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Original Research Article

Reversing Health Sector Brain Drain among Medical Students and House Officers in South-South Nigeria

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Abstract

***Background*:** Brain drain (BD) is the movement of highly educated individuals or professionals from a low socio-economic country to a more advanced socio-economic country for professional opportunities. The aim of this study is to evaluate Reversing Health Sector Brain Drain among Medical Students and House Officers in South-South Nigeria: A Crossectional Study. ***Method*:** This was a cross-sectional study involving 350 (final year medical students 200 and house officers 150). A well-structured questionnaire was administered to participants. The study lasted for a period of 2 months. Exclusion criteria was those medical students who were not in final year and doctors that were not house officers. Inclusion criteria were final medical students and house officers. This study used a simple random sample of 200 participants, calculated using the Taro Yamane formula, and data were analyzed with SPSS version 25.0. ***Results*:** Study revealed that 94.3% of the participants (final year medical students and house officers) are willing to stay and practice in Nigeria if factors that will enhance better work conditions are put in place. Also, 71.4% of the doctors said better welfare who keep them back in the country and 71.4% of the participants said training and re-training of healthcare professionals is a panacea for brain drain. ***Conclusion*:** The study revealed that majority of the participants said the good work condition, attitudinal change by the consultants, provision of jobs for doctors, equipping of hospitals with good facilities and ending kidnapping of doctors are instruments of reversing brain drain in Nigeria.

Keywords: Reversing, Trend, Health Sector, Brain Drain, Medical Students, House Officers.

INTRODUCTION

Brain drain is the migration of skilled human resources for trade, education, etc. (World Bank, 2000). Trained health professionals are needed in every part of the world. However, better standards of living and quality of life, higher salaries, access to advanced technology and more stable political conditions in the developed countries attract talent from less developed areas. The majority of migration is from developing to developed countries. This is of growing concern worldwide because of its impact on the health systems in developing countries. These countries have invested in the education and training of young health professionals. This translates into a loss of considerable resources when these people migrate, with the direct benefit accruing to the recipient states who have not forked out the cost of educating them. The intellectuals of any country are some of the most expensive resources because of their training in terms of material cost and time, and most importantly, because of lost opportunity.

Young, well-educated, healthy individuals are most likely to migrate, especially in pursuit of higher

education and economic improvement (Mejı´a, *et al*., 1979; Awases, *et al*., 2003). The distinction between 'push' and 'pull' factors have been recognized (Bach, 2005). Continuing disparities in working conditions between richer and poorer countries offer a greater 'pull' towards the more developed countries. The role of governments and recruitment agencies in systematically encouraging the migration of health professionals increases the pull (Bach, 2005). Migrant health professionals are faced with a combination of economic, social and psychological factors, and family choices (Connell and Brown, 2004), and reflect the 'push–pull' nature of the choices underpinning these 'journeys of hope'. De-motivating working conditions, coupled with low salaries, are set against the likelihood of prosperity for themselves and their families, work in well-equipped hospitals, and the opportunity for professional development (Narasimhan, *et al*., 2004).

Employers in receiving countries take a different position; they have their own shortages of skilled people in specific fields and can drain a developing country of expertise by providing job opportunities (Pang, *et al*., 2002). Kupfer *et al*., provided the strategies to discourage migration to the USA, a major recipient country (Kupfer, *et al*., 2004). Higher education is one of the principal conduits of permanent emigration (Meyer and Brown, 1999). The majority of doctors acquire specialized and postgraduate professional qualifications in the host country. Half of the foreign-born graduate students in France, UK and USA remain there after completing their studies (Martin, *et al*., 1998).

These statistics suggest that if developing countries provided world-class education and training opportunities, as well as opportunities for career advancement and employment, the migratory flow could be reduced (NSB, 2002). However, in reality, this may not make much difference. On the plus side, foreign-born graduates acquire expensive skills which are not available within their countries. On the negative side, these skills and knowledge never migrate back to their own countries.

Developing countries, especially South Asia, are now the main source of healthcare migration to developed countries. This trend has led to concerns that the outflow of healthcare professionals is adversely affecting the healthcare system in developing countries and, hence, the health of the population. As a result, decision-makers in source countries are searching for policy options to slow down and even reverse the outflow of healthcare professionals. Is it possible to do so? Maybe not, bearing in mind the current political and economic situations of the source countries and globalization. The increasing demand for health care in the higher income countries is fuelled to a large extent by demographic trends, e.g. the ageing of the baby-boom generation (Stilwel, *et al*., 2004). The opening up of international borders for goods and labour, a key strategy in the current liberal global economy, is accompanied by a linguistic shift from 'human capital flight' and 'brain drain' to 'professional mobility' or 'brain circulation'.22 Solutions should therefore be based on this wider perspective, interrelating health workforce imbalances between, but also within developing and developed countries.

MATERIALS AND METHOD

Research Design: This was a cross-sectional study involving 350 (final year medical students 200 and house officers 150) who were within the age of 18 to 47 years. A well-structured questionnaire was administered to participants. Each participant had one questionnaire to fill appropriately and independently after instructions were given to them by the Research Assistants. Data collection took place over two months, from March 1st to April 30th, 2024.

Study Area: Study was carried out in Medical in schools across states that make of South-South geo-political zones.

Exclusion Criteria: These included medical students not in final year as well as non house officers.

Inclusion Criteria: were final medical students and house officers.

The sample collection was by simple random sampling and sample calculation formula was done using Taro Yamane formula. It therefore means that a sample of two hundred respondents was used for this study. Data were analyzed using Statistical Package for Social Sciences (SPSS), Version 25.0.

Population of the Study and Sampling Procedure

The target population of this study consisted of final year medical students and House Officers in Medical Institutions in South-South geopolitical zone of Nigeria, aged 18–47 years.

Sample and Sampling Techniques

A simple random sampling technique was used to select participants. Sample calculation formula was done using Taro Yamene formula. It therefore means that a sample of two hundred respondents was used for this study.

Although the calculated sample size is 350 a total of 2820 participant were recruited for this study.

The mathematical illustration for the Taro Yamane method is stated as follows:

$n= N/ (1+N (e)^2$

Where: n signifies the sample size N signifies the population under study e signifies the margin error (it could be 0.10, 0.05 or 0.01)

So, $n= 2820/ (1+400 (0.05)^2$

$n= 2820/ (1+2820 (0.0025)$

n= 2820/ (1+1)
n= 700/2=350

Study Instrument for Data Collection

A survey questionnaire was used as the technique for data collection, which was conducted within a period of three weeks from March – April, 2024. The questionnaire items were adapted and adopted from existing validated instruments.

Validity and Reliability

The questionnaire was reviewed and approved by some medical professionals in Department of Medical Sciences, Rivers State University.

Method of Data collection (Study procedure)

The instrument for data collection was administered by hand to final year medical students in South-South, Nigeria aged 18-47 years by the researcher. The copies of the instrument were distributed to the research assistants to relief the researcher the stress of data collection. The researcher administered the questionnaire to the respondents and retrieved them after completion in an interval of minutes. Structured questionnaires were administered to each participant and were given instructions on how to fill it independently and return the filled questionnaires to the researcher.

Statistical Analysis: Statistical analysis of data was done using SPSS Version 25.0. P value < 0.05 was considered significant for data.

RESULTS

This study was aimed at reversing the trend of health sector brain drain among final year medical students and house officers in Medical Schools in South-South Nigeria. The results of age distribution of participants shows that 10(2.86%) were within the ages of 18-22 years, 200(57.14%) 23-27 years, 70(20.00%) 28-32 years, 30(8.57%) were 38-42 years while 20(5.71%) were within 38-42 years while 20(5.71%) were within 43-47 years (Table 1). The results of position of participants revealed that 200(57.14%) were final year students while 150(42.86%) were medical officers (Table 2). Study revealed that 85.7%) of the respondents agreed to stayed in Nigeria and practiced (Table 3). On the possible ways of reversing brain drain in Nigeria, 28.6% agreed that good work condition can reverse brain drain, 14.3% said attitudinal change by the consultants, 8.6%) said provision of jobs for doctors, 28.6% said equipping hospitals with good facilities and 20.1% said that ending kidnapping of doctors will reverse brain drain in Nigeria (Table 4). Also, 85.7% quest for motivation (Table 5).

Table 1: Age Distribution of Participants

Age Group	Frequency	Percentage
18-22 years	10	2.86
23-27 years	200	57.14
28-32 years	70	20.00
33-37 years	30	8.57
38-42 years	20	5.71
43-47 years	20	5.71
Total	**350**	**100.0**

Table 2: Position of Participants

Response	Frequency	Percentage (%)
Final Year Student	200	57.14
House officer	150	42.86
Total	**350**	**100.0**

Table 3: Doctors and final medical students that agreed to stay and practice in Nigeria

Response	Frequency	Percentage (%)
YES	300	94.29
NO	50	5.71
Total	**350**	**100.0**

Table 4: Factors that can reverse brain drain in Nigeria

Response	Frequency	Percentage (%)
Good work environment	100	28.57
Attitudinal change by the consultants	50	14.29
Provision of jobs for doctors	30	8.57
Equipment of hospitals with good facilities	100	28.57
Ending kidnapping of doctors	70	20.00
Total	**350**	**100.0**

Table 5: Doctors and final year medical students who agreed that motivation can reverse brain drain

Response	Frequency	Percentage (%)
YES	300	85.72
NO	50	14.29
Total	**350**	**100.0**

DISCUSSION

Brain drain (BD) is the movement of highly educated individuals or professionals from a low socio-economic country to a more advanced socio-economic country for a greener pasture and this has engulfed the health sector where its negatively affects healthcare delivery. However, reversing the trend of healthcare sector brain drain require several working mechanisms to be in place, so that it will encourage and improve the standard of healthcare delivery system in the State. Medical students and House officers are critical stakeholders in healthcare system and when they have interest in practicing in Nigeria, with all their needs in placed, its provide a stable healthcare delivery system and generate revenue for government.

The study revealed that majority of the participants (both medical students and House officers) are willing to stay and practice in Nigeria if those conditions that encourage productivity (good healthcare delivery) are put in place. This shows that Nigerian doctors are willing and ready to serve their father's land thus enhancing good healthcare delivery. The research shows that 71.4% of the participants agreed to shun brain drain if better welfare is given. This is very critical because it is the most viable reason for brain drain. If better welfare is offer to healthcare professionals this will go a long way to curb the incessant migration of healthcare professionals. This better welfare will take care of higher salaries, good standards of living, good work place conditions and modern equipment to enhance healthcare delivery.

Also, majority (71.4%) of the participants said training and re-training of healthcare providers reverse their plan on embarking on brain drain. This will enable them (healthcare providers to update their knowledge and skills and improve on healthcare delivery and a majority of respondents indicated that that post-graduate training could also reduce brain drain in Nigeria. The study also revealed possible ways of reversing brain drain in Nigeria, 28.6% good work condition (28.6%), attitudinal change by the consultants (14.3%), provision of jobs for doctors (8.6%), equipping of hospitals with good facilities (28.6%) and (20.0%) ending kidnapping of doctors (20.0%). These will prevent factors that would have been the architect of brain drain in Nigeria. The push factors are those factors that instigate the healthcare providers to migrate from its own country to another foreign with better working conditions. The pull factors are those factors provided by the foreign nations that attracts the healthcare providers.

Motivation is an instrument for rewarding hardworking staff in any organization or institution, and when this is done periodically, it encourages staff to stay and carry out their legitimate duties, thus enhancing productivity. Majority (85.7%) of the participants agreed that motivation is an instrument that can reverse their brain drain. Every good economy is driven by stable political atmosphere and good policies. The study shows that 97.1% of the participants said stable government and good policies towards healthcare delivery system will reverse their brain drain and this will give them the impetus stay and practice medicine in Nigeria. Reversing the trend of brain drain in the health sector is an issue that must be tackle by healthcare mangers, government, non-governmental organizations, multi-nationals and philanthropists. When factors that encourage brain drain are addressed, its reverse the trend of brain drain.

Provisions of factors necessary to alleviate the sufferings of doctors and final year medical students and indeed improve the healthcare facilities by government, government agencies, philanthropists, and non-governmental organization will keep the doctors in the country and thus reverse brain drain.

However, limitations to the study lack of fund, incessant power and some doctors were reluctant to attend to the research assistant during filling the questionnaires due to lack of proper remuneration and shortage of manpower.

CONCLUSION

The study revealed that 94.3% of the participants (final year medical students and house officers) are willing to stay and practice in Nigeria. The study also shows that majority of the participants said that good work condition, attitudinal change by the consultants, provision of jobs for doctors, equipping of hospitals with good facilities and ending kidnapping of doctors are instruments of reversing brain drain in Nigeria and that when these factors that encourage brain drain in Nigeria are addressed, it will reverse the trend of brain drain.

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Ethical Approval: Not require.

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