ISSN No:-2456-2165

Perceived Determinants of Brain Drain Among Mental Health Care Professionals in Specialist Health Care Facilities in Benin City

Okolo, Ogharibhor Saturday
B.Sc (Ed), BN.Sc, M.Sc, RN, RPN,RNE.
School of Psychiatric Nursing, Uselu- Nigeria.

LAWRENCE AYAH IRUO
B.Ed(Hons), M.Ed, BN.Sc, M.Sc,
RN,RM,RPN,RPHN,RNE.
Dept of Mental Health/ Psychiatric Nursing,
Faculty of nursing
Niger Delta university
Wilberforce Island, Nigeria.

Abstract:- The study investigated Perceived Determinants of Brain Drain among Mental Health Professionals in Specialist Health Care Facilities in Benin. A cross sectional predictive research design was adopted using two facilities: Federal Neuro-Psychiatric Hospital Benin and the Department of Psychiatric and Mental Health, University of Benin Teaching Hospital, Benin City. Population for the study consisted of 299 respondents drawn from the facilities (277 from Federal Neuro-psychiatric Hospital Benin and 72 from University of Benin Teaching Hospital). Purposive sampling technique was employed. Sample size was all-inclusive. Target population were mental health care professionals in specialist health care facilities in Benin City. The instrument for data collection was the Brain Drain Prediction Scale, developed by the researcher. The instrument was tested for validity and reliability. The ethical approval was also obtained. Data were collected by means of questionnaire. Percentages, frequencies and Chi-Square statistics were used in analyzing the data. Result revealed that there were significant relationship between condition of service and migration intention (χ^2 =134.7, p =.000 > 0.05), professional development and migration intention (χ^2 = 46.32, p =.000 > 0.05), foreign technology and migration intentions,(χ^2 =68.81 p =.000 > 0.05). The study concluded the service conditions are improved upon, brain drain among the mental health care professionals may be reduced. Therefore, the study recommended that the condition of service and other incentives should be improved to enable retention of mental health care specialist personnel and suggested that studies should still be carried out on brain drain issues using other methods of data analysis.

Keywords:- *Brain-drain, Determinants, Health Care Professionals and Specialists Facilities.*

I. INTRODUCTION

Migration and emigration among health care professionals across nations and continents have been a societal issue globally for some decades. The situation is made worse in developing countries, where health care professional always migrates to developed countries in search of greener pastures. Constant migration of trained health care professionals erodes the health care facilities and delivery so much as leaving the health care of the citizen of the developing countries as Nigeria in jeopardy as getting adequate specialist care from trained health care personnel becomes a mirage (Okolo, Bamidele and Omeluzor, 2014).

According to Chimenya and Qi (2015) the increased movements of relatively well-educated persons from developing countries to developed countries was termed "Brain drain" which was first coined by the British Royal Society to allude to the mass movement of technologist and scientist from Canada and United Kingdom in the 50s and 60s to the United States of America USA for better opportunities. Okolo, Bamidele and Omeluzor (2014) defined brain drain with regards to health workers, as the migration of professional health care givers to a more stable socio-political environment for improvement in their educational and professional status, better salaries and quality of life.

In the past decades, there were notable increase in the number of migrants from 75 million to approximately 215.8 million respectively from 1960 to 2015. This increment will continue into the future because of the growing gap in wages standards of living, poverty, unemployment and political instability variation between developing and developed countries (Jenkins, Kydds, Mullen, Thompson, Sculley, Kupper, and Carroll 2017). Robinson (2008) agrees that, 'brain drain is a very big challenge and it might be difficult to phase out, particularly in the very poor regions of the world.

According to Guruje, Hatcher, Brownie, Carroll, Hollins and Mai, (2010) 51% and 24% of Zimbabwean doctors and nurses respectively work elsewhere in the world. In the past decades, a lot of developing countries have been observed losing a good number of health care professionals to developed countries and Malawi is one of them.

The amount of brain drain in Africa is a yawning gap and this is based on South-North emigration. Africa's brain drain has been put at 16 million that left the continent

(Chimenya and Qi, 2015). About 17 countries in the sub-Saharan African have less than half of 100 nurses, per 100,000 populations that are WHO minimum standards as against over 1,000 nurses per 100,000 populations in Western countries. For example, Tanzania has 85.2, Malawi 28.6, Botswana, 241, and South Africa, 140.2, nurses per 100,000 populations (Chimenya and Qi, 2015).

According to WHO (2012), Sub-Saharan Africa only has an estimated 145 000 doctors to serve a populace of 821 million and a major contributing factor is emigration of such highly trained health care professionals (Jenkins, Kydds, Mullen, Thompson, Sculley, Kupper, and Carroll, 2017). With regards to empirical studies, Kangasniemi, Winters and commander (2007), Robinson (2008), Gibson and McKenzie (2011) assert that more financial gains and advancing career prospect are important inducement at home country. According to Hall (2005), the problems of access to research and poor support from institutions are also major factors outside higher income that motivate researchers and scientists to move abroad. According to Stillwell et al (2004), Mensah et al (2005); Muula and Maseko (2006); Dodani and LaPorte (2005); Buchan (2006); Dovlo, (2007); Kainth (2009); Lofters (2012) and Dimaya et al. (2012) in sub-Saharan Africa, issues such as unfavourable employment opportunities, low wages, unfavourable working condition, greater workload etc are what are pushing out health workers. In a similar vein, Ngoma and Ismail, (2013) also agree that low level of development, political instability, poor economic policies, lack of training, religious or ethnic fractionalization, colonial links and similarity in language between emigrating countries and recipient countries are factors driving highly skilled migrants. The major features accountable for capital flight are economic (Beine et al., 2008; World Bank, 2011); political, social and educational in nature (Akpokari, 1998; Adepoju, 1991; Takyi, 2002). But, the study has agreed that push factors in the less developed countries are of organizational in nature, for instance there are some jobs in the country that are so complicated, yet the remuneration is a peanut, there is work overload, absence of proper mentorship and lack of up to date equipment to carryout ones' responsibilities. Numerous measures have been applied to curtail the brain drain.

According to Jenkins, Kydds, Mullen, Thompson, Sculley, Kupper, and Carroll (2017), incorporated policy method is best suitable for providing a long-term elucidation to medical brain drain. According to Guruje and Oladeji (2016), despite measures taken by some countries to stem the flow as suggested above brain drain of health care professionals has accelerated significantly in recent years. This has greatly exacerbated the inequalities in the world distribution of health care professionals.

For instance, North America shoulders10% of world disease burden but has 42% of the total skilled world health care providers while Africa with 25% of world disease burden has only 3% of world skilled health care workers (World Health Organization, 2012). A Global disparity in the possession of health workforce is the major problems associated with mental healthcare delivery because clinical demands require personal expertise and training, rather than advanced technology or equipment.

According to Kiang, Jauhar, and Haron (2014), poor remunerations, unavailability of national development plans and research institute have been identified as major factors related to emigration or brain drain (Tansel and Gungor, 2003). The major determinant in human capital approach to leave source country to recipient country is based on expected wage increase (Oyewunmi, Oyewunmi, Iyiola, and Ojo, 2015).

The World Health Report (2006) stated that the quest for good standard of living is the underpinning factor for migration. Others include Increase dissatisfaction with existing job or living conditions, absence of career prospects, poor management, work overload, violence and crime referred to as push factors to migration.

Prospects for better welfare, gaining experience, a safer environmental safety and family issue are pull factors existing in recipient countries. Previous research studies have included factors of demography such as gender and age to be important in explaining the migrant intention of mental health care workers, (Dalen, Groenewold, and Schoorl, 2004).

The intention or migration predictions vary from gender, marital status, educational standard condition of work (Gubhaju and Jong, 2009). According to Oyewunmi, Oyewunmi, Iyiola, and Ojo (2015), WHO (2014) the highlighted analysis of the mental health situation in Nigeria reveals that with over 170 million people, there are only ten (10) specialized psychiatric hospitals, eight (8) non-governmental organizations providing mental health services, with a bed space of 1856 beds.

For human resources, there are one hundred and twenty thousand (12000) Psychiatric nurses, one thousand four hundred and sixty (1,460) psychiatrist, one hundred and forty-nine (149) clinical psychiatrists, sixty-nine (69) occupational therapists, thirty-five (35) psychiatric social workers one hundred and fourteen (114) E.E.G Technologists. According to WHO (2014), this translates to ratio of mental health care professionals to the general population; Psychiatrists: 0.15 per 100,000 of the population, Psychiatric Nurses: 2.41 per 100,000 of the population, Clinical Psychologists: 0.07 per 100,000 of the population, Psychiatric Social workers: 0.12 per 100,000 of the population, Occupational therapists: 0.05 per 100,000 of the population, E.E.G Technologists: 8.03 per 100,000. According to Adekola (2017), Nigeria is one of the most sourced countries in the sub-sahara African Countries for the migration of medical personnel. Eghejule (2016) blamed the state government for not making the environment conducive for healthcare practice. According to Eghejule, the unconducive environment has accounted for the mass exodus of healthcare professionals to seek for greener pastures overseas. Among the factors that push-out health care workers to other countries according to him are poor

condition of service, poor opportunities for career growth and the absence of good equipment etc in Nigeria and Edo State in particular.

The nursing strength of the Federal Neuro-psychiatric Hospital Benin reduced from 237 in 2014 to 192 in 2015.It further reduced from 192 in 2015 to 184 in 2016. It again came down to 174 in 2017. More than 50% of the nurses gave 'emigration' as the reason for resignation. It was equally noted that an average of three (3) nurses every month do apply for transcript from the federal school of Psychiatric Hospital Uselu to enable them complete foreign employment formalities. The downward slide may continue if adequate measures are not instituted to check the trend. This calls for serious concern. It is against this backdrop that the research is carried out.

II. STATEMENT OF PROBLEM

The Federal Neuro – psychiatric Hospital Uselu and the Mental Health Unit of University of Benin Teaching Hospital are the only Mental Health Care Facilities in Edo State. The two Hospitals have a combined bed space of 302 and an average daily out patients turn-over of 192. The beds are almost always filled to capacity: and the clients have to be managed by only 22 Psychiatrists, 191 Psychiatric Nurses, 32 Psychiatric Social Workers, 7 clinical Psychologists and 13 Occupational Therapists.

This has confirmed the World Health Organization (2012) assertion that there is gross shortage of mental health care professionals in Nigeria. According to Yondeowei, Wodu, Nejo, Bamigbola, Bosun, Peter, Odey, Azubuike, Dada, Charles and Oyekola (2019), Accoding to the chairman of National Association of Resident Doctors (NARD) in Edo State, Dr. Carl Umakhikhe, there are only 80 Doctors in the 34 government Hospitals in the State; as against the 120 Doctors in 2016. The rest have gone to Europe. Furthermore, the Newsletter, FNPH (2018) stated that the Nursing strength of the Federal Neuro-psychiatric Hospital Benin reduced from 237 to 192 in 2015. It further reduced from 192 to 184 in 2016. It again came down to 174 in 2017. More than 50% of the Nurses gave 'emigration' as the reason for resignation.

It was equally noted that an average of three (3) Nurses every month do apply for transcript from the Federal School of Psychiatric Nursing Uselu to enable them complete foreign employment formalities. The downward slide may continue if adequate measures are not instituted to check the trend. But from the Uselu analysis above, it is clear that the tempo is likely to continue if adequate measures are not instituted to curb the trend. It is against this background that the researcher seeks to investigate some factors associated with Brain Drain in order to assess the staff disposition to Migration.

- *Purpose of the Study*

The purpose of the study was to examine the Perceived Determinants of Brain Drain among Mental HealthCare professionals in selected specialist facilities in Benin City.

- *Objectives of the Study*

Specifically, the objectives are to:

1. Identify the association between condition of service and the intention of mental health care professionals in Benin to emigrate.
2. Identify the connection between mental health care professional development and the intention of mental health care personnel in Benin to emigrate.
3. Identify the relationship between availability of mental health care technology and the intentions of mental health care workers in Benin Metropolis to emigrate.

- *Operational Definition of Terms*

The key concepts here are: determinants, brain drain, mental health care professionals and specialist hospitals.

Determinants of Brain Drain: Refers to factors within Benin City that make the health care professionals to migrate out continually to other countries or factors outside Nigeria that attract the Health Care Professionals to migrate and accept appointment outside Nigeria.

Brain Drain: Refers to continuous migration of trained Health care personnel which leave the Nigerian Health Care facilities destitute of Trained Health Personnel and specialist Health Care Services.

Mental Health Care Professionals: Refers to Trained and licensed Health care personnel that specialize in Mental Health and Psychiatric care. They are: Psychiatrists, Psychiatric Nurses, Clinical Psychologists, Occupational Therapists, Electro-Encardiogram (EEG) Technologists and Psychiatric Social Workers.

Specialist Facilities: Federal Neuropsychiatric Hospital, Uselu-Benin City and the Mental Health Unit of the University of Benin Teaching Hospital (UBTH).

III. THE CONCEPTS OF BRAIN DRAIN, MENTAL HEALTH CARE FACILITIES AND MENTAL HEALTH CARE PERSONNEL

- *Brain Drain*

According to Pillay (2007) and Afaha (2011) brain drain is the thoughtful movement of professionals from one country to the other. In this case it applies to the movement of mental health care professionals like doctors, psychiatric nurses, clinical psychologists, etc from developed to developing countries. It could also be applied to the migration of engineers, agriculturists, pilots etc.

Although this is of great concern to the developed nations, the brain drain phenomenon is seen as a serious constraint on the development of the developing countries. Research has shown that by the year 2000 there were 20 million health professionals as immigrants (foreign-born workers with higher education) living in member countries of the Organization for Economic Co-operation and Development (OECD), a two-third increase in ten years.

Seventy percent of these immigrants came from poor and transition nations. Academically, brain drain has been described as "human capital flight" and is the emigration of well educated, skilled and naturally endowed persons on a large scale from the 'have not' to 'have' countries. The migration n is due to lack of opportunities, conflicts and political instability in less developed countries (Minda 2016).

On the other hand, Dovlo (2004) described brain drain as the emigration of individuals with university education out of their countries for such a long time that even their remittances or technology transfer or investment from recipient countries cannot compensate for the loss incurred by the country of origin (Pillay, 2007 & Afaha, 2011). According to Borta (2007) the traditional literature views, the exodus of human capital as something of a curse for developing countries, and deliberate effort need to be instituted to stem the tide or reduce its negative consequences on the emigration countries, including the taxation of migrants' income abroad.

However, in modern theoretical debates, the term brain drain is contrasted with the relatively new term "brain gain" which emerged in the late 1990s. As a result, brain drain primarily means the spontaneous phenomena accompanying professionals' freedom to decide where to live and work outside the influence of the policymakers of administration of the state whereas brain grain is the deliberate concern by skilled persons (Minda, 2016).

- *Mental Health Care Facilities*

According to Olugbile, Zachariah, Coker, Kuyinu and Ischei (2018), mental health care facilities are any health care formation which could be a unit, or department with a facility that carters for the needs of patients with mental health challenge. On the other hand, the facility could stand on their own as an entity. In this wise, there are mental health units/departments in Federal Medical Centres (FMCs), Teaching Hospitals, General Hospitals etc. the facilities standing on their own could be Psychiatric Hospitals, Drug Rehabilitation Centres, and Recreational Centres. To this end, the mental health units of UPTH and the Neuro-Psychiatric Hospitals, Benin are Mental Health care facilities.

- *Mental Health Care Personnel*

According to World Health Organization (2018), the mental health care providers could either be the supporting staff in the mental health care facilities or the core service providers. The supporting staff could be the general health workers or the administrative staff, while the core service providers are the cores that work directly with the patients to promote mental health, prevent mental illness and to treat/mitigate mental health challenges. The staffs in this case are the Psychiatrists, Psychiatric Nurses, and clinical Psychologists etc.

- *The Classification of Brain Drain*

The United Nation Institute for Training and Research (UNITAR) in 2006 classified brain drain into three categories namely; Brain overflow, brain export and brain exchange.

- *Brain Overflow*

This is when there is over production or poor use of unabsorbed/surplus because of low rate of demand and excess at home. The unabsorbed then find their way abroad or foreign labour markets. Brain migration of this type is called brain overflow (UNITAR, 2006). In Nigeria, 63% of the students in higher education have been reported to be qualified for social services whereas the country needs a maximum of 40% (UNITAR, 2006). Educated unemployment among others is a major reason for brain overflow.

- *Brain Export*

This is a form of migration in which skilled personals are exported by sending country. The country of origin receives remittances steadily for an agreed period of years or lump sum inform of tax.

- *Brain Exchange*

This is between the developed countries (DC) and less developed countries (LDC); examples are exchange of scholarship, researchers, and students for the purpose of sharing ideals, knowledge, training and expertise. This type of migration between LCD and DC for mutual benefit is referred to as brain exchange. Brain exchange is a contemporary term in which brain loss is remunerated or compensated with brain gained.

- *Incidence of Brain Drain*

"The emigration of African skilled persons to Europe is one of the greatest obstacles to Africa's development (United Nations Economic Commission for Africa [ECA], 2010).

African government has a responsibility to ensure that brains remain in the continent because it is projected that in 25 years' time, Africa will be empty of brains (Lella, 2010). The exodus of skilled manpower from DC to LCD is not new but the degree of the problem and its prevalence presents a growing urgency of actions as the consequences of brain drain threatens to stunt the overall development of the continent.

The problem of Brain Drain has reached an alarming proportion with Ethiopia ranking first and closely followed by Nigeria and then Ghana. More than ten years ago, about 50% of Ethiopians who schooled overseas did not come back after studies. Based on International Organization for Migration [IOM] report (2016), between 1980 and 1991, 74.6% of Ethiopia human resources, where Ethiopia has over one hundred economists in the United State of America (USA), She has only one full time economic professor in the country [ECA], 2010).

According to the estimates of former president Babangida committee on Brain Drain in 1988, Nigeria between 1986 and 1990 lost over 10,000 academicians from tertiary institutions. The total estimates were from private

organization, civil service and this amounted to over thirty thousand. Sixty-four percent of Nigerians aged 25 years and above hold a first degree. Basically in a way Nigeria and her counterparts in African are funding the education of their nationals for the developed world where they contribute to their development without returned on their investment. According to British Broadcasting Corporation [BBC] (2010), Africa spends $4 billion to recruit expatriate while USA gained $ 26 billion which she would have spent training about 130,000 highly qualified physicians, nurses and other allied professionals. Africa must rise to her feet to kill this monster called Brain Drain that is threatening its existence in all spheres of life, (Jenkins, Kydds, Mullen, Thompson, Sculley, Kupper, and Carroll, 2017).

- *Incidence of Brain Drain in the Health Sector*

According to Guruje, Hatcher, Brownie, Carroll, Hollins & Mai, (2010), the desperate migration of health care professionals is the most serious obstacle as Africa tries to fight AIDS, disease epidemics and support other health programmes.

According to United Nation Economic Commission for Africa (2010), the minimum standard set by WHO to ensure basic health services is 20 physicians per 100,000 people. While western countries can boast of an average of 222; thirty-eight countries in sub-Sahara fall short of the standard and 13 of these have 5 or fewer physicians. Kenya loses an average of 20 medical doctors each month to Brain Drain while in Ghana 60% of its medical doctors in 1980 and 600-700 Ghanaians physicians are currently practicing in USA. This is about 50% of Ghana total medical doctors (Lella, 2010).

The UNDP report on Human Development in 1993, put Nigeria Doctors working in USA alone at over 21,000 as against the acute shortage of such personal at home. If we were to add others in the Gulf states, Saudi-Arabia, Australia, Europe and African countries the number will almost be or more than 30,000. According to WHO Bulletin (2004), Nigeria was reported as a major health-staff exporting countries in Africa. For instance, 432 nurses left the shores of the country to work in the UK between April 2001 – March 2002, compared with 447 between April 2000 – March 2001, this is not part of about 2000 nurses illegally moving out of Africa. This is seen as a threat to the sustainability of the health industry in Nigeria by the Nigeria government.

According to Guruje and Oladeji (2016); Chimenya and Qi, (2015) and Bamidele and Omeluzor (2014), the flight of health professionals is not limited to doctors, nurses and pharmacist alone but social services personnel as well. But the loss of nurses in particular is growing; psychiatric nurses are hot cake in developed world as they are needed in mental, old people's home and other social works areas.

This is fueled principally by the knowledge that USA needed 126,000 nurses because she will face a shortage of 80,000 nurses in 2020. Britain also announced that she needed 31.000 nurses. And that they will be ready to offer 20 times what they are currently earning ECA (2010) in Nigeria. This is the bait which Africa and indeed Nigeria, must work against using several strategies to overcome. Note: About 17 Sub-Sahara Africans countries have less than half of the WHO minimum standard for nurses of 100 per 100,000 populations (for example, Malawi has 17 nurses per 100,000 people). In contrast many Western countries have more than 10,000 nurses per 100.000 people (ECA, 2010).

- *Causes of Brain Drain (Push and Pull Factors)*

According to Jenkins, Kydds, and Mullen, (2010); Pillay (2007) & Afaha, (2011), the movement of health workers depends on personal values and on the interplay of complex economic, social, and political forces that emanate both in home and in foreign countries.

The net outflow of health care workers from the Africa results from a net force that favours home countries. These forces are push, pull, stick and stay a forces within or outside the health care industry. Others are accelerating factors which provide favorable environment for movement of skilled health workers out of country of origin.

Push forces originate from country origin while pull forces originate from foreign countries. The forces interplay with other forces and most of these factors are the reverse of the other (e.g. low pay in country of origin compared to higher pay in the recipient country) (Briggs, 2000).

Important economic push-pull forces that result in outward migration are related to labour market conditions, such as the rate of engaging skilled workers and demand (Bach, 2003), differences in take home pay and other conditions of service (Hamilton & Yau, 2004; Dovlo, 1999), work context issues such as organizational capacity, workload and work associated risks, and career development opportunities (Sanders et al, 2003; Meeus 2003).

Non-economic forces that push health care professionals out of the country include perceived quality of life, political stability and crime levels, educational opportunities for children and the presence of a network of fellow citizens in the host country (OECD, 2002). South Africa (SA) data reveal that there is a major peak in emigration after a serious political upheaval (Myburgh, 2002).

Despite all the forces that favours emigration above, some health workers including mental health workers still remain in country of origin. This may be as a result of strong socio-cultural and patriotic values, the presence of rewards and incentives or the prohibitively huge amount of money required to emigrate. Padarath, et al (2003) term these 'stick' factors.

Similarly, those who have decided to go for greener Pasteur could decide not to come back home due to new socio-cultural relationship and the tendency to have negative effects on their families and new comfortable life style. This is referred to as stay factors. So the interaction of these factors will determine whether health workers will leave,

remain, or stay or returns from foreign country to Africa, depends on the interplay of these four forces.

In addition, the factors which create favorable environment to migrate include easier communication and access to information, improvements in transportation, the freedom of trade and services and the formation of integrated economic markets.

- *The Impact of Emigration of Health Professionals on Africa*

According to Pillay (2007) and Afaha (2011), among the worst obstacles to Africa's development is the emigration of its skilled workforce and aftermath effect (loss) of the factors of production, namely labour, capital and enterprise.

The loss of health professionals hampers the continents ability to deliver health services and reduces its capacity to train, research and innovate in this sector, which impacts adversely on socio-economic development, either directly or indirectly.

- *Impact on Health Service Delivery*

According to Jenkins, Kydds, Mullen, Thompson, Sculley, Kupper, and Carroll (2017), it is the prerogative of every government to ensure that its citizens have access to affordable and appropriate health care.

However, Africa health care industry is faced with a lot of personnel problems especially in major areas as a result of inequitable in the distribution of health personnel, and attrition of skilled health workers. In effect, Africa is worse hit and this is considered as the obstacle to the delivery of adequate healthcare (Stilwell, 2004). Recent studies reveal a significant negative similarity between the density of health workers and mortality rates (World Bank, 2001), and a positive correlation between quality of the outcome of health care and the health workers' availability (Mercer and Dal Poz, 2002).

As the skilled personals reduce in number, so also it affects the health care system delivery in both quality and quantity. The South African public sector is missing a third of the doctors it needs (Financial Mail, 2006), Mali had to close about three quarter of their community health posts due to acute shortage of personnel (USAID, 2003), and in Zambia and Malawi, while the number of health care facilities are growing geometrically, the increase in the number of health officials is lagging behind arithmetically, i.e. the health facilities remain perennially under staffed, (Dovlo and Martineau, 2004).

Ultimately it is the poorer rural populace that suffers the brunt of any reduction in health personnel, as these are the least preferred areas to work in. Acute shortage of staff in health facilities increase the workload demands on health workers who remain, limit the number of clients able to receive care, and reduces the quality of care for those able to receive it.

However, the negative impact on health care is not only as a result of the loss of a large number of personnel. The migration of specialists, no matter how few can lead to the complete collapse of a particular service within a country (Padarath et al., 2003). In a situation where more specialist leaves, there is a consequent loss of institutional memory which results in the duplication of work and wastage of resources as a result of reinventing disease management strategies and an inability to refine strategies based on experience, all of which are often not captured as part of the costs and effects.

- *Impact on Knowledge Production*

The impact of the brain drain on associated areas of the health labour market such as training, research and innovation are also crucial. Whilst their relative numbers per se may be small, the consequences of their loss are far more significant. The loss of academic and experienced personnel weakens the capacity of research and health care services by impacting negatively on the future production of health care personnel in terms of quantity and quality, as well as on the mentoring of the remaining practitioners. Data on the academic workforce in South Africa indicate a slow growth amongst permanent academics, an increase in the proportion of academics aged 55 and above, and a reduction in the percentage of academics with terminal qualifications in the universities (CSIR, 2005). Similarly, in Ghana (Martineau et al., 2002) and in Malawi (Muula, et al., 2002) there has been a sharp decline of academic health care professionals and nurse educators respectively, which has hindered these countries ability to train new health care professionals. This could possibly be attributed to emigration. Similarly, information on the research and development workforce in South Africa also shows a significant decline at both higher educational institutions as well as in government employ. In totality, the number of medical researchers in the South African public sector declined from 189 in 2002 to 136 in 2003 (HST, 2004).

Placed in an international context, most African countries also have far fewer researchers for every thousand members of the work-force compared with more developed nations (CSIR, 2005). Given that technology and innovation are underpinned by a sound academic workforce, these demographics represent a critical state of affairs and suggest that the main challenge relates to promoting the retention of academics.

The overall analysis of South African scientific publication indicates that total outputs as well as those in ISI publications have been stagnating for the past 10-15 years. However, in terms of world output this has meant a reduction in relation to world share from 0.7% in 1987 to 0.49% in 2000. Cumulatively Africa's share of global scientific output has fallen from 0.5% in the mid 1980's to 0.3% in the mid 1990's.

Furthermore, analysis indicates that the situation is worse for the medical and health sciences with a reduction in production from 22 to 20% over this period (CSIR, 2005). Geographical indicators also point to an alarming trend that

an increasing number of scientific articles are published by SA scholars over the age of 50 years. If one adds to this consideration the fact that the more productive scientists in any system are also generally older, then the significance of our aging profiles becomes even more pertinent. When researchers leave, they also weaken the educational system as many of the best minds take this option.

This leads to deficiencies within the universities and the professional attachment and supervision of new graduates, thereby also affecting the future education and training of health personnel. The loss of research capacity at institutions is also seen by the high incidence of failures and the increase the duration of post graduate students in their programme of studies. One SA study (CSIR, 2005), showed that the number of non-completions of master's students increased by 45% from 1968 in 1991 to 2859 in 1999.

The in-dwindling availability of skilled health personnel will weaken the absorptive power of new research and medical techniques by the domestic market and this too, can reduce the quality of local research and training. It discourages local demand from sourcing for knowledge and services locally, thus further weakening the health system and its financial base.

The more luxury demand sectors then turn to those outside the home system for their supply, thus further weakening the financing and demand for similar qualities of treatment at home. This creates a further disincentive for research on local diseases and a focus on northern hemisphere health problems because of availability of facilities and finance. This also tilts the local curriculum to the ones that can be exported instead of local problem (epidemiology) at home.

- *Impacts on the Economy*

Human recourses are the life wire of increased production and economic growth foundation. The emigration of health care personnel reduces the skilled workforce of a nation, thus slowing economic growth and consequently impacting negatively on the quality of life of its citizens. The effects are numerous and varied.

The first relates to loss of the investment in the training and subsequent non-use of skills of the health professionals. Governments investment in the training of skilled health personnel is strengthen the health care industry the nation but however, brain drain often denies the populace of such health needs. The financial implication to replace the lost health medical personnel is huge.

It is estimated to cost between sixty thousand dollars and ninety-seven thousand dollars to train a general practitioner in Africa, and approximately forty-two thousand dollars for a nurse (Dumont & Meyer, 2004). Recipient country who only employ foreigners often training in country of origin would have saved approximately five hundred million dollars they would have spent training their nationals before employment (Meeus & Sanders, 2003; Martineau et al., 2002).

The loss of south African doctors between 1989 and 1997 translate into a loss of training investments of $5 billion while the South African doctors in New Zealand have cost tax payers R600million (Bundred & Levitt, 2000). For countries losing fewer personnel, the total loss may be lower, but relative to annual public budgets, these losses are substantial.

At the same time, the prospect of emigration may attract students to medical education who have from the start the intention to emigrate, rather than the commitment to serve domestic needs. This has the effect of shifting the government subsidy from being an investment in health to being a privatized benefit to one person. Secondly, the contributions such professionals can make to the GDP of their home country are lost.

Emigration to the civilized world poses a serious problem of reversed subsidy of the developed countries training costs. In the light of the countries depletion of Africa skilled health workers, Africa is left with no option than to depend on expatriate. For example, Africa for now employs one hundred and fifty thousand (150, 000) expatriate at an estimated cost of four billion dollars per year.

Several African countries are dependent on Cuban and Eastern European health professionals to provide care, especially in rural areas. In 1999, 6% (6000) of South African registered doctors were foreign. Fourthly, lost worker productivity associated with worsened health contributes to further economic loss.

Inadequate healthcare makes a country's workforce less efficient and people are absent from work because of health problems, or problems encountered in accessing care (Commission on Macroeconomics and Health, 2001). Other impacts on the National economy may be regarded as positive. Migrants often remit a portion of their earnings back home and thus contribute to economy growth and poverty alleviation.

Whilst this is acknowledged and encouraged in countries such as India and Philippines, this is less organized and managed in African countries. Recorded transfers to Africa amounted to $12billion in 2002. It is estimated that the third largest inflow of funds to Ghana is from remittances by Ghanaians abroad (Shinn, 2002).

The global surge in remittances stands in stark contrast to slower growth in overseas aid and provides a compelling argument for migration playing a key role in international development and being a powerful force for poverty alleviation. However, some evidence suggests that remittances by health professionals (unlike other migrants) are limited and do not necessarily offset the lost investment in their education (Commonwealth Secretariat, 2003; the Economist, 2002; Stalker, 2001).

There is equally the possibility that the movement of skilled workers abroad brings about a high investment in

workforce in the home country. The prospect of travelling to a high wage earning countries may motivate someone to engage in capacity building with the hope of securing better jobs in future. This no doubt is an advantage to the country of origin, directly or indirectly (Beine et al., 2001, 2003).

Brain circulation – the return of professionals with enhanced skills or the mobilization of the skilled Diaspora via virtual networks- is also often cited as an economic benefit (Martineau et al., 2002). However, this benefit of technology and knowledge transfer can only accrue if returnees have access to similar resources and working conditions.

➢ *Policy Interventions and Implications*

Any rational attempts to manage the causes and consequences of medical migration will require an integrated policy framework that preserves the human right to free choice and free movement. The forces that drive this concept are complex and originate both in home and Diaspora countries. The problem for the home countries is to mitigate the outflow of health care personnel in a sustainable way and decrease the impact of emigration on the continent while that of foreign countries is to mitigate their demand in a responsible way without compromising source countries.

The suggested policy interventions are by no means detailed or prescriptive but merely serve to highlight principles to guide policymaking within the context of the conceptual framework in Figure 2.1.

➢ *Addressing 'Push – Pull' Gradients*

One of the most sustainable ways to reduce the brain drain of health care professionals is to address the push factors. Factors within and beyond the purview of health systems, need to be addressed as part of a comprehensive response to the brain drain of health professionals. This could be done by improving conditions of service in Africa, increasing development of commerce and the absorption of health care professionals into the economy. Factors inherent to health systems such as management capacity, health care equipment, salaries, condition of service and opportunities for career progression need to be looked into. Exogenous factors such as crime and issues of governance are also vital. Pull factors can be mitigating if rich countries handle their demand by rolling out plan of actions aimed at self-sufficiency or by engaging in managed migration which entails mutual memorandum of understanding with countries which have a surplus of health professionals (Bach, 2003).

➢ *Strategies to Deal with Reduced Stock of Health Care Professionals*

Countries on the African continent need to consider more innovative strategies to improve their stock of health professionals because of scarcity of human resource and the fact that it is difficult to stem the tide of emigration. Simply increasing the production of health professionals does not mitigate the loss – more leave. In South Africa, less than 50% of Doctors produced in the 15 years up to 2005 registered (Financial Mail, 2006), while in Zimbabwe less than 5% produced from 1995 to 1998 registered to practice (Chikanda, 2000).

However, as a short term measure of slowing down the trend, the emphasis should be geared towards the training and retaining of the not-too-attractive health workers, giving them bonds to sign on the completion of their training and improving their condition of service (Dovlo and Martineau, 2004). In addition, encouraging immigration of health professionals by synchronizing labour and immigration legislations, and by harnessing the skills of the Diaspora, can overcome some of the insidious effects of the brain drain.

Destination countries can contribute to improving staffing levels in source countries by discouraging emigration from at risk countries, by using ethical and transparent recruitment strategies, setting quotas or caps on immigrant health workers, increasing temporary work permits to encourage short term migration, and establishing professional certification for foreign trained medical personnel which may be a barrier in terms of cost and effort.

➢ *Improving Health Care Capacity*

Source countries need to improve quality and quantity of services by improving utilization of skills/ mix of other staff, unfreezing of posts aimed at reducing public expenditure and improving overall efficiency, effectiveness, governance and equity of the health system.

➢ *Training and Retraining of our Professionals*

Focusing on improving our educational system and innovation capacity is premised on the causal link between these key enablers and the growth of human capital, technical progress and improved business performance.

Consequently, there is economic growth, wealth creation and social up-liftment. Policy option geared towards enhancing these variables therefore has the potential to result in a virtuous cycle with skills retention and attraction the end result. Current knowledge generation capacity can be strengthened by creating bodies that make the health innovation function coherent, improving public sector investment, creating centers of excellence, leveraging ideas, capital and technology from the skilled Diaspora and fostering networks and linkages with the global scientific community. Enhancing future knowledge generation capacity can be ensured by improving proficiency and encouraging excellence in mathematics and science among scholars by improving capacity at schools and higher education institutions.

➢ *Reducing the Economic Impact of the Brain Drain*

All of the points highlighted above are crucial and need to be implemented in synchrony if we are to avert the socio-economic impact of the brain drain of health professionals. However, at a more direct level, source countries can negotiate compensation from destination countries and facilitate remittance flows and investment from Diaspora. Destination countries can consider increase

in debt relief /health aid and compensation for educational costs as well as tax relief for funds repatriated to home countries.

- *Global Governance*

The international mobility of skilled workers is a reality of the 21st century. However, because of the impact of a brain drain in developing countries and especially in sectors such as health care, it is imperative that the global governance of migration should become part of the global policy agenda, similar to environmental and information management issues (Newland, 2005). Regional and sub-regional organizations such as African Union and NEPAD, ECOWAS, recipient country organizations such as the G8 and OECD as well as key custodians of the global economy such as the International Labour Office and the Wealth Health Organization need to set the agenda to achieve equitable health care for all.

- *Empirical Review*

Several studies have been conducted on brain drain among health professionals and its impact on service delivery. In an article by Oladeji and Gureje (2006) titled, Brain Drain: a challenge to global mental health; it was stated that the brain drain of medical professionals from lower-income to higher-income countries contributes to the current inequity that characterizes access to mental healthcare by those in need across the world and hinders efforts to scale up mental health care services in resource-constrained settings, especially in the sub-saharan African countries.

The movement or migration of skilled workers is hinged on many factors which include globalization of markets for skilled workers and the capacity of rich countries to attract and retain skilled specialist from countries that are poorer. In the light of this, worldwide shortages of mental health workers have to be solved by attracting and encouraging young Doctors into mental health/psychiatric globally. Efforts should also be made to introduce measures to improve health workers' retention in poor countries.

According to the findings from the study conducted by Lofters, Slater and Thulien (2013) on "Brain Drain": Factors influencing physician migration to United States of America (USA). The aim was to find out the factors behind International Medical Graduate (IMG) migration from other countries to USA. Here anonymous questionnaire with open and close-end questions were randomly sent out to five hundred (500) IMG Doctors in some states in the USA. The data so generated were analyzed using a mixed-method design utilizing both descriptive statistics and inferential analysis approach. The results reviewed that 39 physicians met inclusion criteria and completed the survey. In addition, majorities were 50 years or older and over 60% were male. The most popular reason for emigration from their home country was the socioeconomic and/or political situation, and the most popular reason for selecting USA was family issues. Recommendations for how brain drain could be mitigated fell into three broad categories: 1) more accurate information about lack of opportunities in Canada, 2) more continuing medical education opportunities in home countries, and 3) address issues such as safety and quality of life in home countries.

Similarly, Minda (2016) conducted an assessment of the factors leading to brain drain and implications to the development of health sector in Addis Ababa: a case study of two public Hospitals. The primary objective of the study was to assess the factors leading to brain drain and its implication on the development of health sectors. To this end, the push factors in source country and pull factors in the diasporas including other major drivers were made part of the study and review. The Likert Scale instrument was used to address the specific research question of the study. Furthermore, the researcher used purposive sampling particularly convenience sampling method to select the two public hospitals whereas, a census method was employed in addressing physicians. The research findings revealed that the brain drain has a negatively affected the health care service delivery of the hospitals under review as well as the development of health sectors of the country as a whole. Furthermore, Afu (2016) conducted a study on the impact of migration and brain drain in Cameroon. The aim was to investigate the causes and consequences of this unprecedented phenomenon, its pattern and dynamics and finally the options to slow it down.

The data for this study were collected through primary and secondary sources. From the primary data perspective, questionnaires were distributed to randomly selected respondents based on the various continents of the world and some strategic interviews were also adopted to complement it.

Similarly, the author also made used of published secondary data sources that were of substance to the study in diverse ways including documentary evidence of eye witness reports that were peculiar to this pilot research. On the theoretical note, the author adopted the Neo Classical economic theory. The findings from the study affirmed that international migration in Cameroon is caused by the push factors (adverse socio-economic conditions prevailing in the country) and pull factors (favourable socioeconomic conditions in the western world).

From a different perspective, Kiang, Jauhar, and Haron (2014) conducted a criterion reference investigation on Brain- Drain: The Determinants of Migrant intention of Professional Engineers in Penang. They stated that "capital flight or brain drain constitute a continuous major concern to societies, academic, government and the business organization". That the present shortages of engineers are the drive behind all strategies being part in place to effective retains engineers. Engineers in the context of Malaysia do not show a well understood behaviour with regards their intentions to migrate. The objective was to evaluate the influence behind the intent of migration of professional engineers' and the degree/level of intention among professional engineers in Penang. To attain the objectives of the study, all the electrical engineer from all the

manufacturing firms in Penang were surveyed. A useable response received were 104; and the study reveal a negative relationship that was significant between job engagement and migrant engineers. Another negative associated with the intention of engineers to migrate was organization engagement. However, the following were not found to be related to migrant engineers' intention to migrate as follows: job satisfaction, high job pay, social welfare and human security. From the study, age and level of education were the two control variables found to be significant with engineer's intention to migrate in Penang. Age negatively affected migrant engineer's intention, while level of learning acquired have positive significant with engineers' migrant intention. Moreover, the study reveals that Penang migrant intention to migrate was moderate.

In another study by ICMH (2013) the health workers constitutes more than 80% of professionals that wants to leave their countries of origin because of condition of service, better technologies and professional development. In a similar study, Kiang, Jauher and Haron (2015) listed poor working condition, the prospect of developing the engineering career and better engineering techniques for being responsible for the professional engineers in Penang leaving their home countries in droves in search of greener Pasteur.

Finally, in a study conducted by Andrew and Baomin (2015) titled investigating determinants of brain drain of health care professionals in developing countries: A review. The research looks at what makes the health worker in Malawi to want to leave for greener Pasteur. Health care professionals from poor countries suffer from unbearable living and working condition and low or poor enumeration packages from so wise countries and as such look elsewhere for better salaries, better living conditions and good condition of life in advanced countries.

The above phenomenon has been for several years related to features of brain drain of skilled workers from source countries where they are mostly needed. This then create more problems to already fragile and weak health care delivery system. The study generally creates insights into the issues related to brain drain of health care specialists from developing countries to developed countries.

➢ *Theoretical Framework*

This study employed the Push-Pull Theory of Brain Drain by Pillay (2007)

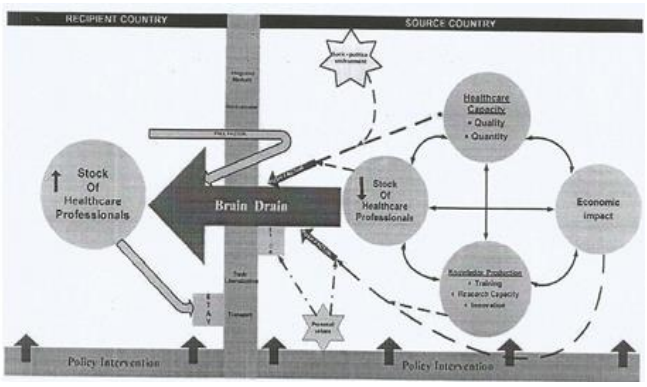

Figure 1: Conceptual model for the determination of Brain Drain among mental health professionals in Benin City (Adopted from Pillay, 2007).

➢ *The Push-Pull Theory of Brain Drain by Pillay, 2007*

The theory underpinning this study is the Push-Pull Theory of Brain Drain, Pillay (2007). The framework illustrated in Figure 1, above, highlights the multiple forces at play that result in the net out migration of health professionals from source to recipient countries, as well as its impact on the various sectors, either directly or indirectly. It suggests that optimal management of this phenomenon depends on the adoption of appropriate and cohesive policies in both source and recipient Factors driving the out-migration of African health professionals. The mobility of health professionals depends on personal values as well as on the interplay of complex social, political and economic forces that emanate both in home and in diasporas. The net outflow of health professionals from the African continent results from a net force that favours recipient countries. These forces are called push or pull factors. Their origin is from the health system either within or outside. In addition, there are other important facilitating factors that create an enabling environment for migration. Push forces originate in source countries while pull forces originate in recipient countries. These forces react with each other and are the opposite of each other depending on the perspectives being looked at (for instance, low pay in the source country related to higher pay in the recipient country: Briggs, 2000). Important economic push-pull forces that result in outward migration are related to labour market conditions, such as employment rates and demand (Bach, 2003), wage differentials and benefits (Hamilton and Yau, 2004; Dovlo, 1999), work context issues such as organizational capacity, workload and work associated risks, and capacity building (Sanders et al, 2003; Meeus 2003). The forces that could make the health worker to migrate that are not economically related are perceived improvement of quality of life, political stability, crime level, quality education for children and the strong presence of other social support network in the host country (OECD, 2002).

Despite what has been described above, some health care professionals still remain at home countries to salvage the situation. This might not be unconnected to strong patriotism, socio-cultural ties, some in tangible incentives and probably the high cost of migration. According to Pderath et al. (2003), these are what could be regarded as the stick factors. In a similarly vein, those who have moved may resolved not to return due to the development of new bonds in the diasporas (the stay factors). Ultimate, the resolution of the health worker who has left Nigeria whether to come back or not depends on the inter play of these four forces of pull, push, stick and stay. In addition, facilitating factors that create an enabling environment to migrate include easier communication and access to information, improvements in transportation, the liberalization of trade in services and the formation of integrated economic markets. The stock of Africa health professionals

- *Application of the theory*

The research reveals that there are lots of factors that exacerbate the brain-drain of mental healthcare professionals, and Benin may not be an exception. These include economic, social, political and cultural factors, globalization, improved communication and targeted migration (Iwu, 2014). Iwu. (2011) argue that high level of stress at work could also result in brain-drain, burnout and voluntary termination/resignation of employment as is being observed in the Federal Neuro-psychiatric Hospital, Benin City. Brain drain of mental healthcare professionals may negatively affect the mental healthcare promises of a country (Ikenwilo, 2007). For instance, the favourable environment and the problems of inadequate health care facilities may emerge. These could push out the worker. Interestingly, the home country like Nigeria which could have invested heavily in developing the capacity of the worker may end up losing such a worker to brain drain. Pillary (2007) sees this as an insensitive political agenda for the home and destination country. The cost of out flow of healthcare professional can be somewhat substantial, particularly when the less-developed economies invest in educating their healthcare workers only to have them leave for wealthier nations. This could make the rich nations richer and the poor nations poorer. Owing to brain drain of health workers, it becomes impracticable for the source country to achieve long-term economic growth and social development driven by talented skilled worker. The sourcing countries are getting poorer in manpower development because of the ingenuity of rich countries to milk out the developed manpower.

Migration problems further weakens the already fragile health care indicators in the poor countries particularly in the sub-sahara where the maternal and child health indices are nothing to write home about. In the 3rd world countries, the reasons usually advanced for migration in the health care industries have been attributed to poor salaries, unstable government, dwindling policies on health and frustrations of practicing in the native countries. Research has shown that some categories of health care providers in South Africa are dissatisfied with their condition of service (Pillary, 2009). Issues such as salary, poor working environment, and organizational climate e.t.c. were pointed out as the militating factors against job satisfaction. Govender (2013) saw that these factors were among the important contributing factors for migration in South Africa. They also felt that the non-existence of counter and control measures to migration of healthcare workers could exacerbate migration trends in South Africa and other African countries that experience similar conditions. Innumerous African countries young recruits including unqualified personnel in the field of healthcare are in the likelihood of facing the challenge of being left alone to work without supervision. This exposes them to the risk of wrong diagnoses and consequently, wrong management of patients as a result of performing tasks that are above their capacities (Awases et al., as cited in Connell et al., 2007).

Migration does not only represent negativity on the healthcare system of source countries. It also impacts negatively in rural communities and cities where majority of citizens depends largely on the public health care system. However, Serour (2009) suggested some measures aimed at addressing the problems which could be summed up as improving the condition of service of the health worker at home. This could further be analyzed as follows: • Improving the health workforce data base in order to keep tabs on the trends and identify possible causes. • Improving wages, health resources, and working conditions. • An insistence on pay back from recipient countries and migrant health professionals. • Task shifting. • Ensuring that there is adequate investment in the health work force. • Up-to-date; relevant medical training and research. But then, those health workers who chose not to travel abroad for greener Pasteur for one reason or the other but are unsatisfied with the condition of service; their performance maybe affected negatively including absenteeism. Munro (2007:21) noted that absenteeism is among cardinal problems that a manager has to deal with, on an on-going basis in the operation of an organization. Sadly, in South Africaitis estimated that absenteeism costs organizations so much each year (Johnson, 2007; Stokes, 2008 in Banksetal., 2012:1). Given that fewer health professionals remain to service patients; it is argued that those who are left behind are then compelled to deliver medical services to patients. This brings about professional stress.

Rothmann and Malan (2007) opined that work-related stress may lead to reduction in performance or reduced productivity, declined levels of customer service, health difficulties, absenteeism, low turnover, industrial accidents, substance abuse and purposefully. Therefore, the Push and Pull theory by Pillay (2007) is applicable to this research because if the predicted variables are observed and the above suggestions instituted, the brain drain in Benin might be mitigated.

- *Summary of Reviewed Literature*

It is clear that brain drain generally is a global problem. Its negative impact is more on the developing countries. The causes of brain drain are the push and pull factors i.e. the factors in the home country of the migrant

"pushes" him away; while factors in the recipient countries "pulls" him to the country. The push-pull theory is used in explaining the dynamics. Likert scale questionnaire was used by most researches in gathering data for most of the empirical studies. Despite the gravity of the problems, all hope is not lost as some strategies aimed at mitigating the problem were equally review.

IV. RESEARCH METHOD

➢ *Research Design*

A cross-sectional predictive research design was adopted in the study. It is a cross sectional because; the research instrument will be administered at once for data collection. It is also predictive because the results of the analysis data shall be used to predict the disposition of the respondents to brain drain.

➢ *Research Setting*

The settings that were used for this study are: Federal Neuro-psychiatric Hospital (FNPH) and Mental Health Department of UBTH, all in Benin City.

The first Centre is Federal Neuro-Psychiatric Hospital (FNPH) Benin City. it is situated along New Lagos road and another of its branch (permanent site) at Idumwowine along Benin/Auchi Road. It is bound by medical stores Road by its left, Federal Road at its back and GT Bank. Road by its right. The permanent site is bigger. The two branches have a total bed space of 270 and 902 workers made up of psychiatrist, psychiatric nurses, psychologist, occupational therapists, Electroencephlography (EEG) technologists, psychiatric social workers among others.

The second Centre is University of Benin Teaching Hospital (UBTH) Benin City is located along New Lagos Road. It shares boundary with the University of Benin, Benin City. It is bounded by Federal Government Girls College road by itsleft and it stretches at its back to over 500 meters. It has a total bed space of over 400 and is well equipped. The hospital has many departments including mental health.

➢ *Population of the Study*

The target population for this study comprised all mental health care professionals in Federal Neuro-psychiatric Hospital (FNPH) and Mental Health Department of UBTH, all in Benin City. The number of mental health care professionals at FNPH and Mental Health Department of UBTH are 227 and 72 respectively; making a total of 299 mental health care professionals. But the accessible population for the two health care facilities was 211, since some were on leave, while some others were on afternoon or night duty.

➢ *Sampling Size*

The total population for the study was 299 mental health care workers. However, only 211 were accessible at the time of data collection and therefore was used as all-inclusive method.

➢ *Sampling Technique*

Purposive sampling technique method was used to include all target population that were accessible at data collection. The categories of mental health staff that were used include psychiatrists, psychiatric nurses, clinical psychologists, EEG technologists, psychiatric social workers and occupational therapists.

➢ *Instrument for data collection*

The instrument for data collection is Brain Drain Predictive Scale (BDPS). The BDPS is a criterion reference predictive instrument designed by researcher. It is designed in four (4) Sections (A, B, C and D). Section A is to assess the demographic data of the respondents, while section B, C and D contains five (5) questions each to address objectives 1,2 and 3 respectively. Section A is for demographic data and the respondents are expected to select the options that are applicable to them. Sections B, C and D are on a 5-point likert scale format of strongly disagree (SD) = I; Disagree (D) = 2; undecided (UD) = 3; Agree (A) = 4 and strongly agree (SA) = 5. Assessment and evaluation of the respondents: the scores of each of the 3 sections (i.e. B, C & D) are added up to arrive at the total score for the section. The total score and the interpretations are then used in addressing the corresponding Research Question.

➢ *Validity of Instrument*

The instrument used was Brain Drain Prediction Scale (BDPS). It was presented to an expert in psychometry in the University of Benin who recast some of the questions to reflect the face, content and criterion reference validity of the instrument. It was later presented to the supervisor and reader of the faculty for guidance and approval.

➢ *Reliability of the Instrument*

The reliability of the instrument was established by applying the split-half method of trial-running the instrument in the Federal Neuro-psychiatric Hospital (FNPH) Yaba. The permission/approval and assistance of the ethical committee of the hospital was obtained before getting thirty-four (34) volunteers (i.e. 20 Nurses, 8 doctors, 2 occupational therapists, 2clinical psychologist and 2psychiatric social welfare workers). The 34 staffs were then divided into two (1 and 2) groups of 17 staffs. To ensure homogeneity of the two groups. Each of the groups had 10-nurses, 4-doctors, 1-psychologist, 1-social welfare staff and 1-occupational therapist.

The BDPS was equally split into two halves and administered to the two groups at once. The instrument was split in the following sections:
Section A was common to the two groups; while all the odd questions i.e. numbers 1,3 and 5 of section B, all the even numbers of section C i.e. questions 2 and 4 and question 1 and 3 of section D were administrated to group 1 (i.e. altogether group 1 responded to 7 questions from sections B, C and D). Group 2 then responded to the remaining questions of 2 and 4 of section B; 1, 3 and 5 in section C; then 2 and 4 in section D. Question 5 of section D was not used for the test of reliability so that the two groups could respond to equal number of test items (7 each).

The Pearson Product Moment Correlation Co-efficient (PPMCC) was used to analyze the data generated by instrument from the two groups; the correlation co-efficient was found to be 0.78 ie 0.8. So, the instrument was then accepted as reliable since it is greater than 0.7 (Bolarinwa, 2016).

➢ *Method of Data Collection*

Five (5) Research Assistants (RAs) were used in the collection of data. Two of the RAs were assigned to the UBTH. They were members of staff of the hospital who understood the environment. The other three joined the researcher in FNPH, Uselu. The five of them had orientation on how to meet the respondents in their offices; they had to explain their mission and emphasized that participation in the data collection process is purely voluntary, that confidentiality would be ensure and that the exercise was purely an academic exercise. The BDPS could be left with them if they are too busy to respond to the questions. The completed questionnaires were retrieved within 48 hours of administration.

The RAs moved with memo pads to code the offices where the instruments were not retrieved immediately in order to ensure accountability e.g. "psycho-therapy room-5 copies".

➢ *Method of Data Analysis*

Descriptive statistics (simple percentages) were used to analyze data generated by the instrument for section A (demography) i.e percentage and frequencies. The results were presented in tables. Microsoft Excel was the software used in the analyses.

Chi-square (inferential statistics) was used in analyzing data generated by section B, C and D of the instrument.

- Section B is for objective 1
- Section C is for objective 2 and
- Section D is for objective 3.

Microsoft Excel facilitated the collation of the data into the spreadsheet; then the JMP statistical discovery software version 12.0 was used for the data analysis. The actual chi-square was calculated manually.

➢ *Ethical Considerations*

The researchers secured ethical approvals from the research committees of the hospitals. The respondents were made to understand that the research is voluntary and they could opt-out of the research at any point in time. The respondents did not disclose their identities and their names were not reflected in the research report. Permission for the use of the research sites were gotten from the Medical Director (MD) of the FNPH Benin City and the Chief Medical Director (CMD) of the UBTH, Benin an approval was equally gotten from the Research and Ethics committees of the FNPH Uselu on 13/8/18 (Ref. No.PH/A.864/xiii/60) and UBTH Benin on 6/6/19 (Ref. No. ADM/E.22/A/Vol.vii/14756)-See appendix iii & appendix iv. A verbal approval from each respondent to participate in the research was necessary for those that are willing to participate in the research. For those that are willing to participate in the research, the questionnaire is expected to be completed.

V. DATA PRESENTATION AND ANALYSES

➢ *Presentation of Data*

Two hundred and ninety-nine (299) questionnaires were administered and two hundred and seven (207) were retrieved representing 69.23 percent of the return rate. Based on this percent, data were analyzed and presented as follows:

Table 5.1: Characteristics of Study Participants (n = 207)

Characteristic	N	%	95% CI
Employer			
Federal Neuro-Psychiatric Hospital Uselu	164	79.2	73.2–84.2
University of Benin Teaching Hospital	43	20.8	15.8-26.8
Profession			
Occupational Therapist	13	6.30	3.7-10.4
Psychiatrist	21	10.1	6.7-15.0
Psychiatric Nurse	144	69.6	63.0-75.4
Clinical Psychologist	7	0.03	1.6-6.8
Psychiatric Social Worker	22	10.6	7.1-15.6
Total	**207**	**00.0**	

Source: Researcher's Participants Response

Table 5.1 shows the characteristics of the study participants. It showed that majority of the respondents 164(79.2%) are from Federal Neuro-Psychiatric Hospital Uselu, while 43(20.8%) are from UBTH. It further showed that majority of participants 144(69.6%) are Psychiatric Nurses, 22(10.6%) are psychiatric Social Workers, 21(10.1%) are Psychiatrists, 13(6.30%) are Occupational Therapists while 7(0.03%) are clinical Psychologists.

Table 5.2: Relationship Between Condition of Service and the Intension to Migrate (Objective 1)

Determinants of migration tendency	Migration tendency			Total	Calculated Value (χ2)
	Very High	High	Low		
Better salary to work overseas because of:	48	49	110	**207**	134.7 (p=.000)
Better accommodation	39	139	29	**207**	88.3 (p= .000)
Better educational opportunities for my children	70	94	43	**207**	.43.74 (p= .000)
Better transportation allowances	63	108	36	**207**	.97.74 (p= .000)
Better disengagement/severance packages	63	97	47	**207**	.43.64 (p= .000)
Total	**283**	**487**	**265**	**1035**	.89.74 (p= .000)

Source: Researcher's Participants Response

Calculated value x^2 =134.7, Tabulated value x^2 = 15.507,

.43.74
(p= .000)

df = 8 level of significance = 0.05

From the chi-square contingency table above, 48(23.19%) of respondents strongly agreed that better salary to work overseas would makes them to have emigration tendency while 49(23.67) and 110(53.14) of respondents agreed and undecided respectively. For better accommodation as a criterion for emigration, 39(18.84%), 139(67.15%) and 29(14.01%) strongly agreed, agreed and undecided respectively. Better educational opportunities for their children had 70(33.82%) strongly agreed, 94(45.41%) agreed and 43(20.77%) respondents undecided. 63(30.43%), 108(52.17%) and 36(17.39%) of respondents strongly agreed, agreed and undecided respectively to better transportation allowances as a criterion for emigration. While, better disengagement/severance packages criterion for emigration had 63(30.43%), 97(46.86%) and 47(22.71%) of respondents strongly agreed, agreed and undecided respectively. The chi-square calculated value is 134.7, while the table value at 0.05 significance level and degree of freedom 8.

Table 5.3: Relationships Between Professional Development and Migration Intention (Objective 2)

Determinants of migration tendency	Migration tendency			Total	Calculated Value(χ2)
	Very High	High	Low		
Better opportunities for promotion	33	116	58	**207**	**46.32 (p= -000)**
Better educational opportunities for self	44	126	37	**207**	**63.32 (p= -000)**
Better opportunities for international conferences	86	89	32	**207**	**75.56 (p= -000)**
Opportunities to work/interact with foreign contemporaries	60	111	36	**207**	**78.67 (p= -000)**
Opportunities for collaborative researches and publications	60	113	34	**207**	**46.90 (p= -000)**
Total	**283**	**555**	**197**	**1035**	**64.76 (p= -000)**

Source: Researcher's Participants Response

Calculated value x^2 =46.32, Tabulated value x^2 = 15.507, **(p= -000)** *df = 8 level of significance = 0.05*

The table above shows that 33(15.94%) of respondents, 116(56.04%) and 58(28.02%) strongly agreed, agreed and undecided respectively. 44(21.26%), 126(60.87%) and 37(17.87%) of respondents strongly agreed, agreed and undecided respectively to the criterion "better educational opportunities for self" as a migration tendency. Better opportunities for international conferences had 86(41.55%), 89(43.00%) and 32(15.46%) respondents who strongly agreed, agreed and undecided respectively. Opportunities to work/interact with foreign contemporaries

had 60(28.99%), 111(53.62%) and 36(17.39) respondents strongly agreed, agreed and undecided respectively. While, opportunities for collaborative researches and publications as a criterion for emigration tendency had the following responses from respondents: strongly agreed 60(28.99%), agree 113(54.59%) and 34(16.43%). The calculated value for X2 is 46.32. At 0.05 level of significance (degree of freedom 8), the table value is 15.507.

Table 5.4 Relationships between Contemporary Mental Health Care Technologies and Migration Intention (Objective 3)

Determinants of migration tendency	Migration tendency			Total	Cal. χ^2 value
	Very High	High	Low		
Adequate medical equipment are available	33	122	52	**207**	**68.81**
The workload distribution is fair and +available	62	101	44	**207**	(P =.0000)
Adequate laboratory facilities are available	45	127	35	**207**	(P =.0000)
The management strive to create smooth relationship with employees	40	116	51	**207**	(P =.0000)
Up-to date technological equipment are available	92	65	50	**207**	(P =.0000)
Total	**272**	**531**	**232**	**1035**	(P =.0000)

Source: Researcher's Participants Response

Calculated value $x^2 = 68.81$ Tabulated value $x^2 = 15.507$, $p = .0000$ $df = 8$ level of significance = 0.05

The above table shows that 33(15.94%), 122(58.94%) and 52(25.12%) respondents strongly agreed, agreed and undecided respectively to the criterion adequate medical equipment are respectively. Also, 62(29.95%), 101(48.79%) and 44(21.26) respondents strongly agreed, agreed, and undecided to the 'workload distribution is fair and available'. Adequate laboratory facilities are available had the following responses: strongly agreed 45(21.74%), agreed 127(61.35%) and undecided 35(16.91%). The management strive to create smooth relationship with employees as a criterion had strongly agree 40(19.32), agree (116(56.04%) and undecided 51(24.64%). Also, up-to-date technological equipment are available had 92(44.44%), 65(31.40) and 50(24.15%) respondents respectively. From the table, calculated value (χ^2) of 68.81 was obtained. At 0.05 level of significance (df 8), the table value is 15.507.

Table 5.5: Emigration Tendency Scale

Scale	Score	Migration tendency (%)
Very High	56-75	201(97.10)
High	41-55	6(2.90%)
Average	31-40	0(0%)
Low	21-30	0(0%)
Very Low	15-20	0(0%)

Source: Researcher's Participants Response

The table above shows that 201(97.10%) of respondents have very high emigration tendency, 6 (2.90%) have high migration tendencies while 0(0%) has average, low and very low emigration tendency.

VI. DISCUSSION OF FINDINGS

Administered Questionnaire: Two hundred and eleven (211) questionnaires were administered. But 207 were returned i.e 164 (79.2%) from the FNPH, and 43 (20.8%) from UBTH. Majority of the respondents favour migration based on the three (3) variables under consideration.

On the relationship between the condition of service and the intention to migrate; none of the 207 respondents disagreed or strongly disagreed to migrate if the conditions of service over there is better and they have the opportunity to do so. Therefore, a strong positive relationship has been established. Again, since the calculated value of the $x^2 = 134.7$ is greater than the table value $x^2 = 15.51$ at level of significance = 0.05, df = 8; the H_o is rejected in favour of the H_1. Therefore, there is a significant relationship between the condition of service and migration intention. This then agrees substantially with the perception of Dr. Carl Umakhikhe, the Edo State Chairman of NARDS that poor condition of service and other variables are responsible for pushing out Doctors out of Benin, (Youdeowei, Wodu, Nejo, Bamigbola, Bosun, Peter et al; 2009). But the findings are at variance with those of Jauhar and Haron (2014). It also agrees with Lofters, Slater and Thulien (2013) that there is a significant relationship between the condition of service and migration intention.

Relationship between professional development and migration intention: none of the 207 respondents disagreed or strongly disagreed with the five item statement on this

objective. This means that everything being equal, they would want to migrate. It follows that a strong positive relationship has been established between professional development and the migration intentions of the respondents. Again, since the calculated value of $x^2 = 46.32$ is higher than the table value of $x^2 = 15.51$ at df = 8 and level of significance = 0.05, the H_0 is therefore rejected in favour of the H_1. This is in line with the perception of Andrew and Baomin (2015) and Youdeowei, Wodu, Nejo, Bamigbola, Bosun, Peter, et al (2019).

Relationship between the use of contemporary technologies and migration intention; none of the 207 respondents choose either disagree or strongly disagree on the five (5) statements in the objective under review. In this regard, they all favour a situation where they would want to migrate if the modern equipment abroad is better than here in Nigeria. On this score, a strong positive relationship has been established between contemporary technologies and the migration intentions of the respondents. Again, the calculated value of $x^2 = 68.81$ is higher than the table value of $x^2 = 15.51$ at df = 8 and the level of significance = 0.05. so the H_0 is rejected in favour of the H_1. This is in line with the perception of Jauhar and Haron (2014); Youdeowei, Wodu, Nejo, Bamigbola, Basun, Peter et al (2019); Afu (2016).

VII. CONCLUSION

Based on the findings, it has been established that there is significant relationship between condition of service; working equipment abroad, professional development and the brain drain in Benin as perceived mental health professionals.

➢ *Implication for Mental Health and Psychiatric Nursing*

Taking a holistic view of brain drain among mental health care profession, the following implications can be deduced:

1. It is clear that there are not enough mental health care professionals as it falls short of WHO recommendation. Then the government of the day,/Non-Governmental Organization (NGO) should do their best to provide enough incentives to discourage emigration of mental health care workers.
2. More health professionals should be encouraged to specialize in mental health care.
3. Specialized health facilities are few. So, more is required to remove vagrant destitute are on the street.
4. Specialties in community and drug addiction are required in order to reduce suicide and drug addiction.

➢ *Recommendations*

It could be that the existing salary packages for mental health care professionals is discouraging; causing mental health care professionals brain to leave the country, therefore.

1. It is recommended that existing pay packages should be improved so that qualified and experienced mental health care professionals may be retained in the country.
2. Financial incentives should be offered to mental health care professionals with foreign higher qualifications.
3. Additional financial incentives should be offered to mental health care professionals working beyond duty schedules.
4. Mental health care professionals working in rural areas should be provided additional allowances and accorded leave for 3-4 days on monthly basis so that they have time for recreational activities with their families.
5. Recruitment and promotion should restrictedly be on merit.
6. Mental health care professionals should be provided with equal opportunities for advancement.

➢ *Limitations of the Study*

Some challenges were encountered by the researcher in the course of this study. These limitations were mainly on resources and availability of relevant materials strategic to the topic under consideration. Also, only small geographical area is covered in this study. As a result of the small geographical area covered, national generalization may be limited and also time and semester workload.

➢ *Suggestion for Further Studies*

Other researchers should examine this study from other perspectives, like the relationship of age, marital status, socio-economic status, cultural/ethnic background, religion and intention of mental health care profession to migrate respectively. Other variables that could determine the migration intentions of mental health care professionals should be examined in a similar research.

REFERENCES

[1]. Afaha, J.S. (2011). *Migration, Remittances and Development in Origin countries: evidence from Nigeria*. A paper presented in the 6th African Population Conference in Ouagadougou, Bukinafago on 5th-9th December, 2011.

[2]. Afu, I.A. (2016). The impact of migration and brain drain inCameroon.Tallinn University of Technology, School of Economics and Business Administration, Department of International Relations, *Chair of International Relations and Political Science*.

[3]. Agunias, D. (2009) "*Guiding the Invisible Hand: Making Migration Intermediaries Work for Development, in United Nations Development Programme*, Human Development Research paper 2009/22.

[4]. Chimenya, A., and Qi, B. (2015). Investigating Determinants of Brain Drain of Health Care Professionals in Developing Countries. *A Review Net Journal of Management.* 3(2) 27-35

[5]. Collier, P. et al. (2002) "Africa's Exodus: Capital Flight and the Brain Drain as Portfolio Decision "*Journal of African Economies* 13(2): 15-54

[6]. Docquier, F., Lohest, O., and Marfouk, A. (2007). *Brain Drain in developing countries, Discussion paper* (ECON-Departement des Sciences Economiques) 2007004, Department des Sciences Economiques, Universite Catholique de louvain-laNeuve.

[7]. Draper, B., Luscombe, G., and Winfield, S. (2009). The Senior Psychiatrist Survey II: experience and psychiatric practice. *Aust NZ J Psych*, 33:709-16.
[8]. Evans, I.M., and Fitzgerald, J.M. (2015). Integrating research and practice in professional psychology: Models and paradigms. In: Evans IM, Rucklidge JJ, Driscoll MO, editors. Professional practice of psychology n Aotearoa / New Zealand. Wellington, New Zealand: *NZ Psych Soc*, 283-300.
[9]. Farber, B.A. (1983). The effects of psychotherapeutic practice upon psychotherapists. Psychotherapy: Theories Pract., 20:174-82.
[10]. Foulkes P. (2013). Trainee perceptions of teaching of different psychotherapies. *Austral Psych*.11:209-14.
[11]. ICMH (2013). International Migration, Health and Human Rights. IMHH series Issue No. 4. December 2013.
[12]. Jenkins, R., Kydd, R., Mullen, P., Thompson, K., Sculley, J, Kuper, S., carrol, J., Gureje, O., Hatcher, S., Brownie, S., Carrol, C., Hollins, S. and Wong, M.L. (2010). *International Migration of Doctors and its Impact on Availability of Psychiatrists in low and middle Income Countries*. Plosone 5(2) PP".
[13]. Kiang, L., H., Jauhar, J., Haron J. (2015). Brain Drain: The Determinants of Migrant Intention of Professional Engineers in Penang. www.researchgate.net.
[14]. Minda, E. (2016). Assessment of the factors leading to brain drain and implications to the development of health sector in Addis Ababa: a care study of two public hospitals. Addis Ababa, Ethiopia. *An M.Sc thesis submitted to the school of post graduate studies, Addis Ababa University*.
[15]. Okoro, C.C., Omelrizor, S.U., and Bamidele, I.A. (2014). Effect of Brain Drain (Human Capital Flight) of Librarians on Service Delivery in some Selected Nigerian Universities. SAGEOPEN. PP".
[16]. Oladeji, B. D. and Guereje, O. (2016). Brain Drain: a challenge to global mental health. *Bj psych international*, 13(3), pp''
[17]. Orlinsky, D.E., Botermans, J.F., and Rønnestad, M.H. (2011). Towards an empirically grounded model of psychotherapy training: Four thousand therapists rate influences on their development. *Aust Psych*, 36:139-48.
[18]. Osazuwa, J. (2017). *How Brain Drain cripple Nigeria Health Care* the SUN newspaper publication of June, 8th 2017.
[19]. Oyewunmi, Oyewunmi, Iyiola and Ojo (2015). Mental Health and the Nigerian workplace: Fallacin, Facts and the way forward. *International Journal of Psychology and counseling*, 7(7), 100-111.
[20]. Pillay, R. (2007). A conceptual framework for the strategic analysis and management of the Brain Drain of African health care professionals. *African journal of business management*, 026-033.
[21]. Shinn, D., H. (2002). Reverse the Brain drain in Ethiopia. *A paper Delivered to Ethiopian North America Health Professionals Association on November* 23, in Alexandria, Virginia: 1-6
[22]. Simon, G.E., Von Korff, M., Rutter, C.M., Peterson, D.A. (2012). Treatment processes and outcomes for managed care patients receiving new antidepressant prescriptions from psychiatrists and primary care physicians. *Archives of General Psychiatry*, 58(4), 395–401.
[23]. WHO (2012). Mental health situation analysis in Nigeria. University of Ibadan *Journal.* Pp''.
[24]. WHO-AIMS report on mental health system in Nigeria (2006). *A report of the assessment of mental health systems in Nigeria using the WHO-Assessment instrument for mental health systems:* Ibadan Nigeria. Pp''