

## Assessing the effects of medical brain drain on the Nigerian healthcare sector among residents of Jos, Plateau States, Nigeria

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### Abstract

The study explored the effects of loss of medical talents on the Nigerian health industry among residents of Jos, Plateau States, Nigeria. Specifically, the objectives of the investigation are to find out the root causes of medical brain drain, effects, and challenges of brain exodus in the Nigerian health sector. The study adopted the mixed research approach. Quantitative surveys and key informant interviews were adopted to collect data from 256 respondents through purposive sampling techniques. Findings showed that the poor state of facilities in the country's healthcare system is a push factor for health practitioners to leave Nigeria. Specifically, the study revealed that the causes of medical brain drain include inadequate and poor service delivery, the ineffectiveness of the policy/regulatory measures put in place, insecurity, corruption, the deplorable state of medical facilities and equipment in the country and poor remuneration as well as non-payment of salaries/non-implementation of new salaries pronouncement by government. Further, the study revealed that the movement of medical practitioners out of Nigeria is causing the country huge financial losses and slow advancement in the country's healthcare system. The issues of medical brain drain have negatively impacted the Nigerian healthcare sector.

**Keywords:** Effects, Health sector, Healthcare system, Medical brain drain, Nigerian healthcare

### 1. Introduction

Brain drain, sometimes called a movement of expatriates from less attractive zones to attractive places remains an international scourge and all professions are affected, with the health sector the most hit (NOIPo11, 2017). Brain drain is the emigration of highly trained or qualified people from mostly less developed countries and territories to developed destinations. It is a drain of efforts made in the education of experts from the source countries to the benefiting countries (Sheikh et al., 2012). As a result of the impact of best brains moving out of the third world and advancing nations, it has become an international discourse. According to the International Labour Organisation (ILO) (2015), medical brain drain accounts for 64 percent of the global movement of the human population. United Nations (UN) (2002) figures further revealed that 154 to 175 million people moved abroad in search of greener pastures between 1990 and 2002.

The migration of skilled professionals in the health sector first started in the 1940s (Misau, Al-Sadat & Gerei, 2010). The trend led to the movement of many healthcare workers in Europe to the United Kingdom (UK) and the United States of America (USA) (Organisation for Economic Cooperation and Development

[OECD), 2015). In the 1960s, this became a huge problem for disadvantaged countries and territories. In 1979, the World Health Organisation (WHO) realised a document containing its findings of the migration of health workers in 40 countries. The report found that more than 90% of health professionals migrated to five countries: Australia, Canada, the Federal Republic of Germany, the UK, and the USA (Ahmad, 2004). In 2013, for instance, India was said to be the highest contributor of health professionals to the UK and USA (Organisation for Economic Cooperation and Development (OECD), 2015).

The scourge of migration of medical health experts from less developed to developed nations is seen as a challenging phenomenon that needs to be tackled head-on. This trend negatively affects the dispensation of quality and effective healthcare delivery, especially in developing countries (Nepachem, 2009). Adinan et al. (2012) posit that the movement of health experts from third-world and other less-developed nations to attractive destinations has left these areas short of medical personnel. The movement of medical staff out of developing countries, usually referred to as brain drain, affects the health care system of such countries negatively. In developing nations, governments are facing bigger challenges as a result of poor working environments and conditions for medical practitioners. This is largely responsible for the medical professionals' exodus to places where they believe their services are better valued and appreciated (Nadir, Sadar & Ahmad, 2023).

According to the WHO (2019), brain drain in the healthcare sector remains a big challenge that governments across the globe, particularly those in developing countries will have to deal with. The WHO (2017) notes that the international migration and mobility of health workers are increasing in volume. Across countries, health systems are challenged by the outflow of health workers from developing to developed nations, thereby negatively affecting the Universal Health Coverage initiative (Ogaboh, Udom & Eke, 2020). This led the WHO to come up with a requirement for the movement of medical personnel in 2010, aimed at reducing the effect of such migration on disadvantaged countries. Some of the measures include better incentives for medical personnel by the government in poorer countries, and modern housing, among others (WHO, 2014; Campbell, Dhillon & Siyam, 2016). Also, the UK government in 2021, as part of efforts to curb the scourge of medical brain drain suspended the recruitment of healthcare workers from Nigeria and 46 other countries. According to the UK government, the rate at which health professionals move to developed nations continues to negatively affect healthcare delivery in such emigrant countries (Adejoro, 2023).

From the foregoing, it is glaring that many developing countries are the most hit by medical brain drain syndrome. For instance, in India, about 69,000 trained medical doctors and 56,000 nurses migrated to the UK, USA, Canada, and Australia in 2017 (Paharia, 2021). This migration is caused by the inhuman treatment of doctors, nurses, and other health personnel, as well as the poor working environment (Paharia, 2021). Popescu, Patrasca & Chivu (2006) corroborate that the lack of government commitment to healthcare issues in middle-income countries continues to push health workers out of such areas.

Furthermore, in Kenya, available statistics revealed that in 2023, 64.6% of health workers in the country wanted to leave for better destinations like the UK, USA, and Canada (Kenya Ministry of Health, 2023). Earlier data by Gross et al. (2011) claims that from 1999 to 2007, six percent of Kenya's nurses representing 41,367 left the country for greener pastures. Other statistics from WHO (2006) support the above that a large number of medical practitioners, especially nurses and midwives who received their training in Kenya are now working in developed territories. This figure was put at about 1, 213. To date, health worker's migration in Kenya remains a worrisome development. Its negative impacts on the healthcare needs of the citizens should be addressed.

Similarly, in Tanzania, many health experts 2019 moved to countries where they are assured of better working conditions and atmosphere (Adinan et al., 2020). Statistics revealed that as of 2019, 1,356 medical professionals, particularly doctors, migrated to better places like the UK, Germany, and Canada (Adinan et al.,

2020). The situation is not different in Ghana, as the exodus of medical personnel continues to rise as confirmed by Dodani and LaPorte (2020) that 72% of health facilities in Ghana in 2018 did not have sufficient manpower to cater to the health needs of the people partly due to brain drain.

In Nigeria, the migration of healthcare workers can be traced back to the 1960s (Adenipekun, 2023). In recent times, according to a document released by the UK government in 2022, a total of 13, 609 Nigerian medical workers were given permission to move to the UK in 2021; in 2022 the figure was 727 (Adenipekun, 2023). A supporting report by the Organisation for Economic Cooperation and Development (2022) and OECD (2022) confirms that in 13 years, 36,467 Nigerian physicians will move to the United Kingdom.

The *Punch* of 16 January 2022 further concurs that between July and December, 805 medical doctors migrated from Nigeria to the UK. The rate means that 134 trained doctors a month, 33 a week, or four a day. The *Punch* further narrates that, in five years, 15,409 nurses left the shore of the country. This translates to 3,009 nurses yearly, 228 in a month, and 57 per week from 2016 to 2021. For instance, in March 2019, there was a massive recruitment of healthcare workers in Nigeria by the Saudis (The Guardian, 2019).

The reason for this massive movement could be due to the good incentives and effective working conditions in the developed countries (pull factor), in addition to the high level of economic inequality in Nigeria, poor salaries, and other push factors highlighted earlier by Nigeria Medical Association (Nigeria Medical Association, 2022). This continues to affect the nation's healthcare delivery system.

Though the Nigerian government has made some efforts to curtail this trend, this continues to rise. In a recent policy move to curtail brain drain in Nigeria, the government submitted a Bill on April 6, 2023, which recently passed the second reading stating that doctors should spend at least five years in the country following their graduation before they are offered the full practicing license (Orizu, 2023). This bill has failed to take into consideration that many countries such as Saudi Arabia are willing to employ young medical graduates without requisite experience to beef up their healthcare. The past policy on bonding has failed to curtail the emigration of healthcare professionals.

Though scholars across the board have conducted studies on medical brain drain (Buowan, 2021; Chimereze, 2020; Imafidon, 2018; Kabbash et al, 2019; Kirigia et al, 2016; Okafor & Osigbesan, 2021; Quamruzzaman, 2020; Yahaya & Jebbin, 2020). However, none of these studies assessed the effects of healthcare professionals' movement abroad on Nigeria's healthcare sector among residents of Jos, Plateau State, Nigeria. This is the gap in knowledge that this study bridged.

## **2. Objectives of the study**

1. To find out the frequency of medical brain drain occurrence in Nigeria among residents of Jos, Plateau State.
2. To establish the causes of the movement of medical professionals out of Nigeria among the respondents.
3. To assess the effects of medical personnel exodus out of Nigeria among the respondents.
4. To find out the challenges posed by medical brain drain among the respondents.

## **3. Review of empirical studies**

Nadir, Sardah and Ahmad (2023) used the cross-sectional research strategy to find out the effects of the medical professional's movement among the medical student population in Pakistan. Findings revealed that of the 420 medical students studied, 140 of them made arrangements to leave the country after graduation, and the USA was their preferred destination. The cause of this, according to the findings, is poor remuneration and long working hours in Pakistan. The study concluded that in Pakistan, the migration of medical personnel to better

countries was high. The research recommended an improvement in the condition of service and an intensive campaign by the country's health authorities to discourage movement overseas.

Boros (2022) investigated the movement of medical professionals from Hungary, looking at it from worldwide perspectives and how the Hungarian authorities are responding to the issues. The study adopted the qualitative research approach to analyse documents in Hungary, in Europe, and at the global scale regarding this phenomenon. The study found that the migration of healthcare professionals has caused access to healthcare deficits in the country. It was also discovered that healthcare professionals were regarded as people who can easily be replaced. The research concluded that effective policies to curb the menace of brain drain are rarely formulated. It recommended that the Hungarian government should come up with good strategies that will mitigate the movement of medical professionals to other places.

Quamruzzaman's (2020) study was on the effect of medical experts' migration on children's healthcare delivery in 188 countries for a period of 15 years. The research made use of the unchanged-effects reversion method. It was established that health professionals' exodus has severe impacts on child health and that the impact is heavier on the side of the poorer countries. The research recommended that governments of affected nations and territories need to improve the welfare of their medical staff and address issues of bad governance and administration to be able to retain their medical personnel.

Similarly, Kirigia et al. (2016) studied the impact cost of medical personnel migration on Kenya's healthcare industry. It made use of the survey research method. The study found that it cost the Kenyan Government \$65,997 to train one medical student; and for one nurse that moved to other attractive places, the government of Kenya lost about \$338,868 worth of return from investment. The study recommended a drastic measure by the Kenyan government to tackle medical brain drain syndrome. It concluded that since developed countries continue to deprive the advancing nations of their medical personnel resources, there was a need for both divides to come up with better strategies to address this health human resource crisis.

The crux of Kabbash et al. (2019) research was the reasons medical students and fresh medical graduates desire to leave their country Egypt. It adopted the cross-sectional data collection technique and gathered data from medical students in Tanta and Kafrelshiekh institutions. The study found that the majority of the students wanted to leave the country due to issues around poor salaries, poor relationships with patients and colleagues as well as verbal abuse. The study advocated for a retention policy to curb the migration of medical doctors and other health professionals out of the country.

Osigbesan (2021) in a study on the effects of health professionals' migration on the Nigerian healthcare system, adopted a qualitative research methodology and employed a heuristic phenomenological design that is related to the study's aim. According to the research, there is a high migration of medical workers from Nigeria to other countries. The study revealed that the effects of the exodus of medical staff from Nigeria have created a gap in population-medical care demands. This, Osigbesan related to poor salaries and wages, corruption, poor power supply, infrastructural deficits, and poor funding, among others. In view of these findings, Osigbesan suggested that robust measures should be put in place by the Federal Government of Nigeria to address the issues of poor salaries and working conditions of medical professionals. This, Osigbesan argues, would lead to effective healthcare delivery in the country.

Okafor and Chimereze (2020) examined the implications of the medical professionals' movement out of Nigeria. The study sees medical brain drain as medical human capital flight in the health jurisdiction, in which a large movement of human expert resources is involved, it is also the loss that results from excessive migration of medical experts. They adopted the secondary sources data collection technique to achieve the study's objective. The study established the consequences of nurse migration to include a shortage of nurses within the country, as it argued that citizens suffer because of this while trying to access healthcare. Thus, the study

suggested that the government should take drastic steps by improving the health workers' salaries, and their working conditions, giving autonomy to professional bodies, as well as coming up with strong legislation to curb this trend.

Similarly, Ikhida (2021) maintained an exodus of medical practitioners from the country would undermine Nigeria's ability to attain most of the health-related Sustainable Development Goals. The paper called on the National Assembly to give the country's healthcare sector an adequate Appropriation Bill yearly. It also advocated collaboration between the National Assembly and State Houses of Assembly to ensure that Nigeria fully implements all medical laws and policies in the country. From the reviewed empirical studies, the bottom line is that medical brain drain has huge consequences on developing nations, which Nigeria belongs to. The trend usually creates a hole in the health sector of developing countries, which is difficult to fill.

### **Theoretical underpinning**

The study is anchored on The 'Push and Pull Effect' Theory. This is one of the most significant theories that apply to research concerning the movement of people, especially human capital from poorly treated places to destinations referred to as "attractive". The theory was propounded by Everett Lee in 1966. Lee explains that countries, territories, and nations have both good and bad attractions. He refers to these factors as positive and negative conditions. Lee contends that good factors are those that pull people from other places to it. On the other hand, negative or bad factors drive away people from such places. In other words, Lee's thoughts suggest that the purpose of people leaving one destination to another is due to the fact that people can improve their living standards. This implies that the theory is concerned with the reasons people migrate. The forces that make people move from one location to another range from social to cultural, health, education, political, and economic, among others.

Therefore, this theory is applicable to this study because the push factors such as bad working conditions, poor salaries and wages, tense security atmosphere, poor health equipment, and poor funding, to mention but a few, in Nigeria's health industry, have made the medical professionals continue to move out in droves to places where such facilities are available (pull factors).

## **4. Research method**

**Study design and setting:** The mixed method [qualitative and quantitative] research strategies were employed. This allowed for the generation of adequate and variety of data to draw valid and reliable deductions.

**Study population:** The population of the study comprised medical personnel in Plateau Specialist Hospital, University of Jos Teaching Hospital, Dadin Kowa Primary Healthcare Centre, Rafield Medicals, and Our Lady of Apostles Hospital and some purposively selected residents of Jos who the research believed were capable of answering the research questions. The total population of the study remains unknown, however, for effective data handling, the researcher made use of 240 respondents for the quantitative aspect of the study, while 16 Key Informant Interviews were conducted, selected across the population jurisdictions.

**Data collection method:** Data was collected on a face-to-face basis, through the use of five trained research assistants and the researcher himself. Quantitative data were presented in frequency tables and figures, as well as a five-point Likert Scale of strongly agree, agree, undecided, strongly disagree, and disagree. The qualitative data were transcribed, coded, analysed, and presented in a narrative format. Limitations of the study is monocentric making the sample size small.

**Ethical considerations**

Respondents' confidentiality was respected throughout the study. The ethical principles of fairness, beneficence, non-maleficence and respect for human dignity were respected.

**Data analysis**

The researcher administered a total of 240 copies of questionnaire of which 233 were retrieved, representing 97% of the sample size and found valid for the analysis. This is illustrated in Figure 1.

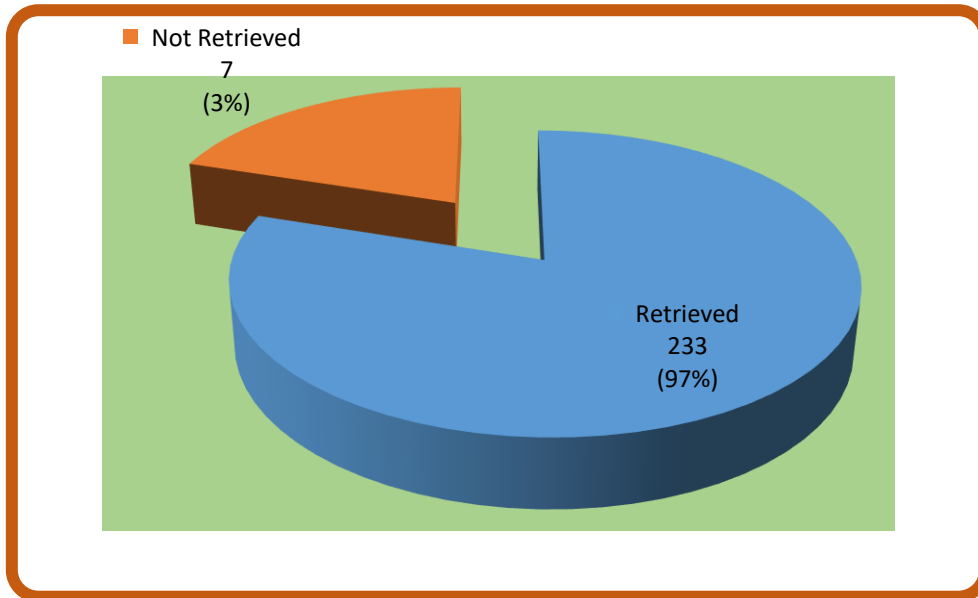


Figure 1: Analysis of Response Rate

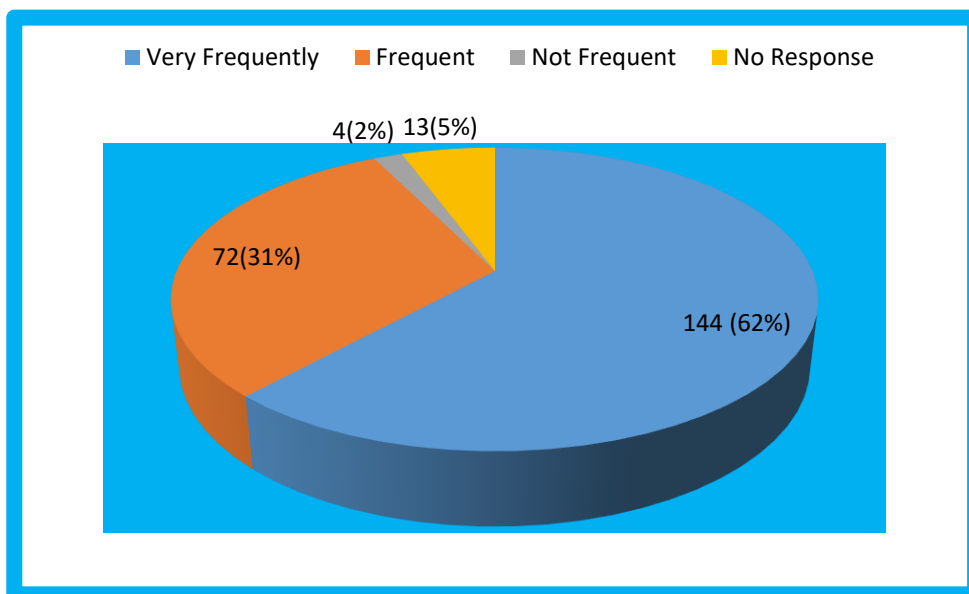


Figure 2: Frequency of Medical Brain Drain Occurrence in Nigeria

Findings in the Figure above indicate that most of the respondents making up 62% agreed that brain drain syndrome happens in Nigeria on a very high frequency. Data further reveals that 31% of respondents are of the opinion that the phenomenon occurs in Nigeria frequently. 2% said it does not occur frequently while 5% submitted that they don't know whether medical brain drain occurs in Nigeria. This finding was further buttressed in a KII by one of the respondents "in just a few years, Nigeria has lost between 1, 000 to 2, 000

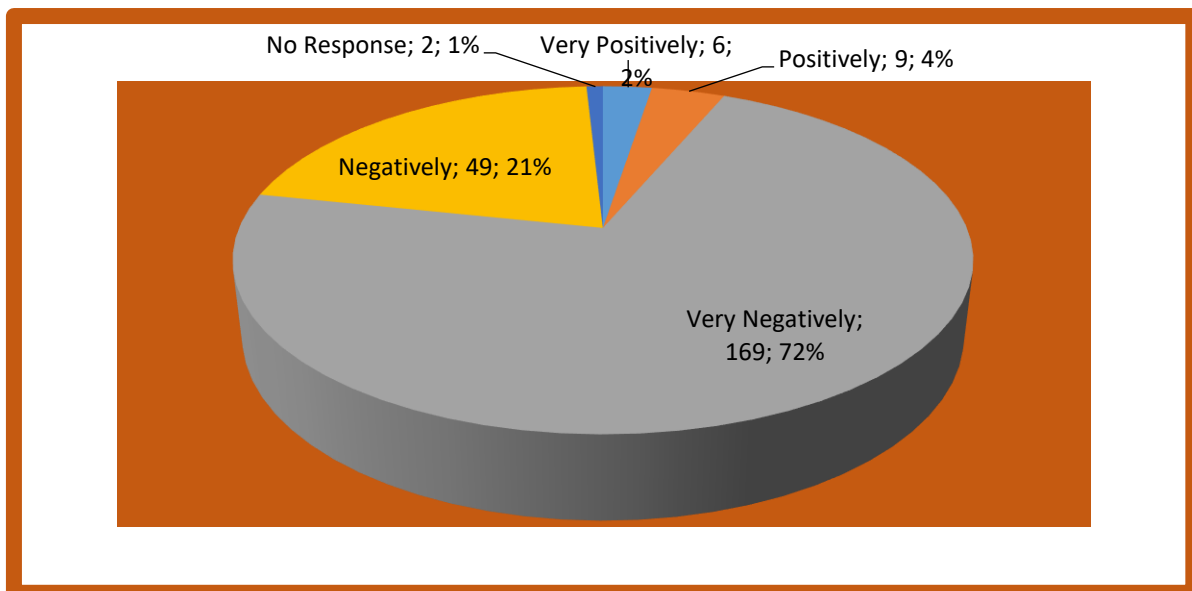
resident doctors to the “*japa*” syndrome annually”. Another Key Informant stated that “30 per cent-40 per cent of Nigerian trained medical practitioners leave the country every year”. Another Informant opined that “this is on the increase daily”. Another affirmed that “About 80 per cent of doctors currently in Nigeria want to leave the country”. It can therefore be deduced that media brain drain occurs regularly in Nigeria.

**Table 1:** Causes of Medical Professionals Exodus in Nigeria

Options	SA	A	DK	D	SD	Mean Rating	Decision
Poor working conditions, no sufficient access to good healthcare, bad governance, structural dysfunction, and underuse of the health professionals skills	203	30	0	0	0	5	Accepted
Unfavourable health policies and programmes, poor salaries and wages, issues of insecurity (kidnapping of medical workers) and poor educational system for health professionals children	191	39	3	0	0	5	Accepted
Government does not provide the needed equipment to work and other facilities	189	44	0	0	0	5	Accepted
Attractive work environment in the destination countries	215	14	1	3	0	5	Accepted
All of the Above	196	14	7	9	7	5	Accepted
None of the Above	0	0	0	24	209	1.1	Rejected

It could be inferred from the quantitative result in Table 1 that poor working environment among other factors are responsible for movement of medical professionals out of Nigeria. This opinion was further stressed in a KII granted by a participant that “the push factors include low morale, lack of career progression, low pay; the pull factors are shortage of doctors in the UK, US among others preferred destinations”. Another respondent averred that “some of the causes are seeking for better working environments in the preferred countries, better standard of living, obsolete equipment in our health facilities, and the economic situation in the country”. This finding was further affirmed in an interview granted by other Key Informants thus: To specialise in the medical sector, many of the health care practitioners have not been able to find training spots in teaching hospitals. There are also economic factors to it. A good number of health care workers in Nigeria are aware of the pay packaged in Europe, North America as well as the Middle East.

“Bad working environment and the inability to live a comfortable life”, was another reason for the mass migration of healthcare workers in Nigeria according to another Key Informant. Other informants stated that “poor remuneration, poor working tools/environment and security challenges, harsh government policies accounted for the reason for mass migration of healthcare workers in Nigeria”. Thus, it could be deduced that the finding reflects the extent of rot in the Nigerian socio-economic system.



**Figure 3:** Effects of Medical Professionals Migration on the Nigerian Healthcare Industry

Finding in Figure 3 reveals an overwhelming impact: 72% and 21% respectively opining that it has affected the health system very negatively and negatively. In agreement to this finding, one of the Key Informants, stated that “Brain drain is seriously affecting the Nigerian healthcare system negatively, as it leads to increase in mortality rate in the country, more numbers of quack and fake doctors are coming up, poor training, increase in out-of-pocket spending, as well as widening the gap in terms of patient-doctor ratio”.

**Table 2:** Which among the Following Best Describes How the Medical Brain Has Affected the Nigerian Healthcare System?

Options	SA	A	DK	D	SD	Mean Rating	Decision
It is affecting the socio- economic development	116	111	6	0	0	4.4	Accepted
Medical brain leads to shortage of medical personnel in the Nigerian healthcare sector	223	10	0	0	0	5	Accepted
Trained professionals in Nigeria move overseas in search of better working conditions and better remuneration	211	22	0	0	0	5	Accepted
The poor state of infrastructure in the Nigerian healthcare sector is enough reason to discourage the medical personnel thereby encouraging migration in search of good working environments	229	4	0	0	0	5	Accepted
Nigeria is losing a lot of money due to movement of its medical practitioners abroad	120	39	12	9	3	3.4	Accepted
The doctor-patient ratio continues to increase as a result of medical brain drain	230	3	0	0	0	5	Accepted
Death rate continues to increase in Nigeria due to health experts exodus out of the country	131	73	14	6	7	4.3	Accepted
Brain drain is on the increase in the Nigerian healthcare sector	214	16	3	0	0	5	Accepted
The few medical practitioners left in the country are overstretched	219	14	0	0	0	5	Accepted

Brain drain has lead to proliferation of private medical centres and hospitals leaving the public health institutions in shamble, leading to high cost, which is beyond the reach of majority of Nigerians	116	94	11	3	9	4.3	Accepted
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The findings in Table 2 reveal different opinions of those who participated in the study. In the respondents' position, they strongly agreed that medical brain drain has rapidly increased in the country. They further stressed the fact that the movement of trained medical workers out of the country is responsible for a huge socio-economic drain of resources in Nigeria. The respondents further submitted that due to the medical brain, the country's healthcare sector is suffering from a shortage of health workers, and the patient-doctor ratio continues to widen. Also, trained medical professionals prefer to migrate abroad to advance their skills. The state of infrastructure in the nation's healthcare system continues to discourage them, thereby leading to their movement out of the country. Findings further show that the few medical personnel that are left in the country are overstretched, and this has led to an increase in private hospitals and health centres, most of which are beyond the financial capacities of ordinary Nigerians struggling to earn a living.

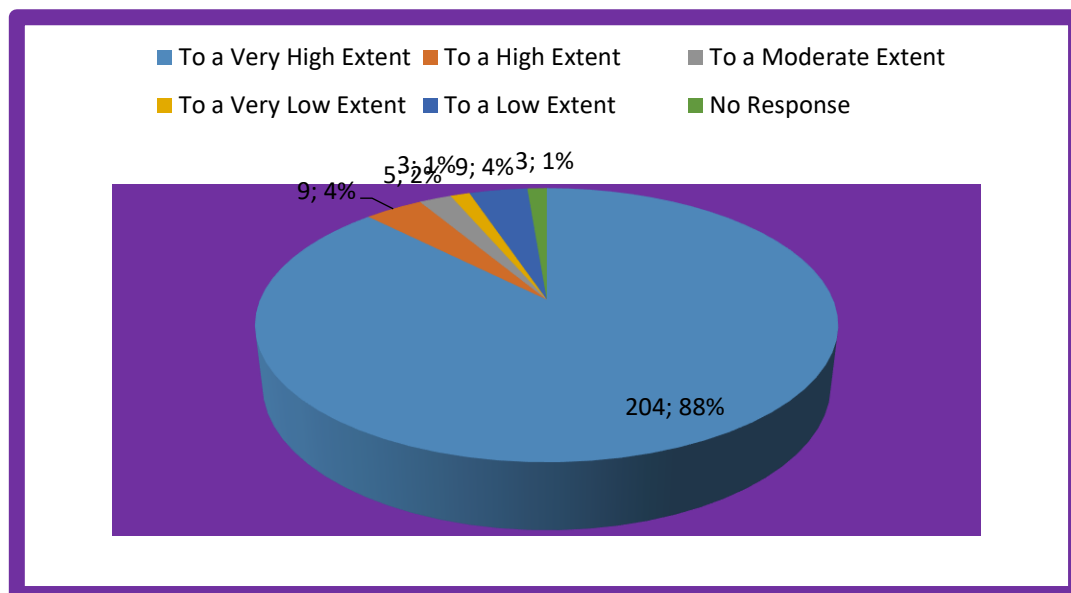


Figure 4: Challenges Posed by Medical Brain Drain on the Nigerian Health Sector

Figure 4 above reveals that most of the respondents accounting for 88% agreed that medical brain drain poses a great challenge to healthcare delivery in Nigeria and this is adjudged to be to a very great extent. This assertion was avowed in an interview granted by some respondents; thus, “inadequate and poor service delivery leading to medical tourism”, another added that “it deprives the country of skilled and experienced manpower in the health sector”, “severely weakened the tertiary and secondary healthcare services in the country”, opined another respondent. Furthermore, another interviewee acknowledged that: Nigeria is losing a lot of money because of medical tourism. However, the amount lost is difficult to imagine because of lack of data. There is a rise in maternal mortality; the few medical practitioners that are left in the country are overburdened.

### 5. Findings and discussion

This section presents the discussion of findings on issues and policy options concerning brain drain in the Nigeria's healthcare sector. To achieve this, the study put forward some research questions. The findings of the

study revealed the current causes of medical professionals' movement out of Nigeria. The findings also unveiled some of the challenges associated with this trend.

Therefore, the study found that medical brain drain occurs frequently in Nigeria. Findings further revealed the causes of health workers movement out of Nigeria to include search for financial security, better work environment, job fulfilment, and competitive medical education system in the destination countries. Data revealed that the push causes include lack of job dissatisfaction, poor medical education system, shortage of medical doctors, which leads to heavy workloads as reasons for medical staff movement out of Nigeria. Others are poor work conditions and healthcare tools, and low salaries/remuneration. Earlier finding by Imafidon (2018) also corroborates what this study found. The findings of this study also justified the adoption of the 'Push and Pull Effect' Theory. For instance, the 'Push and Pull Effect' Theory advances the causes of human capital movement to the fact people want to improve their living standards, while Maslow's Hierarchy of Needs Theory focuses on human needs such as healthcare, clothes, shelter and safety.

Data collected from the field further showed that medical brain drain has negatively impacted the Nigerian healthcare sector. A report by *Daily Trust* on March 19, 2019, confirms that a Saudi Arabian company came to Abuja and Lagos for a massive recruitment exercise to cart away hundreds of doctors of all categories from Nigeria. Osigbesan (2021) finding further corroborates that effects of exodus of medical staff from Nigeria have created a gap in population-medical care demands. Finding also revealed the challenges to include inadequate and poor service delivery leading to medical tourism; depriving the country of skilled and experienced manpower in the health sector; weakening of the country's tertiary and secondary healthcare services; Nigeria is losing a lot of money because of medical tourism; and there is a rise in maternal mortality as the few medical practitioners that are left in the country are overstretched.

## **5. Contribution of the study**

Information on issues, no doubt, is always growing. Therefore, this study has contributed to the existing body of literature on medical professionals' movement-related matters. Studies have been conducted by scholars on this phenomenon both in Nigeria and outside Nigeria. Nevertheless, none of these scholars focused on assessing the effects of medical brain drain on the Nigerian healthcare sector among residents of Jos, Plateau States, Nigeria in 2024. It is thus inferred that this research may be useful to researchers and other information seekers to have understanding of medical professionals' exodus issues from the viewpoint of residents of Jos, Plateau State, Nigeria.

## **6. Implications of the study**

The implications of the findings of the study on Nigeria's healthcare system is that if the government does not confront this trend and address it holistically, the death rate will continue to increase, medical tourism will continue to suck the country's resources and above all, the country's healthcare facilities will continue to remain in sorry state.

## **7. Recommendations and suggestions**

For medical brain drain to be minimised in Nigeria, the following recommendations and implementation strategies are put forward:

1. The Federal Government of Nigeria should take proactive measures to curb the migration of trained medical professionals' abroad for employment purposes.
2. There should be a multi-stakeholders approach in the full implementation of all health laws in Nigeria.

3. The Nigeria government should ensure that all fresh medical graduates are absorbed locally for the mandatory one -year internship.
4. The Federal Government should partner with Nigerian medical professionals in Diaspora to render services in the teaching hospitals.
5. The Federal Ministry of Health in conjunction with the National University Commission should draw up a scheme that will increase admission of students into the health care professions for training so as to beef up the number of healthcare practitioners in Nigeria.
6. The Federal Government should strengthen existing policies and invent new programmes directed at curbing the impacts of medical brain drain in the nation's healthcare sector.

## 9. Conclusion

The effects of the medical brain on Nigeria cannot be quantified. The poor state of the economy and insecurity in Nigeria are largely responsible for the migration of healthcare professionals to other countries in their numbers. It is for the above reasons and many more that prompted the conduct of this study, which assessed the issues of healthcare workers movement out of Nigeria and its impact on the country's health system, with a view to proffering policy options.

Upon detailed field data analysis, it is concluded that medical brain drain occurs on a very frequent basis in Nigeria. The study further concluded that the causes of this phenomenon are in two categories: the poor working conditions in one's country and the attractive factors in destination countries. The push factors are poor working environment, inadequate access to proper healthcare, and underutilisation of talents. Others are attractive pay compared to what is obtainable in Nigeria, access to work with up-to-date tools, regard for the discipline, hope for career progression, and pre-and post-retirement social welfare packages, among others.

The conclusion was also drawn that the medical brain drain had very negative impacts on the country's healthcare system. These consequences include: a wide gap in population-medical care demands which led to medical tourism by the elite of the country; a medical brain drain pushes Nigeria into a state in which healthcare practitioners who have the ability to help shape public policies to rebuild the health institutions are almost non-existent. The few health professionals left behind are overburdened. There is also the movement of health specialists from rural areas to urban centres

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