Examining Medical Brain-Drain and Work Stress Among Health Workers in Nigerian Public Hospitals: A Case of University of Benin Teaching Hospital (UBTH) Edo State Nigeria

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ABSTRACT

This paper examined the problems of medical brain drain and work stress among nurses in public hospitals in Nigeria with special emphasis on the University of Benin Teaching Hospital (UBTH). A teaching hospital was chosen because of the array of health professionals required and often paraded as well as its vulnerability to brain-drain problems. The three most affected health workers by the brain drain syndrome (Doctors, Nurses, and Medical Laboratory Scientists) were investigated for three years (2021 – 2023), while nurses were examined on workload, work stress, and service delivery within the same period. Primary data were generated with the use of a questionnaire while data on brain drain were collected using secondary data. Results of data analysis showed a steady increase in the number of medical professionals migrating to advanced countries for better wages from Nigerian public hospitals and correspondingly, there is an increase in the workload on the staff left behind. Findings also showed that arising from high working hours, loss of restorative hours at work, high number of patients – the health worker / patient ratio, health care service delivery is poor and ineffective. The study concludes that there is a high prevalence of medical brain drain in public hospitals, leading to a high rate of workload and work stress experienced by the remaining staff who eventually deliver ineffective and inefficient service to the service users in Nigeria.

***Keywords*:** brain-drain, health workers, nurses, public hospital, work stress.

Introduction

The importance of good health conditions to the individual and the nation at large cannot be over-emphasized. This is because a healthy individual is an asset to himself/herself and the country while an unhealthy citizen is a liability to self and the nation. The adage that says "health is wealth" therefore underscores the place of quality health care in the nation and justifies goal number 3 of the Sustainable Development Goals (SDG) agenda of the United Nations to which Nigeria is a signatory. Goal number 3 of the SDG made it imperative for member nations to "ensure healthy lives and promote well-being for all at all ages". This had been one of the cardinal objectives of the Nigerian government through its health care system across the country. However, the provision of good healthcare services to the service users has not been substantially achieved and consequently, achieving goal 3 of the SDG has remained a mirage.

Some advanced economies such as Australia, Canada, and the United States of America in the wake of the 20th century reviewed their migration policy by making it more selective to attract skilled workers from other countries as a deliberate response to the workforce need in certain sectors of their economy. These countries established a quota or a visa system that gave applicants with specific skills a competitive advantage over other applicants. Some European Countries also did similar things by redesigning their visa programs to attract migrants with specialized technological skills and this increased the number of international migrants to these countries astronomically. This phenomenon was later christened as "Brain- Drain" by the immigrant's country of origin and "Brain- Gain" by the recipient nation.

The brain-drain phenomenon was initially viewed as a win-win situation by the developing countries, considering the high rate of unemployment confronting them and the challenges of development. However, the reality is that those who are migrating are the skilled workforce that constitutes the engine-room for development rather than the unemployed skilled people - a phenomenon now known as "brain drain". This has led to the near collapse of some sectors of the economy of many developing countries including Nigeria, with critical sectors such as health badly affected.

The health sector is crucial to the economic growth and development of every nation and as such attracts global attention through the "Sustainable Development Goals (SDG)" Goal number 3 of the SDG provides that member nations should "ensure a healthy- lives and promote well-being for all and at all ages". Nigeria, being one of the signatories, is under the obligation to do the same and has been striving to meet this target. However, the issue of the brain drain is posing a very great challenge to the Federal government of Nigeria on the provision of a qualitative health care system. Brain drain syndrome is constantly reducing the skilled workforce in public hospitals thereby making them fall short of the ratio of healthcare providers to patients as prescribed by the World Health Organization (WHO).

Many public hospitals in Nigeria lack sufficient manpower across different professionals such that some medical wards have to be closed down in some public hospitals (*The Punch* Newspapers, 2023). This has undoubtedly put the lives of many citizens in precarious state and increased the mortality rate of certain categories of people across the country. Thus, assurance of healthy lives and promotion of well-being for all and at all ages may be a mirage if urgent steps are not taken to address the problem of brain drain. Adjusting to a brain-drain problem may not be as easy, as it could come with lots of disruption to the structure and operations of the system which may bring about an increase in workload and problems of work stress on the

remaining staff. Work stress which is also referred to as occupational stress is one of the most serious health problems globally (Vadivu, 2017) and nurses are not immune to the different forms of stress at work (Faremi et al., 2019). Studies have shown that most of the occupational stresses experienced by nurses often occur due to increased workload, complex procedures, conflict with other health care workers, inadequate resources, poor working physical environment, workplace abuse either or both from superior and client, and the introduction of new technology (Masa'Deh et al., 2017).

It is therefore imperative to investigate the trend and pattern of the "brain drain" as well as its impact on the remaining personnel in the public health institutions in Nigeria. Examining the incident of work stress as a consequence of the brain-drain syndrome among nurses in public hospitals in Nigeria will not only help in determining the prevalence and impact of occupational stress of nurses on health care service delivery in Nigerian public hospitals but also help in creating a baseline data for the stakeholders in the health sector and propel necessary interventions in the sector.

Literature Review

The health care system in Nigeria is subdivided into three layers based on the complexity of operations and other parameters and these are: primary health care (which is community-based and the closest to the people), secondary health care, and the tertiary health care. The tertiary health care is the highest level and handles the most complicated cases and surgical operations. It also serves as a centre for training and research ground for medical professionals. Thus, tertiary health care often parades an array of health professionals with the best brains in the country by virtue of the number and complexity of the cases it handles. The University of Benin Teaching Hospital (which is the study area for this paper) is one of the Federal Teaching Hospitals (FTHs) in Nigeria.

The University of Benin Teaching Hospital (UBTH) is a multi-specialty Federal Tertiary Health Institution located in Benin City, Edo State in southern Nigeria. The hospital was established as the Midwest Medical Centre in 1971 and renamed the University of Benin Teaching Hospital. It was officially opened to the public on May 12, 1973. The University of Benin Teaching Hospital is one of the largest teaching hospitals in Nigeria with a bed capacity of 900 and is a major referral centre for highly specialized healthcare services for persons within Edo State and the entire south-south region of the country.

There are facilities and human resources for virtually all specialties of clinical and laboratory medicine. Apart from being a tertiary health facility, the University of Benin Teaching Hospital also offers primary care at the Comprehensive Health Centres in the rural communities of Ogbona and Udo, both in Edo State. The Hospital is involved in training middle and high-level manpower including Resident Doctors, Nurses, Midwives, Post-Basic Nurses, Medical Laboratory Scientists, and Medical Laboratory Technologists and Health Record Officers, among others. The Hospital also trains medical students as the Teaching Hospital of the University of Benin (Faremi et al., 2019).

Brain drain is considered a serious constraint to the development of poor countries and a matter of serious concern for many European countries such as the United Kingdom., Germany and France. The term" brain drain" has been defined differently by scholars from different perspectives. Rapoport & Docquier (2006) describe it as the international transfer of resources in the form of human capital and mainly applies to the migration of relatively highly educated individuals from developing to developed countries. They viewed brain-drain as capital flight

across national boundaries especially the one involving the elites from less developed to developed economies. Generally, this term is used in a narrower sense and relates more specifically to the migration of medical personnel, engineers, physicians, scientists, and other very highly skilled professionals with university training.

Studies have shown that the number of migrants has been skyrocketing over the years and there is no end to it in sight. In 2019, the total number of international migrants was estimated to be 272 million globally according to United Nations estimates, representing an increase of roughly 17 percent from 2013 (UNESCO,2020). This shows that approximately 3.5 percent of the global population lives in a country different from their country of birth (Kone & Özden, 2017; Ozden et al., 2011) with many migrants going to the developed world, while more than half of the total global migration flows occur from the developing countries (Sparreboom et al., 2019).

There are three major pathways through which a less-developed country of origin might be impacted positively or negatively by the emigration of its high-skilled workers: the labour market pathway, the human capital pathway, and the macroeconomic development pathway. The human capital pathway includes the losses or gains that the country of origin receives as a result of incentivizing emigration which may include the fiscal impacts as well as the effects of remittances, of increased foreign direct investment and technology flows given the diaspora, and of return migration (Kone & Özden, 2017). From the perspective of the labour market pathway, there is an ongoing debate on the impact of the emigration of the highly skilled in their country of origin. So far, attention has been focused on the potential negative wage impacts of high-skilled emigration with the general opinion being that brain drain reduces the potential for development of a country of origin (Docquier et al., 2011).

Docquier et al (2011) argued that emigration of the highly skilled workers reduces the wages of those with lower skills between 1 and 6 per cent when considering OECD countries. However, the larger impacts are noted for countries that have relatively high emigration rates such as Cyprus, Malta, Ireland, New Zealand, and Portugal. In countries with medium levels of emigration such as Latvia, South Korea, the United Kingdom, and Canada, the negative impact on the wages of those left behind averages about 1 percent. Thus, the losses are the result of effects and lost externalities from the departure of high-skilled individuals. Many other scholars have also found similar results. Elsner (2022) discovered that the effect of emigration on wages is small for most OECD countries, but large for those countries with relatively high emigration rates, putting the former to decline at an average wage of 0.5 for individual percent over a ten-year period, which translates into 2 to 3 percent in the case of the latter.

With the realization that human beings are components of capital in the production process, the exodus of the highly trained could be regarded as human capital flight which is termed a brain drain in this paper. One explanation offered for this could be found in the classic human capital model (championed by Sjaastad, 1962). Scholars have argued that “a migrant’s goal is to maximize his/her utility by choosing the location that offers the highest net return to human capital, hence labour supply”. Sjaastad emphasized that a potential migrant weighs his/her opportunities and the costs thereof, and as such chooses the path that maximizes the present value of lifetime earnings. In the context of this study, health personnel in the Nigerian health sector are marketable anywhere in the world and as such, in an attempt to maximize utility, choose any location in the world where there are better facilities to work with and their services are better remunerated.

Many theories have been developed to aid the understanding and implications of the brain drain syndrome on both countries of origin and destination countries. One of such theories is the "new growth theory" The new growth theory argues that with the additional human capital in the country of destination, positive technological externalities would arise as a consequence of migration. Romer (1986), Romer (1987), Romer P. (1990a), and Lucas (1988) found that the migration of skilled workers stimulated the dynamics of economic growth in the country of destination and as such, with the increasing recognition of labour as a form of capital, more and more research were undertaken on the effects of brain drain on economic growth and macroeconomic implications.

Consistent with the new growth theory, Bhagwati (1991), Rauch (1991), Glaz'ev and Malkov (1992), Gould (1994), Ishikawa (1996), Wong and Yip (1999) and Beine et al. (2001) in their respective works found that while a high wage in the country of destination motivated high-skilled migrants to emigrate, high-income countries attracted foreign labour to increase their productivity and, as such, their economic growth. They also found that the effects of migration were detrimental for the country of origin when considering their impacts on growth and welfare dynamics and therefore suggested that in the long run, impact of migration would result in a divergence between high- and low-income countries. Thus, they proposed that countries of origin should create incentives for return, such as increasing the opportunity for employment in the country.

However, models of brain drain have been developed to provide policy recommendations aimed at preventing the detrimental effect on workers' welfare and growth. While some models focused on prohibiting brain-drain (although it is difficult to implement), others proposed a tax on emigrants collected by the developed country and transferred to the sending country. This approach is also problematic, ranging from the widespread distribution of the emigrants and the challenges of enforcing tax on non-residents, which will undoubtedly require strong assistance from the host government.

The brain-drain dynamic model by Wong and Yip (1999) belongs to the latter and proposed the policy that increased investment in education such as raising the educator-student ratio in the sending country will encourage growth and development. This will have a direct benefit on the people remaining at home, and also reduce the tax burden of financing public education. This paper advocates for each sending country to design an appropriate policy that will mitigate the problem of brain drain in their country.

Materials and Methods

A quantitative research design was employed to comprehensively evaluate medical brain drain and work stress among nurses in public hospitals in Nigeria with particular reference to the University of Benin Teaching Hospital (UBTH), Benin City. Primary and secondary sources were integrated into this design to provide a thorough understanding of the trend, and distribution of medical brain-drain as well as the prevalence, causes, and consequences of work stress on nurses in the public hospitals in Nigeria.

The quantitative research approach was chosen because of its capacity to elicit first-hand information from participants, and this was implemented through a questionnaire for the primary source and hospital personnel record for the secondary source. Although the geographical scope of the study is Nigeria, UBTH was chosen among the tertiary hospitals because it shares the same structure, ownership, and operational architecture as other tertiary public hospitals in Nigeria.

The research specifically focuses on the three major health workers in the healthcare system randomly (Doctors, Nurses and Laboratory Technologists) because they are skilled, their services are germane, and are the most vulnerable to medical brain drain in the health industry. This study adopted the multistage sampling methods: the convenience sampling method was used to select UBTH, the purposive sampling method was used to select the three groups of professionals (Medical Doctors, Nurses, and Laboratory Technologists). For the brain-drain, random sampling (balloting technique) was used in selecting nurses for work stress, while the stratified random sampling was used to divide the hospital into wards/units and nurses selected across the wards/units. The University of Benin Teaching Hospital is an 900-bed tertiary healthcare facility with about 3870 personnel out of which 759 are nurses.

The sample size was determined using Taro Yamane's formula, developed in 1964, for a finite population of 759 nurses using Yamane's formula, a systematic probability sampling technique which allows researchers to derive an appropriate sample size. The formula is:

n = N1+N
s (e) 2……..…… (1)
Where: was determined
N = Aggregate population of male and female final-year students in the geopolitical zone
n = Desired total sample size
e = level of significance (5% or 0.05 i.e., 95% confidence level)
1 = Constant
Substituting the values, n = 7591+759 (0.05)2= 399.47
The calculated sample size with a 5% significance level using the Yamane formula is approximated to 400.

For data collection, a survey questionnaire was administered to the nurses selected for the study as the primary method of data collection while the records of medical personnel who have transferred their services to foreign countries over the past three years were obtained from the personnel unit of the hospital as secondary data. The survey questionnaire method was chosen for its speed and cost-efficiency in collecting standardized data from a large number of sample respondents. It was employed given the need to quantify, predict, and generate factual outcomes related to the prevalence, pattern, and nature of work stress among nurses in UBTH and produce or draw statistically significant evidence-based conclusions that extend beyond the sampled population.
The survey questionnaire consists of two sections with a closed-ended question. Section A contains the socio-demographic characteristics of the participants, section B consists of items measuring work stress among nurses, and section C contains items measuring service delivery. Work stress (nonverbal, verbal, and physical) prevalence was operationalized and measured with 10 items scale on a 4-point Likert rating scale, ranging from 1 = “strongly disagree”, 2 = “disagree”, 3 = “agree”, 4 = “strongly agree”. Service delivery was operationalized and measured with 5 items scale designed on a 4 Likert response rating scale from 1 = “strongly disagree”, 2 = “disagree”, 3 = “agree”, 4 = “strongly agree”. The descriptive statistics (frequency tables, percentage, mean) were used to analyse the socio-demographic characteristics of the respondents as well as the analysis of their responses to work stress and service delivery questionnaire items.

Results

Two types of data were used in this study namely; the primary and secondary. Consequently, two types of results were obtained and are hereby presented. The record of medical staff that have exited the service of UBTH for Foreign countries (secondary data) within the last three

years were obtained from the Personnel Department and analysed and the results are presented in table 1 and figure 1.

Table 1: DISTRIBUTION OF MEDICAL BRAIN-DRAIN IN UBTH (2021-2023)

	CATEGORY OF STAFF	**2021**	**2022**	**2023**	**TOTAL**
1.	DOCTORS: CONSULTANTS	04 8%	09 10.1%	14 11.6%	**27**
2.	DOCTORS: REGISTRARS	12 24%	27 30.3%	40 33.1%	**79**
3.	NURSES: ALL CATEGORIES	31 62%	46 51.7%	60 49.6%	**137**
4.	MEDICAL LAB SCIENTISTS	03 6%	07 7.9%	07 5.7%	**17**
	TOTAL	**50 100%**	**89 100%**	**121 100%**	**260**

Source: 2024 Field Survey

Table 1 showed the distribution of the four groups of health care professional who exited the service of UBTH in three years period: 2021 to 2023. In 2021, fifty (50) professionals left the service of UBTH for foreign countries to work; 8% of them were Doctor Consultant; 24% were Doctor Registrar; 62% were Nurses, while 6% were laboratory scientists. In 2022, 89 professionals migrated same way with 10.1% being Doctor (Consultants); 30.3% were Doctor Registrar; 51.7% were Nurses, while 7.9% were Laboratory scientists. In 2023, a total of 121 professionals migrated to foreign countries out of which 11.6% were Doctor (Consultants); 33.1% were Doctor Registrars; 49.6% were Nurses while 5.7% were laboratory Scientists.

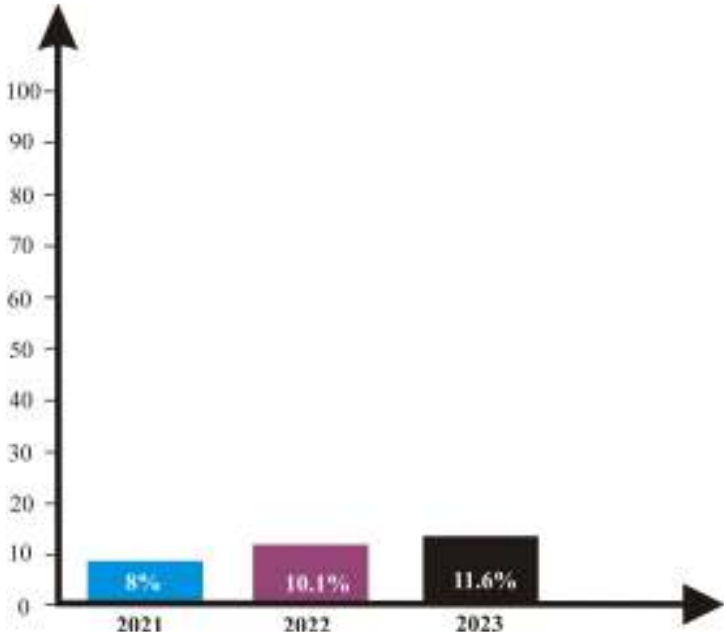

Figure 1
Graphic Representation of Three-Year Brain Drain of Doctors Consultants in UBTH

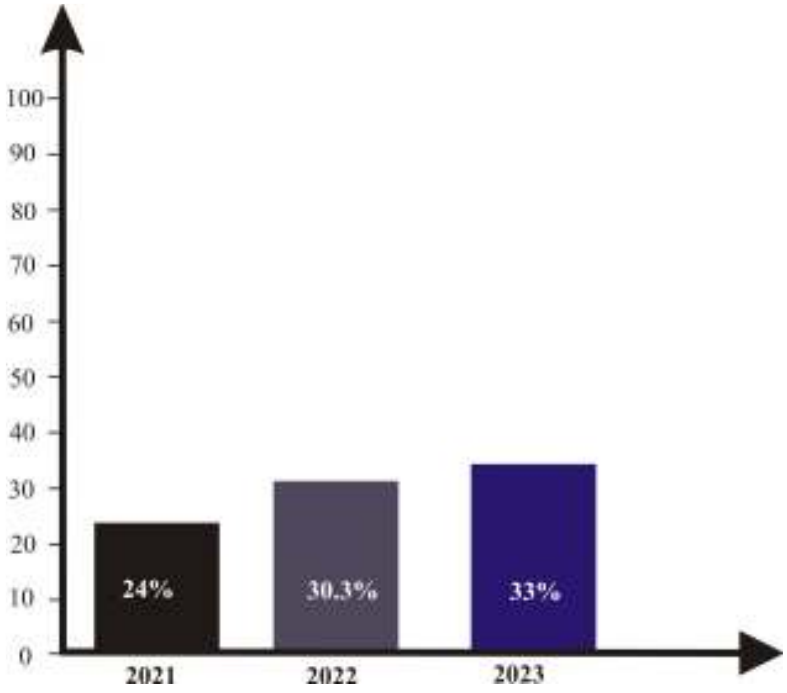

Figure 2
Graphic Representation of Three-Year Brain Drain of Doctors Registrar in UBTH

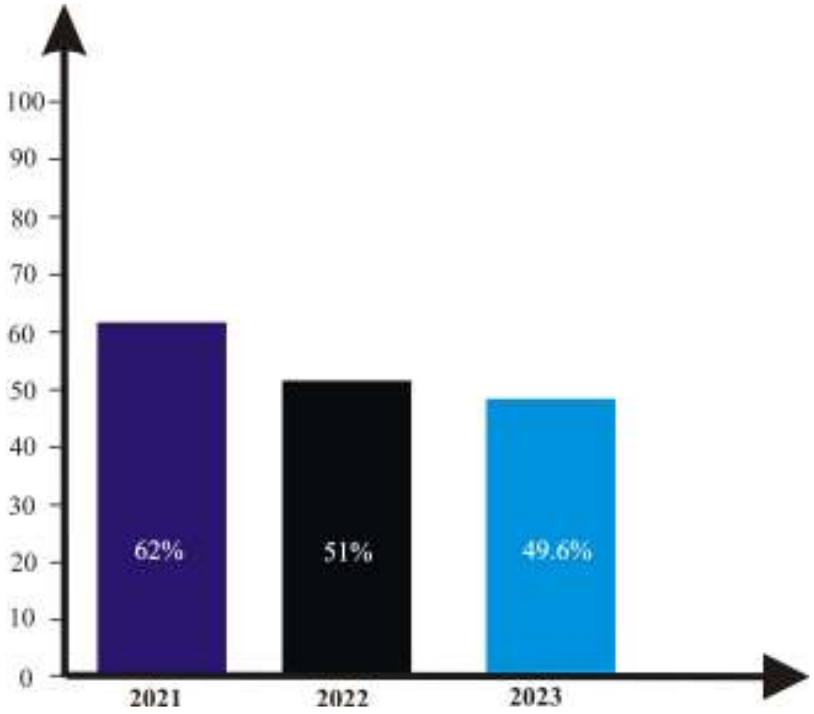

Figure 3
Graphic Representation of Three-Year Brain Drain of Nurses in UBTH

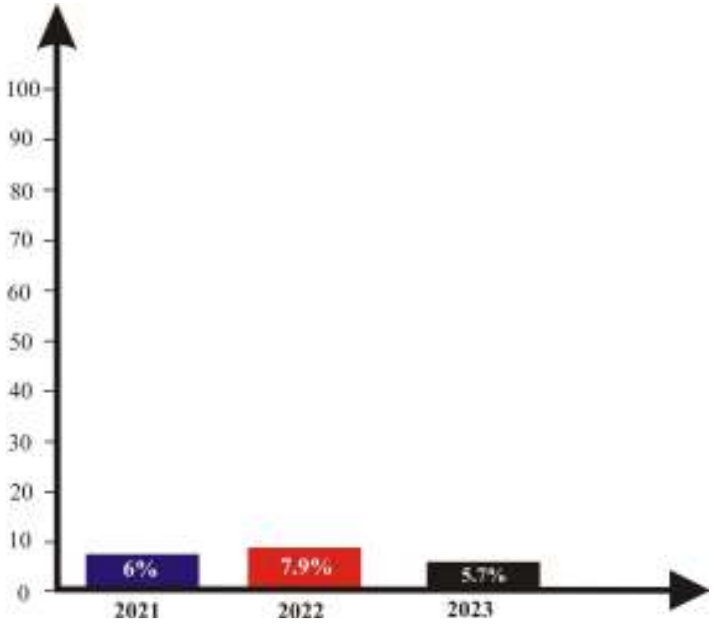

Figure 4
Graphic Representation of the Three-Year Brain Drain of Laboratory Scientists in UBTH

The primary data were obtained from the questionnaire administered on nurses were analyzed and the analysis of the socio- demographic characteristics of the respondents varied in line with their status. On gender distribution, 84.4% were female, while 15.6% were male. The ages of the respondents ranged between 15 years to 55 years and above, with 11.5%between 18 - 24 years, 30.2% between 35 – 44 years, 4.2% between 45 – 54 years, 3.1% were 55 years and above, while 51.0% were between 25 and 34 years. On marital status, half of the respondents (50.0%) were married, while 42.7% were single and 7.3% were single parents. In terms of educational qualification, 50.0% of the respondents are bachelor's degree holders, followed by 30.2% registered nurse, 17.7% Master's degrees, while others 2.1%. Majority of the respondents 73(76.0%) were permanent staff, while 24.0% were contract staff.

Participants' responses to the questionnaire items on work stress were revealing. Ninety four percent (94%) of the nurses worked more than 12 hours (which is the maximum working hours per day). The total respondents (100.0%) reported that they attend to more than the required number of patients daily. Sixty-three and a half percent (63.5%) run more night -shifts than they ordinarily should, although 29.2% did not. Also, 68.8% reported they are often called upon to relieve others of their duty but 29.2% did not fall into this category. More than half of the nurses (56.3%) stand for more than 8 hours on duty on average per day while 35.4% stand for less than 8 hours. On nurses' susceptibility to occupational stress due to intense daily activities, 92.7 % reported high susceptibility while 7.3% did not. More than two-thirds (68.8%) believe that 30-minute restorative breaks are essential for nurses but it is hardly given. One-third 33.3%) of the participants opined that nurses are not able to provide optimal health care service for patients when they are stressed up, although 64.6% did not support this claim. More than two-thirds of the participants (68.8%) believe that nursing job has been affecting their private lives; 10.4% differ.

Participants' responses to the questionnaire items on service delivery were analysed and the result was quite striking. Following the work stress experienced by nurses, they were asked how they manage aggressive patients while on duty. Almost two-thirds (59.4%) opined that it is right to deal with aggressive patients who are too curious about their treatment therapy while 40.6% did not share this view. When asked to rate nurses' service delivery, 93.7% posited that service delivery dropped due to shortage of staff and excess workload, 51.0% of the respondents reported that they face troubles/friction with colleagues during group work due to work pressure, although 18.8% did not. On participants' responses to feeling of helpless from patients' complaints when therapy shows no success, 41.9 % answered in affirmation while 58.1% did not show any sign of helplessness. In the same manner, about one-third of the participants (37.5%) found it difficult to make patients contribute enough to their therapy while 62.5% did not.

Discussion

The paper examined the issue of medical brain drain and the attendant consequences of work stress and service delivery in public hospitals in Nigeria. The tertiary health care in Nigeria was the focus of study for many reasons. This is where teaching and research activities for the country's health care professionals take place; it is the level where the services of professionals in the health sector are required. It is also where high profile surgery and operations are performed by the "best brains" in the medical fields, but ironically, it is the mostly affected by the brain-drain problem.

This study showed that arising from the brain drain problem, a large number of Nigerian nurses are made to work more than required hours per day, run more shift duties than usual, maintain

a standing position at work for more than eight (8) hours per day, and run more night shift than normal. All these factors undoubtedly subject nurses to work stress and its attendant problems. The findings of this study also indicate that nurses in public hospital in Nigeria are highly susceptible to work stress because they are hardly given restorative breaks at work, consequently affecting service delivery and their private lives.

Stress has become an endemic problem in the healthcare system in Nigeria contributing to health-related challenges which decrease efficiency and productivity. The current work environment of nurses is confronted with increasing healthcare complexities such as heavy workloads, inadequate staffing levels, scarce resources, and expanding roles which significantly promote work-related stress (Jones et al., 2015). Almutairi et al. (2020) argued that healthcare professionals especially those in pre-hospital care are exposed to emotional stress every day and therefore likely to be depressed. Kyei et al. (2016) reported that stressed employees exhibit signs of depression or not being appreciated, nervousness and anxiety, loss of appetite, exhaustion, blood pressure and even lead to abnormal menstruation. The reduced psychological and physiological challenges in health professionals affect their quality of life and consequently their productivity and overall quality of health service delivery and outcomes (Afulani et al., 2021).

Ironically, the healthcare delivery system is the pivot of national growth and development because the quality of health care is directly related to the network of healthcare facilities and employees providing healthcare services to the individuals who attend the hospitals and clinics regardless of the social status of the patients. The trend in the healthcare field views quality healthcare delivery as a multifaceted philosophy involving six categories: physical, mental, social, emotional, spiritual, and occupational health (Zeng et al., 2022). This is further illustrated by all formal and non-formal events that help provide essential healthcare services for a particular population or set of people without compromising quality (Lawal et al., 2018). Healthcare delivery portends the value of standard life facilities, which guarantee a patient to live in fullness and function at their best (Amedari & Ejidike, 2021). An efficient healthcare delivery allows patients to obtain comprehensive, practical, and self-managed emotions, minds, and bodies working perfectly with combined psychometric capability. The healthcare industry is established to enhance physical and mental functioning by removing, testing, treating sickness, and supporting the optimal health function of society.

These challenges of work stress in the health sector confirm the assertion of Kurki (2018) that Work pressure and demands more than individual ability over a while will lead to stress. Work stress otherwise called occupational stress is one of the most serious health problems globally (Vadivu, 2017) and nurses often face different forms of stress at work (Faremi et al., 2019). Studies have shown that most of the occupational stresses among nurses often occur due to increased workload, complex procedures, conflict with other health care workers, inadequate resources, poor working physical environment, workplace abuse either or both from superior and clients, and the introduction of new technology (Masa'Deh et al., 2017). The World Health Organization described stress as a global epidemic because it has been reported to be associated with about ninety percent of visits to hospitals (Nyarko & Nyarko, 2017). Stress is a widespread phenomenon during human lifespan and everyone either has or will experience it. The rate of occupational stress has increased over the last 40 years which is quite alarming (Mohajan, 2012).

This study revealed the rate and pattern of medical brain drain in Federal government teaching hospitals in Nigeria. Out of the health workers in the teaching hospitals, three categories are the most vulnerable to the brain-drain problem in public hospitals in Nigeria and these are;

doctors, nurses, and medical laboratory scientists. The study revealed a steady and geometric rise in the number of medical professional (doctors, nurses &laboratory scientists) from the public hospital within the period under review. The medical brain drain followed a consistent pattern that is suggestive of an a-band-wagon effect on the affected professionals with the nursing profession being the most affected, followed by doctor registrar, doctor consultants, and laboratory scientists.

Although the issue of brain drain is well documented in literature in advanced economies, relatively little research has been undertaken on low-income countries of origin. Many of the studies on brain drain's effect on wages especially in low-income countries showed positive impacts if the left-behind workers were substitutes, and negative wage impacts if they were complements. Generally, most low-income county studies find positive impacts on wages rather than negative ones. However, wage changes are not the only economic reactions in response to the emigration of workers. Others include changes in capital flows, production inputs, trade patterns, remittances, and internal migration. Brain- drain (emigration) may leave the country with fewer workers to operate machinery, thereby causing an outflow of capital. Alternatively, having fewer workers may compel companies to switch from labour to capital-intensive production.

Furthermore, the emigration of workers may leave gaps in regional labour markets, causing internal migration by those left behind to fill these vacancies. On the other hand, remitting money to the country of origin, of emigrants may impact labour supply and the reservation wages of non-migrants. In this paper, we focused on brain- drain in the health sector particularly as it affects the public sector and its impact on the workers left behind.

Conclusion

The number of medical professionals that have migrated from Nigeria public hospitals to rich countries in the face of rising wage differentials and diverging demographic structures between rich and poor countries has increased dramatically over the last three years. The brain drain has long been viewed as detrimental to poor country's growth potential. Governments of these countries seem to do nothing about it thereby leaving a big deficit in the ratio of health personnel to patients in such countries. One of the consequences of the brain drain experienced in Nigeria is work stress occasioned by the heavy workload on the remaining staff left behind with the resultant effect on service delivery and efficiency. Although the new literature on brain drain suggests that a limited degree of skilled emigration could be beneficial for growth and development, empirical research shows that this is indeed the case for a limited number of large, intermediate-income developing countries.

In the case of the vast majority of poor and small developing countries like Nigeria, current skilled emigration rates are well beyond any sustainable threshold level of brain drain. This paper recommends the dynamic approach where the first approach cannot work. The sending country should find a way to make the emigrants give back to their country by bonding them and entering into an agreement with the recipient country before the citizens are released. The government of Nigeria should therefore declare a state of emergency in the health sector to critically address the issue of the brain drain and its attendant consequences.

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