts in the field of information technology from their home countries to foreign nations, primarily driven by better opportunities and improved working conditions in the destination countries.<sup>27</sup> The following are some key aspects of IT brain drain: skills and expertise body, impact on local tech industry, innovations and research, global IT workforce diversity.

**Academic brain drain:** This is also known as the brain drain in academia or the academic talent exodus, refers to the immigration of highly educated and talented individuals from their home countries to the foreign nations in pursuit of academics and research opportunities, often due to better working conditions, access to resources and career prospects in the destination countries.<sup>3</sup> Effects of academic brain drain includes: loss of intellectual capital, negative impact on the research and innovations, weakening of educational institutions and global exchange of ideas.

**Scientific brain drain:** This is also known as the brain drain in the scientific community, refers to the immigration of highly skilled scientists, researchers, and experts from their home countries to foreign nations in search of better opportunities, working conditions and career prospects.<sup>28</sup> This phenomenon can impact scientific research and development within the source country and also globally. Key characteristics of scientific brain drain includes, loss of scientific expertise, impact on research and development, global scientific collaboration in academic and industrial sectors.

Artistic and creative brain drain: This is also known as the brain drain in the art and cultural sectors, refers to the immigration of talented artists, writers, performers, and other creative professionals from their home countries to foreign nations in pursuit of better opportunities, recognition and creative freedom. This phenomenon can have a significant impact on the cultural and creative industries. Key characteristics of artistic and creative brain drain includes, loss of artist talent, impact on the creative industries, global cultural exchange, recognition and exposure.

### ***The theoretical framework***

This study used the push-pull theory of migration as its theoretical framework. This theory, developed by the 19th-century geographer Ravenstein, suggests that migration is affected by two main factors: 'push' factors and 'pull' factors. Push factors are negative conditions in one place, such as government oppression or economic hardship, that drive people away. In contrast, pull factors are positive conditions in another place that attract people to move there.<sup>19</sup> The fundamental assumptions are: firstly, that the more disadvantaged a place is, the more likely it will produce migration, and that given inequalities, there will be migration. Also, migration can be explained as a function of the economic performance of receiving and contributing nations.<sup>2</sup> Additionally, natural catastrophes, low productivity, unemployment, and underdevelopment are prevalent push factors, along with bad economic conditions, a lack of advancement opportunities, and depleted natural resources. In addition, the pull factors are those that entice people to move to a certain location. Optimal working conditions, attractive amenities, higher salaries, and more job prospects, are all the elements that pull people to a certain place.<sup>3</sup>

### ***Application of the theory***

A major contributor to the worsening problem of Nigeria's brain drain has been the country's economic and social climate. The rich countries' attractiveness as places to work and live is what draws African professionals to them; they call it "greener pastures" when they leave their home countries. At every given moment, the growth of any economic sector is dependent on the accessibility of competent and informed workers. The massive loss of these human capital assets surely slows down the society's rate of advancement and production. So, if the correct measures are implemented to regulate migration, the reason for the disparity in the growth of the Nigerian economy can be addressed.

### ***Factors responsible for brain drain***

There are two complex determining factors for a massive brain drain and these factors are broadly divided into push and pull factors.

#### ***Push Factors***

These are factors that compelled individuals to leave their home country and seek opportunities elsewhere.<sup>4</sup> The following are push factors in the home country that contribute to migration of healthcare professionals.

**Economic challenges:** Low salaries and inadequate financial incentives for healthcare professionals in Nigeria push them to seek better paying opportunities abroad.<sup>14</sup> Nigeria is clearly still a country with cheap labour costs, with a minimum pay of ₦18,000 (about \$49), since its salaries have been far lower than those in industrialised nations like the US, UK, and Australia. Nurses in Nigeria spend more time with patients than any other healthcare worker; however, they earn the lowest salary compared to others at the same level, according to anecdotal evidence. Okafor C *et al.* and Gaiduk R *et al.* stated that when employees feel their organisation is undervaluing their contributions through poor compensation, it motivates them to seek out better opportunities.<sup>15,29</sup> For this reason, many Nigerian nurses seek employment in more developed countries.

**Limited career growth:** A lack of opportunities for career advancement and professional development can drive healthcare workers to leave Nigeria in search of better prospects.<sup>1,25</sup> Since medical practice and nursing care are continuously evolving in response to the introduction of new technology in healthcare, career advancement is of utmost importance to professionals in today's society. According to a study by Chandar H, most Malaysian professionals are looking to advance their careers outside of the country because they feel they have little room for advancement and personal development in their current position.<sup>30</sup> Like their counterparts in industrialised nations, Nigerian nurses suffer from a shortage of study leave, an epileptic education system plagued by strike interruptions, and the long-awaited availability of nursing consultation and nurse practitioner services. Therefore, Nigerian nurses seeking the highest level of professional practice may explore opportunities abroad.<sup>6</sup>

**Inadequate infrastructure:** The Nigerian health sector often faces challenges such as inadequate medical equipment facilities and resources which can lead

professionals to seek better working conditions elsewhere.<sup>21</sup> One of the main reasons for the shortage of nurses at government-owned healthcare institutions is that the government, at all levels, just cannot afford to hire enough nurses. Overworked and underappreciated nurses experience stress, burnout, and discontent with their jobs as a result of the low nurse-to-patient ratio.<sup>22</sup>

**Political instability and insecurity:** Political instability and insecurity in Nigeria can create unsafe environment for healthcare professionals prompting them to emigrate for personal safety.<sup>22</sup> The main reasons people migrate, according to the International Centre on Nurse Migration are to seek a better life free from political turmoil and societal ills. There is a great deal of insecurity in Nigeria right now due to various groups like the Fulani herdsmen and the Boko Haram. Nurses may feel compelled to leave their current workplace in search of one with better security measures in place due to all these concerns.

**Understaffing:** Understaffing in the nursing profession is mostly caused by the government's incapacity to hire enough nurses to work in its health care delivery facilities.<sup>10</sup> Overworked and unhappy nurses are a direct result of the low nurse-to-patient ratio, which in turn causes stress and burnout.

**Lack of recognition and respect:** Professionals may feel undervalued or underappreciated in their home country. A lack of recognition for their skills, expertise or contributions can lead them to seek recognition and respect in countries that offer a more supportive environment.<sup>3</sup>

**Corruption:** Corruption with the healthcare system can hinder the professionals' ability to provide quality health care and be a demotivating factor.

### ***Pull factors***

**Higher salaries:** Countries with strong economies and robust job markets can attract skilled professionals from other countries.<sup>15</sup> The promise of higher salaries, better job prospects and career advancement opportunities can be a significant pull factor for individuals seeking economic growth and financial stability. Many developed countries offer significantly higher salaries and better benefits, making them attractive destinations for Nigerian health workers. According to Olorunfemi O *et al.*, when employees feel that their organization does not appreciate their efforts through lower compensations, they are motivated to seek out better opportunities

elsewhere.<sup>25</sup> The average yearly net wage in a developed nation like the UK is 43,732.30 USD.<sup>30</sup> This is far higher than the average salary of 5,000 USD for a registered nurse in Nigeria, where such a position is available. Earning more money is a major incentive for Nigerian nurses to work in the field.

**Better healthcare system:** Countries with better healthcare systems, infrastructure, social services and overall quality of life can be attractive to individuals seeking improved living conditions for themselves and their families.<sup>31</sup> The availability of amenities, a clean environment and a high standard of living can act as pull factors. Advanced health care systems in countries like the United States, Canada and the United Kingdom can provide healthcare professionals with access to cutting edge technologies and facilities.

**Improved quality of life:** Better living conditions, education opportunities for children and access to social services are appealing factors that pull healthcare workers abroad.<sup>31</sup>

**Professional recognitions:** Countries that value and recognize the skills, expertise and contributions of professionals can be attractive to individuals seeking recognition and respect for their work.<sup>3</sup> The opportunity to work in an environment that appreciates their talents and provides avenues for career growth can be a significant pull factor.

**Good working environment:** Nursing operations are facilitated and occupational risks are reduced in developed nations due to the availability of enhanced tools made possible by advancements in technology.<sup>6</sup> According to Adjei-Mensah S, lack of a good work environment in Nigeria is a major reason why people leave the country.<sup>1</sup>

**Personal development:** Where nurses choose to work is influenced by personal growth and career advancement, two essential aspects in the working life.<sup>21</sup> Inadequate funding for nursing programmes, a dearth of accredited nursing schools, and a demanding academic curriculum all work against Nigerian nurses' aspirations for professional advancement.<sup>21</sup> Such opportunities offered abroad attract nurses, who then migrate to avail these advantages.

**Cultural diversity and openness:** Countries that embrace cultural diversity promote inclusivity and have a reputation for being open minded. This can attract

individuals seeking a more tolerant and diverse society. The opportunity to live in a multicultural environment and experience different cultures can be appealing to individuals seeking a broader perspective.<sup>32</sup>

**Stable socio-political environments:** One of the most valuable human needs, according to Abraham Maslow's Hierarchy of needs is 'safety'. As a result, nurses fleeing societal upheaval in developing countries like Nigeria, where religious and ethnic conflicts plague the populace, seek employment in more stable nations in the West. Fulani herders and the Boko Haram disaster have caused unprecedented levels of terror in Nigeria, particularly in the country's North-east.<sup>22</sup>

### ***Consequences of Brain Drain***

In the health sector, brain drain can have several significant consequences, such as:

1. **Shortage of healthcare professionals:** According to Yakubu K *et al.*, brain drain leads to a shortage of healthcare professionals in the home country, particularly in critical areas such as doctors, nurses, and specialists.<sup>12</sup> This scarcity can overwhelm the existing healthcare system, leading to compromised patient care and increased workload on the remaining healthcare workers.
2. **Decreased quality of healthcare services:** With the departure of highly skilled healthcare professionals, the quality of healthcare services may decline. The loss of experienced doctors, nurses and specialists can result in a lack of expertise in complex medical procedures leading to substandard treatment options for patients.<sup>12</sup>
3. **Increased healthcare cost:** Brain drain can lead to increased healthcare cost as the demand for healthcare services surpasses the available supply. The shortage of healthcare professionals can drive up the salaries and wages of the remaining workforce, which ultimately translates into higher medical expenses for patients.<sup>3</sup>
4. **Limited access to specialized care:** Brain drain often affects the availability of specialized medical care in the home country. Patients may need to travel abroad for complex treatments or surgeries resulting in additional costs and inconvenience. This limited access to specialized care can disproportionately impact individuals with lower socio-economic status who cannot afford to travel for medical treatment.<sup>12</sup>

5. **Impact on research and innovation:** Highly skilled healthcare professionals contribute significantly to medical research and innovation. Brain drain can hinder the development of new medical technologies, advancements in treatment options, and scientific breakthroughs in the home country. This can further widen the gap between developed and developing nations in terms of medical advancements.<sup>28</sup>
6. **Economic implications:** Brain drain has economic implications as well. Countries invest substantial resources in training healthcare professionals, and when they leave, it results in a loss of investment. Additionally, the departure of skilled professionals can deter foreign investments and the health sector, further hindering economic growth.<sup>21</sup>
7. **Weakening of healthcare infrastructure:** Brain drain weakens the healthcare infrastructure of the home country. The departure of skilled professionals often leaves behind understaffed and under-resourced healthcare facilities making it challenging to provide adequate healthcare services to the population.<sup>22</sup>

### ***Government's effort to mitigate the effects of brain drain in Nigeria***

The Nigerian government has implemented various interventions to mitigate the effects of brain drain in the health sector. Some of these interventions include:

1. **Implementation of the National health policy:** This policy has developed and implemented the national health policy, which aims to improve the working conditions and welfare of healthcare professionals. This policy includes provision for competitive salaries, better working environments, and career development opportunities to encourage healthcare professionals to stay in the country.<sup>20,33</sup>
2. **Increased funding for the health sector:** The government has increased its budgetary allocation to the health sector, allowing for improved infrastructure, equipment and resources. This increased investment aims to attract and retain healthcare professionals by providing them with the necessary tools and resources to deliver quality healthcare services.
3. **Scholarship programs and incentives:** The government has established scholarship programs and incentives to encourage healthcare professionals to pursue further education and specialization within

the country. By providing financial support and incentives, the government aims to retain skilled professionals and prevent brain drain.

4. Collaboration with international organization: The Nigerian government has collaborated with international organizations such as the World Health Organization (WHO) and the African Union (AU) to address brain drain in the health sector. These collaborations focus on capacity building, training programs and knowledge exchange to enhance the skills and expertise of healthcare professionals in Nigeria.
5. Strengthening of healthcare institutions: The government has prioritized the strengthening of healthcare institutions by improving governance, management systems and infrastructure. This includes the renovation and expansion of healthcare facilities, procurement of modern equipment and implementation of electronic health systems. These efforts aim to create an enabling environment that attracts and retains skilled healthcare professionals.
6. Public-private partnerships: The Nigerian government has encouraged public-private partnerships in the health sector to leverage private sector expertise and resources. These partnerships aim to improve healthcare service delivery, attract investments and create opportunities for career advancements for healthcare professionals.<sup>12</sup>
7. Promotion of research and innovation: The government has promoted research and innovation in the health sector by providing funding and support for research projects. This encourages healthcare professionals to stay in the country and contribute to the development of new medical technologies and advancements in treatment options.<sup>32</sup>

Though these interventions have been implemented, brain drain remains a significant challenge in Nigeria's health sector. Continued efforts and sustained investments are needed to effectively mitigate the effects of brain drain and ensure the availability of skilled healthcare professionals in the country.

#### ***Possible solutions to brain drain in health sector***

There are several solutions to address brain drain in the health sector, these are:

1. Improve working conditions: Enhancing the working conditions, including better salaries,

benefits and opportunities for career growth, can help retain healthcare professionals. Providing a conducive work environment with adequate resources and infrastructure is crucial.<sup>18</sup>

2. Increase investment in healthcare: Governments and organizations should allocate more funds to the healthcare sector to improve facilities, equipment, and services. This investment can help attract and retain skilled healthcare professionals.<sup>25</sup>
3. Provide professional development opportunities: Offering continuous professional development programs, training and educational opportunities can motivate healthcare professionals to stay in their home countries. This can include scholarships, fellowships and exchange programs to enhance their skills and knowledge.
4. Strengthen healthcare systems: Developing robust healthcare systems that provide comprehensive care, including preventive, primary and specialized services, can reduce the need for professionals to seek opportunities abroad. This involves improving access to health care, reducing bureaucracy and addressing systemic issues.<sup>30</sup>
5. Foster international collaborations: Encouraging collaboration between countries can lead to knowledge sharing, skill transfer and capacity building. This can be achieved through partnerships, research collaborations and information exchange programs.<sup>21</sup>
6. Implement policies and incentives: Government can implement policies that incentivize healthcare professionals to stay in their home countries. These incentives may include loan forgiveness programs, tax benefits or preferential treatment for job placements or promotions.<sup>34</sup>
7. Address push factors: Identify and address the push factors that drive healthcare professionals to leave their home countries, such as political instability, lack of security, limited career opportunities or inadequate working conditions. Governments should work towards resolving these issues to discourage brain drain.<sup>22</sup>
8. Encourage return migration: Create opportunities and incentives for healthcare professionals who have left their home countries to return and contribute their skills and expertise. This can be done through

targeted recruitment campaigns, reintegration programs and providing attractive job prospects.

9. Emphasize retention strategies: Focus on retaining healthcare professionals by implementing retention strategies such as mentorship programs, work-life balance initiatives and recognition for their contributions. This can help improve job satisfaction and reduce the desire to leave.<sup>31</sup>
10. Enhance public-private partnerships: Collaboration between the public and private sectors can help address brain drain by creating more job opportunities, improving working conditions and expanding healthcare services. This can be achieved through joint ventures, public private partnerships or contracting arrangements.<sup>35</sup>

It is important to note that addressing brain drain requires a comprehensive and multifaceted approach involving various stakeholders including governments, healthcare organizations, professional associations and international bodies.

#### ***Implications to nursing practice***

1. Adapting to challenging situations, making quick decisions and resolving unexpected issues that may arise due to the nurse shortage.
2. Educating patients about their conditions, medications and self-care, empowering them to take an active role in their health.
3. Prioritizing self-care to prevent burn out and ensure the well-being of the nurses.
4. Proper staffing levels and support is crucial to maintain quality patient care.
5. Advocating for patient needs and safety even in a constrained environment.
6. Delegating tasks to other healthcare personnel when appropriate while ensuring safe and effective care.

#### ***Implications to nursing education***

1. Designing and updating nursing curriculum to ensure students are well equipped with the knowledge and skills needed in the healthcare industry.
2. Delivering high quality nursing education including lectures, clinical instructions and hands on training.
3. Nurse educators play a critical role in shaping the future of the nursing profession and can influence

their students to stay in the field or consider opportunities in areas affected by brain drain.

4. Educating students about the importance of advocating for their profession, fair working conditions and improved healthcare systems to combat brain drain.
5. Instilling strong ethical values and professionalism in nursing students to ensure they provide companionate patient centred care.

#### ***Implications to nursing administration***

1. Develop and implement strategies for effective workforce planning to ensure that staffing levels are adequate and sustainable, even in the phase of brain drain.
2. Attract and retain nursing staff through competitive compensations, benefits and professional development opportunities.
3. Ensure efficient financial management to allocate resources effectively, addressing budget constraints caused by brain drain.
4. Develop and implement policies and procedures that align with retention strategies and promote a positive work environment.
5. Establish performance evaluation systems that recognize and reward excellent performance, while addressing under performance.

#### ***Implications to nursing research***

1. Using research findings to advocate for changes in healthcare policies, regulations and workforce planning to reduce the brain drain problem.
2. Researching effective methods for healthcare organizations to plan their workforce to mitigate the effect of brain drain, including strategies for recruitment, retention, and leadership development.
3. Gathering data on the causes and effect of brain drain within the nursing profession including reasons for attrition and the destinations of migrating nursing.
4. Investigating the economy impact of brain drain on healthcare system and the broader economy which can be used to advocate for policy changes.

## **Conclusion**

In conclusion, brain drain in the Nigerian health sector is a significant challenge that requires urgent attention.

The loss of highly skilled professionals can have a detrimental effect on the quality of healthcare services provided in the country. Addressing this issue will require a multi-faceted approach, including improving working conditions, investing in infrastructure, and creating opportunities for professional growth. Only then can Nigeria hope to alleviate the unsung epidemic of brain drain in its health sector.

### Recommendations

To reverse the brain drain in health sector, the following recommendations can be considered:

1. Improve working conditions and remuneration: Enhance working conditions and provide competitive salaries for healthcare professionals to incentivize them to stay in their home countries. This can help reduce the motivation to seek better opportunities abroad.
2. Enhance training and professional development opportunities: Invest in continuous training and professional development programs to enhance the skills and knowledge of healthcare professionals. This can increase job satisfaction and provide opportunities for career growth, reducing the desire to seek possibilities elsewhere.
3. Strengthen healthcare infrastructure: Improve healthcare infrastructure, including facilities, equipment, and technology, to ensure that healthcare professionals have the necessary resources to provide quality care. This can help retain skilled professionals and attract those who have left to return.
4. Implement supportive policies: Develop and implement policies that support healthcare professionals, such as loan forgiveness programs, tax incentives, and career advancement opportunities. These policies can encourage professionals to stay and contribute to the healthcare system in their home countries.
5. Foster a positive work environment: Create a positive work environment that promotes teamwork, collaboration, and job satisfaction. This can include recognizing and rewarding the contributions of healthcare professionals, providing support for work-life balance, and addressing issues like burnout and stress.
6. Strengthen healthcare education systems: Invest in healthcare education systems to produce an adequate number of skilled healthcare professionals. This can involve increasing the capacity of nursing schools and other healthcare training institutions to meet the demand for healthcare professionals.
7. Develop retention strategies: Implement strategies to retain healthcare professionals, such as mentorship programs, career development opportunities, and support for work-life balance. These strategies can help create a sense of belonging and loyalty among healthcare professionals.
8. Foster international collaborations: Encourage international collaborations and partnerships between countries to share knowledge, expertise, and resources. This can help address gaps in healthcare services and provide opportunities for professional growth and development.
9. Address socio-economic factors: Address the socio-economic factors that contribute to brain drain, such as political instability, lack of job opportunities, and inadequate health care. This may involve broader efforts to improve the overall socio-economic conditions in the country.
10. Promote a positive image of the healthcare sector: Highlight the importance and value of healthcare professionals through public campaigns and initiatives. This can help change societal perceptions and attitudes toward healthcare professionals, making the sector more attractive for individuals considering career choices.

### Conflicts of Interest

Nil

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