ASSESMENT 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

By:
Eyerusalem Minda

A Thesis Submitted to the School of Graduate Studies of Addis Ababa University in partial fulfilment of the requirements for the Masters Degree of Public Management and Policy (Development Stream) in the Department of Public Administration and Development Management

June, 2016
Addis Ababa, Ethiopia

Declaration

I, Eyerusalem Minda declare that this thesis is my original work and has not been presented for a degree in any other universities, and that all the sources of materials used for the thesis have been duly acknowledged.

Declared by

Name: Eyerusalem Minda

Signature _____

Date *June 2016*

Confirmed by

Name: Dr Mulugeta Abebe

Signature _____

Date _____

.

Table of Contents

List of Tables

Acknowledgement

I am pleased to express my deepest gratitude and sincere appreciation to my advisor Dr.Mulugeta Abebe for his invaluable guidance, encouragement extended to me and mentorship throughout the project.

I take this opportunity to record my sincere thanks to my parents, my sister and my brother in law for their unceasing encouragement and support.

I also place on record, my sense of gratitude to one and all who directly and indirectly have lent their helping hand in this venture.

Acronyms

AHWO:	African Health Workforce Observatory
FMOH:	Federal Ministry of Health
HIV/AIDS:	Human Immune Virus/ Acquired Immune Deficiency Syndrome
HR:	Human Resource
HRD:	Human Resource Development
IOM:	International Organization for Migration
KNOMAD:	Knowledge Partnership on Migration and Development
U.S.A (US):	United States of America
WHO:	World Health Organization
RQAN:	Return of Qualified African Nationals
MIDA:	Migration for the Development of Africa
NEPAD:	New Partnership for Africa's Development
HSDP:	Health Sector Development Program

.

Abstract

The main intent of this research study is to assess the factors leading brain drain and its implication on the development of health sectors. To this effect, push and pull factors of brain drain including the major drivers were incorporated in the study under review. A likert scale questionnaires was employed to specifically address the research questions. Both primary and secondary source of data were used in this particular study. Further the researcher use purposive sampling particularly convenience sampling method to select the two public hospitals where as, a census method were employed in addressing physicians. Accordingly, 94 physicians had been contacted from the total 119 target population. The research findings revealed that the brain drain has adversely affect the health care service delivery of the hospitals under review as well as the development of health sectors of the country as a whole. Eventually, possible recommendations were drawn considering the major research findings and conclusion of the study.

***Key words**: Concept of brain drain, Determinant of Brain drain, Push and pull factors*

CHAPTER ONE
PROBLEM AND ITS APPROACH

1.1 Background of the study

Brain drain is defined as the migration of professionals in search of the better standard of living and quality of life, higher salaries, access to advanced technology and more stable political conditions in different places worldwide. The migration of health professionals for better opportunities, both within countries and across international borders, is of growing concern worldwide because of its impact on health systems in developing countries (Docquier and Rapoport, 2007).

There is an increasing worldwide recognition that health is an integral part of sustainable socio-economic development efforts. The health sector development is the most basic issue in any country development agenda weather it is for developed or developing. It barely related to any healthy functioning of the society in any sector. On the other hand for any country to meet the demand of the society on the health sector there must be continuous development of capable physicians.

Developing capable, motivated and supported health workers is essential for overcoming bottle necks to achieve national and global health goals. At the heart of each and every health system, the work force is central to advancing health. To achieve this there should be optimum number and professional mix of human resource for the effective coverage and quality of the intended services (Bohl,2008).

Following changes of Government in 1991, Ethiopian Government produced the health policy which was followed by the formulation of four consecutive phases of comprehensive Health Sector Development Plans (HSDPs). Along with records from the implementation of HSDP I, II and III showed encouraging improvements both in the health service coverage as well as in the utilization of services at all levels of the health care system of Ethiopia. Subsequently the government also launched HSDP IV in 2010 (FMOH, 2010).

According to Ministry of Health report, on the third year of HSDP IV in 2005 E.C With regard to Human Resource Development, FMOH has increased the intake and number of medical schools, and curtailed the brain drain by holding successive consultations with new graduates (FMOH, 2014).

Further the total number of available Human Resource for Health during the successive HSDP phases was at the end of HSDP 1 which is in 1994 the total number of all physicians was 1,888 and the total No ratio to population was 1:35,603, at the end of HSDP II which in 1997 the total number of all physicians was 1,996 and the total No ratio to population was 1:35,604 and at the end of HSDP III the total number of all physicians was 2,152 and the total No ratio to population was 1:34,986 (FMOH,2010).

Shortage of staff in Ethiopia has always been critical. Health worker/population ratios, for example are 3 to 4 times lower than even East African standards (Girma et al. 2008).

However, 2010 Report of ministry of health shows that there is a strategic plan to make Physician to Population Ratio: from 1:37,996 to 1:5,500 at the end of HSDP IV through Scale up training and development in line with staffing requirements, develop and implement effective and targeted staff retention mechanisms and through establishing continuous Professional Development Program (CPD).

On the other hand professional migration has been an on-and-off topic for a long time. Recently, a new debate with respect to physicians has brought the topic once again into the spotlight. There is no question that professional migration is harmful to any country. Their governments make investments in the education of those professionals and they leave their country and serve somewhere else mainly in developed countries. Physicians migration has become a source of concern for many developing countries and international organizations. The World Health Organization estimates the global shortage of health workers at more than 4 million. From a global perspective, therefore, the medical brain drain could be seen as a matching process through which workers are allocated to places and jobs where they are most productive (Docquier and Rapoport,2007).

Similarly according to Odumasi (2003) over the past 10-15 years, about 50% of Ethiopians who went abroad for training did not return after completing their studies. Further IOM report cited in Odumasi (2003) shows that Ethiopia lost about 74.6% of its human capital from

various institutions between 1980 and1991. And one third of Ethiopian medical doctors have already left the country.

According to (Girma et al. 2008) the Ethiopian government has also mentioned the following as key problems in the health sector: work overload, staff shortages, unclear or misunderstood job descriptions, budget shortages, unfair promotions, not getting annual leave at the right time, lack of transport facilities, lack of a safety policy and protective materials, and inadequate care for sick health workers. HRH information system is highly under developed with scanty information for policy and strategy development.

The literature shows that the brain drain of medical professionals is threatening the very existence of the countries' health services. The problem of brain drain has reached quite disturbing proportions in certain African countries, with Ethiopia ranked first in the continent in terms of rate of loss of human capital, followed by Nigeria and Ghana (Mutume,2003).

According to recent report from FMOH (2010), the number of health professionals in different parts of the country are lower than what is standard. On the other hand the available professionals increased from time to time. However, there is still major gap in highly skilled professionals like Medical doctors, midwives and anaesthesia professionals.

1.2 Statement of the problem

Human resources are the most important assets of any health system. For health institutions to function effectively and efficiently a well trained, motivated and well functioning health workforce must be produced, deployed, maintained and appropriately utilized towards the goal of improving the health of the population. Recently, concern for human resources for health (HRH) has received increased emphasis despite years of neglect of this issue. Ethiopia, like other countries with limited resources, has been suffering from an HRH crisis (African Health workforce Observatory,2010).

According to AHWO (2010) Developing countries have particularly suffered from high attrition rates, low health manpower production, geographical imbalance and an uneven skill mix of health workers at various levels. The report shows that the national health worker ratio per 1000 population is 0.84. This result is far less than the standard set by the World Health Organization of 2.3 per 1000 population.

In addition to the prevailing low rate of physicians per population, the problem is further compounded by inequitable geographic distribution of these physicians. The Government of Ethiopia recognizes that the low density of physicians poses a serious challenge for the delivery of essential health care services especially in the rural areas where more than 80% of population lives (FMOH,2010).

Despite the efforts of the Ethiopian government to train and deploy more than 30 000 HEWs in rural villages and to train more than 5000 health officers between 2005 and 2010, the shortage of and migration by high-level health workers has significantly compromised the health care delivery system, especially at higher delivery points. In addition even though various endeavours have been made at national level to increase the number of physicians in the country, what has been gained during five years (2005-2010) has also been lost. This affects the health system in many ways, including retraining and recruitment cost (AHWO,2010).

According to recent reports from Ministry of Health in 2013/14 The physician to population ratio improved from one physician per 26,943 populations in EFY 2005 to 1 per 20,970 populations (FMOH,2014). However it is still less than the standard set by World Health Organization. Further FMHO 2010 report also shows that the existing unbalanced physicians to population ratio aggravated by the migration of health workers.

1.3 Objective of the study

1.3.1 General Objective

This study is conducted with the purpose of assessing factors leading to brain drain and its implication to the health sector development and to suggest possible solutions to the problem.

1.3.2 Specific Objective

- To assess the current state of brain drain and also to explore the reasons for migration of physicians to abroad.
- To examine the implications of physicians brain drain on the service delivery and the development of the health sector.
- To examine the degree to which brain drain of physicians is affecting the service delivery and the overall health sector
- To put forward the possible conclusions and recommendations based on the research findings.

1.4 Research Questions

On top of the above points, this research aimed to investigate factors leading to brain drain and its implication on health sector in Addis Ababa. The following are the basic research questions addressed in the study:-

- What are the factors leading brain drain of physicians in selected public hospitals?
- What are the implications of brain drain on the health service delivery and the development of health sector?
- What measurements have been taken by the government to resolve the situation?

1.5 Significance of the study/ Rationale of the study

It is believed that any academic research should be conducted by carrying farsighted and significant aim to solve the society‘s problem directly or indirectly. Hence, the under listed points will benefit the concerned government organs, stakeholders and management of public hospitals as well.

- The outcome of the study enables decision makers to formulate relevant policy for those areas where the brain drain is negatively affecting the development of health sectors in the country.
- It bolsters the government objectives of social development on the sector.
- The outcomes of this study will be helpful in addressing some health sector problems and also help policy makers in understanding the reason behind of brain drain and its preconditions in order for government to realize goals and long term strategies.
- It will also serve as the ground for those researchers who would like to conduct further study on the topic under study.

1.6 Scope and delimitation of the study

The term brain drain is a wide concept and can be done at different level but, due to time, financial and other constraints the researcher limits its scope by considering physicians working at two public hospitals in Addis Ababa city. Thus, the study was confined to investigating factors leading brain drain and its implication on the development of health sector in Addis Ababa.

1.7 Limitation of the study

It is difficult to say that a research study completed without any difficulties, similarly no research study is complete in itself. It is also true of the present investigation. Accordingly the researcher faces the following limitations in conducting the research.

- Lack of adequate financial support
- Absence of adequate research papers conducted by senior researchers for immediate reference
- lack of time to utilize maximum effort due to other work pressure

- Difficulty in addressing targeted physicians due to their work nature
- Lack of accurate information and well organized data relevant for the topic under study

1.8 Organization of the study

The research study were organized into five chapters

- The first chapter deals about the problems and its approaches including background, statement of the problem, objectives, and significance, scope and methodology parts.
- Chapter two deals about review of related literature.
- Chapter three deals with research methodology.
- Chapter four will focus on data presentation, analysis and interpretation of the major results and findings
- Chapter five will wind up by giving a brief summary, conclusion of findings from the investigation made through the study analysis and at last recommendations will be made based on the concluded findings.

CHAPTER TWO

LITRATURE REVIEW

2.1 What is Brain Drain

The concept of brain drain was first used by the British Royal Society to describe a situation in the 1950s, where scientists, doctors, engineers and other skilled individuals were migrating from Europe to the United States and Canada in search of employment (Gibson and McKenzie 2011, Boyo 2013).

Dodani (2005) also defined brain drain as the migration of qualified personnel in search of the better standard of living and quality of life, higher salaries, access to advanced technology and more stable political conditions in different places worldwide.

'Brain Drain', academically also known as the "human capital flight" is the large scale migration of highly educated, skilled and talented people of less economically advanced countries to highly rich and developed countries of the world due to conflicted issues, political instability and lack of opportunities in the developing countries (Borta, 2007).

On the other hand Dovlo (2004) described brain drain as the emigration abroad of tertiary-educated persons at such levels and for such lengthy durations that their losses are not offset by their remittances home, by transfer of technology, or by investment or trade from the recipient country.

According to Borta (2007) the traditional literature views, the exodus of human capital is something of a curse for developing countries, and policies need to be considered to oppose or reduce its negative impact on the emigration countries, including the taxation of migrants' income abroad. However, in contemporary 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 skilled persons' decisions regarding where to work and live, without being influenced by any policy-makers or state administration, whereas brain gain is concerned with the intentional efforts of different institutions designed to identify and generate benefits from the outflow of skilled people.

Similarly Misau, Al-Sadat and Gerei (2010) described migration of health workers as the movement of health personnel in search of the better standard of living and life quality, higher salaries, access to advanced technology and more stable political conditions in different places worldwide. Brain drain may be within countries (internal brain drain), but in most cases refers to cross-border or international migration and often from the developing countries to the developed ones.

2.1 Physician brain drain in developing African countries

The literature shows that Africans are moving to western countries at alarming rates. According to the World Bank (2007) cited in Boyo (2013), "the official estimate of documented 'voluntary' African immigrants in North America and Europe is about 3 million. According to Boyo (2013) the report also shows that in the United States, the majority of Africans (36%) come from West Africa; 24% come from East Africa, 22% from North Africa, 8% from Southern Africa and 3% from Central Africa.

Africa, is the most victimized continent losing professionals that cost it about 3.7 Billion dollars annually. The paradox is that Africa spends about 4 Billion dollars on the salary of about 100,000 European expatriates, which is equivalent to about 35% of the aid donated to Africa (Berhan, 2008).

While the degree is variable, brain drain has been a worldwide problem for decades. However, it is only a few well-developed Western countries that got the benefit of the phenomenon. When the rate of loss is taken into account, most of the time it is Sub- Saharan African countries that loose many and highly qualified professionals (Berhan, 2008).

Any problem that exists within a health care system cannot be tackled without adequate staff, and indeed, no health care system can exist without a workforce to staff it. According to Lofters (2012) high-income countries, on average, have a physician density of 300 per 100,000 people. Lower-income countries, in contrast, have average physician densities of only 17 per 100,000.

The dramatic difference between higher-income and lower-income countries in health care worker supply is a major cause of the migration of these workers from the latter to the former; a phenomenon that is colloquially known as the "brain drain" (Lofters,2012) .

Healthcare services are a rapidly growing sector of the world economy. Globalization processes and the worldwide increase in demand for healthcare have not only fuelled the trade in healthcare technologies but also opened domestic borders for foreign labor in the health sector, resulting in cross-border migration of health workers. While the phenomenon of international health workforce migration was discussed as early as 1974, it has dramatically increased in scale due to the liberalization of markets and changes in population dynamics over the past two decades. The freedom of health workers to offer their services in a globalized employment market seen within the context of a global undersupply of human resources for health (Aluttis et al. 2014).

Today, 40% of some of Africa's brightest minds live outside of the continent (Benedict & Upkere 2012, Boyo 2013). Although many African countries are brain drain victims, the three severely affected ones in descending order are Ethiopia, Nigeria and Ghana. In Ethiopia the medical doctors brain drain has been shown to be the most remarkable one (Berhan, 2008).

According to the World Health Organization (WHO, 2006) cited in (Aluttis et al. 2014) globally there was a shortage of almost 4.3 million doctors, midwives, nurses, and other health workers. It further estimated that globally 75 countries had fewer than 2.5 health workers per 1000 population, which is the 'minimum number necessary to deliver basic health services'. The same report also states that, the large majority of countries with a serious shortage of health workers are located on the African continent.

Similarly a WHO study presented at the 1998 UN Conference on Trade and Development revealed that 56% of all migrating doctors flow from third world countries to the developed nations. The remaining 44% of the migrating doctors flow mainly from developed to other more developed countries (Berhan ,2008).

Even if the health care system in the developing countries faces many problems, human resource being one of the majors. The system is structurally and systemically fragile and weak to provide effective service where it is most needed. Brain drain appears to have complicated the situation and made matters worse (Misau, Al-Sadat and Gerei ,2010).

According to Berhan (2008) the migration of medical doctors from Africa to the developed countries escalates the already existing poor health service and system. Although the main reason for migration of medical doctors to the Western and other developed countries is economical constraint, lack of postgraduate training, poor remuneration, lack of good governance, personal insecurity, poor health institutions facility and political instability are some of the cited push factors (Berhan, 2008).

In addition health professionals in Africa often specialize in countries other than their own, spending long periods of time in post-graduate professional training which often leads to continued residence in the country of training (Lowell and Findlay 2001, Dovlo 2004).

In a globalized market, highly income countries can address their shortages in health personnel by recruiting and importing qualified health workers from elsewhere. Shortages thereby are shifted from highly developed countries to low income countries, thereby increasing global inequities. Because many of the so-called pull factors are external in nature (i.e. outside a country's regulatory boundaries), a Low income countries can do little to influence these factors in order to prevent the emigration of its qualified health workforce (Aluttis et al. 2014).

As shortage of health workers is becoming an increasing problem in both developing and developed countries across the world. The world health organization (WHO) estimates that globally, 4.3 million more health workers are required to achieve the health-related Millennium Development Goals (MDGs). Some parts of the world are particularly affected: while carrying 25% of the world‟s disease burden, Africa has only 3% of the world's health workers (Robinson and Clark 2008, Gebremariam 2010). The situation is worst in Sub-Saharan Africa where 38 of the approximately 47 countries do not meet the WHO recommended minimum 20 physicians per 100,000 population; about 13 sub-Saharan countries have five or fewer physicians per 100,000 population (PHR 2004, Gebremariam 2010).

Further health crisis is facing sub-Saharan Africa. The population has increased markedly. In recent decades, communicable diseases and 'new' non communicable disease epidemics have intensified. HIV/AIDS is perhaps the biggest health challenge. However, the supply of health workers remains low and has been worsened by their migration to developed countries (Dovlo ,2004).

In addition to this according to Dovlo (2004), in sub-Saharan Africa, human resources remain in short supply and, even where available, are poorly motivated and are increasingly attracted into the wider international labor market. Statistical information from the World Health Organization shows wide global variations in health professional availability, ranging for doctors from 2.3 to 664 per 100,000 population; but of the lowest fifth of countries in this range, twenty-eight of thirty-seven are sub-Saharan African countries (Dolvo,2004).

According to Dovlo and Nyonator 1999, Dolvo 2004 the numbers of African health professionals joining the brain drain appear to have increased in recent years in response to the high demand from developed countries; Ghana, for example, also loses professionals (especially physicians) to other developing countries, especially to South Africa. However, the main demands have come from demographic changes in industrialized countries that have resulted in aging populations and a reduction in the availability of young people to recruit into the health workforce. For African countries, the loss of health professionals, combined with increased internal demand for health professionals due to the health crisis threatens the entire development process in sub-Saharan Africa and its ability to meet health-related millennium development goals (Dovlo ,2004).

The loss of health care workers can have devastating impacts on lower-income countries, especially when we consider that it is often the brightest of the bunch who have the best chance of migration. The International Organization for Migration (IOM) estimates that lower-income countries pay US $500 million per year to train health workers who go on to migrate to high-income countries. The Caribbean and Sub-Saharan Africa have been especially hard hit by health worker migration (Lofters, 2012).

Similarly Lofters (2012) explains that most of the health professionals emigrating from sub-Saharan Africa go to a few recipient countries, mainly, the United Kingdom and the United States. This direction of flow should make it relatively less complicated to establish inter-country arrangements to manage migration. However, bilateral agreements in Africa so far have been among developing countries with little involvement by the major recipient countries.

However the concern is that the exodus of African doctors will undermine the quality and delivery of healthcare services with long-lasting negative effects as many African countries struggle with crushing healthcare burdens. (KNOMAD, 2015).

At the same time as physicians from developing countries migrate to the developed world, hospitals and clinics in these countries become understaffed, and as a result the overall standard of care declines, while the national burden of untreated disease increases (OKOH, 2010).

Despite this grave situation, the ratio of doctors to patients in sub-Saharan Africa is now estimated to be 17.1 physicians per 100,000 people. The emigration of physicians and resulting physician shortage, coupled with the high prevalence of HIV infection and AIDS, puts a severe burden on the patients and healthcare workers in the sub-Saharan region. The result is diminished access to and quality of care, and significant limits on the provision of all health care services (IOM 2007 p. 11, OKOH, 2010).

On the other hand poor countries are also losing a return on their investment (Patel 2003, Gebremariam 2010) and subsidizing the health systems of richer countries (Snyder 2009, Lopes 2008, Gebremariam 2010): according to the International Organization for Migration (IOM), developing countries spend 500 million dollars each year to train health workers who leave to work in developed nations (Lopes 2008, Gebremariam 2010).

Recipient countries thus reap a variety of benefits from the immigration of foreign physicians, including increased access to health care for their citizens, increased economic productivity, and savings from limited public support for medical education. The immigrant physicians also benefit by making the transition from the developing to the developed world. They can improve their general standard of living dramatically and look forward to a better life for themselves and their families (OKOH, 2010).

Misau, Al-Sadat and Gerei (2010) conclude that migration of medical personnel impart more negatively on the health care of the exporting countries than positively. Moreover, because of the nature and complexity of this problem, sincere and committed efforts are needed from both the medical workers and the governments of developing and developed countries. There is need to change not just the process, but the entire systems in most of the developing countries. The governments should chose between politics and people, while the medical workers should balance their individual needs with ethics.

In addition it is expected that this flight of human capital from developing countries is likely to worsen since developed countries appear to spend less time investing in their own health care and education sectors. Because of this underinvestment, developed countries constantly

find themselves in a state of crisis where they rely on less developed countries to fill the professional gaps in these essential sectors (Johnson, 2009).

On the contrary the "Brain Drain" is not a phenomenon that only concerns developing countries. In many developed countries, skilled workers are beginning to feel threatened by the large amounts of skilled labor force entering their country because they now have to compete for jobs with migrants (Kapur and McHale 2005, Johnson 2009).

2.3 Brain drain of Physician in Ethiopian

Like other developing Africa Countries the medical doctors' brain drain has been shown to be the most remarkable one. Chimenya and Qi (2015) explains that one third of Ethiopian medical doctors have already left the country. According to America AIDS coordinator report cited in Berhan (2008) Ethiopian medical doctors living in Chicago alone outnumbered the homeland figure. For underdeveloped countries like Ethiopia, on top of the natural and manmade disasters, shortage of professionals is becoming a bottleneck for the development endeavour the countries aspire to (Berhan, 2008).

FMOH (2010) report also show that one of the treats that exists in the health sector is Brain drain especially medical doctors brain drain. Furthermore brain-drain has been identified as the main problem, as locally trained doctors leave the country seeking better opportunities elsewhere, and those sent abroad for training fail to return. An estimate for the 1984-1994 period shows that 43 percent of doctors trained abroad did not return (Adugn, 2008).

On the other hand six of the twenty countries with the highest emigration factors (arrived at by measuring the loss of physicians from a country as a proportion of the physicians remaining to do the work of health care) are in Sub-Saharan Africa. In declining order these are Ghana, South Africa, Ethiopia, Uganda, Nigeria and Sudan. Southern African Migration Program (2006) also expressed that with the unleashed forces of globalization, the problems of brain drain and capacity building have become pertinent to the ongoing discourse on development among conscientious Ethiopians (Desta, 2014).

On the contrary there is little information on migration (brain-drain) in Ethiopia but there are clear indications that it is high and growing. Beside this there is no policy specific to human resource development (HRD) for health and no proper mechanism to manage the existing health workforce (Girma et al. 2008).

On the other hand CIRPEE (2008) research finding show that put that placement of new physician through a lottery system as a cause for medical brain drain. He further explain that using a lottery to assign new physicians to jobs could compromise the future allocative efficiency of the labor market, and even contribute to the medical brain drain. Chimenya and Qi (2015) also describe that within the group of lottery participants, the most able tend to leave and are likely to account for a substantial part (one third) of the physician brain drain out of Ethiopia.

In addition according to Berhan (2008) from the Ethiopian perspective, some of the contributing factors (push factors) for physicians migration seen in many literature and during different national and regional meetings is financial and housing issue which is driving factor for physicians to leave the public sector.

Berhan (2008) also describe that the Ethiopian situation, the existing system is in line with the interest of the Diaspora; it pushes physicians to go to other countries and come back with multiple privileges. To cite just a few, medical doctors in the Diaspora, if they come back,

- Allowed to import duty free automobiles and other goods, but not for doctor working in the country.
- Will be provided 500 square meter land plot in Addis Ababa for residential house construction. By chance, if a medical doctor working in Ethiopia gets land plot, it is in the range of 150- 175 square meter.
- Are much favoured for investment opportunities.
- Get much government and mass media recognition. From this one can conclude that the existing system encourages much internal and external brain drain.

Berhan (2008) conclude that this approach negative implication is that to attract very few from abroad, it is disappointing, demoralizing and creating a strong push factor for those working in the public sector. To capitalize, it has a connotation of to be recognized, privileged and well remunerated by the government a medical doctor has to leave this country.

2.4 Support and argument on brain drain

In principle there are two groups who benefit most and those who bear a cost from health workforce migration. According to Aluttis et al. 2014 those who benefit from health workers migration are the migrants themselves and the residents of the recipient country. At first, health workers themselves clearly benefit due to usually better working conditions, better career opportunities, and higher salaries. In addition, the residents of the recipient country benefit from an adequate supply of healthcare services and a savings of tax moneys through training fewer healthcare professionals than they would otherwise need. Some argue that the sending countries benefit to some extent as well from receiving financial remittances from the health workers living in developed countries.

2.4.1 Supporters of Brain Drain of physicians

The freedom of physicians to emigrate is a matter of increasing ethical debate. Advocates of international health mobility emphasize the benefits for individuals in enhancing their careers and earnings opportunities by moving to other countries, benefits to host countries of improved health care, and benefits to source countries produced from remittances and other components of knowledge transfer (Bach 2008 p. 203, OKOH 2010).

Supporters of brain drain believe that global migration has an overall beneficial effect on both the sending country and the destination country. They espouse a more liberal position on migration and claim that in the long run, migration of skilled persons from developing countries to developed countries can contribute to national progress in developing countries (Easterly & Nyarko 2008, Boyo 2013).

Similarly defenders of international physician migration argue that it would be unethical to restrict the free movement of skilled professionals, and it would be difficult to enforce a ban on emigration. They argued that Physicians, have as much right to safe working conditions and decent pay as anyone else does (Bundred & Levitt, 2000; Saravia & Miranda, 2004; Klein, Hofmeister, Lockyer, Crutcher, & Fidler, 2009; Watkins, 2005, OKOH 2010).

According to (Easterly and Nyarko 2008, Boyo 2013), the benefit of brain drain is that it promotes personal freedoms and is “voluntary”. It stimulates increased investments in human capital and enhances the standard of living of family members left behind through remittances and returnees returning with “technology”. The pioneers of this positive understanding of brain drain deviated from the standard belief that brain drain mostly presented negative

consequences and proposed that brain drain could actually promote 'brain gain' (Boyo, 2013). The brain gain hypothesis posits that the migration of highly skilled individuals from developing countries to developed countries actually has a positive developmental effect on the home country and promotes transnational activities (Hunger 2002, Boyo 2013).

The pro brain drain argument also suggests that even when the migrants don't return home, the knowledge they acquire often does. Those who argue from this standpoint sometimes posit that some source countries may even be better off if the highly skilled migrants never come back (Hart 2006, Johnson 2009). This is because in the developed countries, they can learn specialized skills and acquire expertise training that they would have probably forgone had they remained in the home country. As communication channels improve, it has become easier for these migrants to share their newly acquired knowledge with those at home. The "Brain Drain" then becomes a sort of legitimate export industry (Sanders 2007, Johnson 2009). The source countries provide their citizens with the foundation knowledge and resources, and then they export them to developed countries. In turn those who migrated send back remittances and newly gained knowledge.

As a result, it may be more of a mutual gain than a "Brain Drain" as the increase in knowledge and technology will eventually diffuse to the source countries (Johnson, 2009). Others argue that in the case of circular migration patterns, countries can gain significant skills and knowledge if the emigrant worker returns home after a few years abroad. One survey found that 50% of physicians in the United Kingdom who emigrated from low income countries had the intention to return to their home countries at some point. These individuals will have enhanced knowledge and skills that they can put to use once they return to their home country (Aluttis et al. 2014).

While the pro brain drain camp acknowledges that there is a loss of professional personnel and financial capital in the home country as a result of migration, they insist that this loss is only temporary and stability is restored once enough individuals are trained to replace the emigrants (Easterly & Nyarko 2008, Boyo 2013). The problem with this approach as stated by Ansah (2002) cited in Boyo (2013), is that there is a tendency for these replacements to want to emigrate as well. Further the hypothesis of brain gain is strongly based on the assumption that emigrants will actually return to their country (Hunger 2002, Boyo 2013).

2.4.2 Opponents of Brain Drain

Critics of the brain drain, on the other hand, believe that the global migration of skilled individuals is an uneven process and produces a zero-sum situation. According to this perspective, brain drain is characterized by the "exploitation" of developing countries by western countries through the poaching of their educated elite (Ansah 2002, Boyo 2013). Brain drain increases social inequality and rates of poverty (Lowell 2002, Boyo 2013). Generally Critics view brain drain as an economic loss to the home country (Boyo, 2013).

According to Tucho's (2009) cited in Boyo (2013), a survey of highly skilled Ethiopian individuals in Ethiopia and in the United States shows that the social, economic and political development of a country is highly dependent on the utilization of its skilled personnel. Further (Ansah 2002, Boyo 2013) explain that destination countries aggravate the situation by specifically selecting out the most educated individuals during the immigration process. According to this approach, migration of skilled individuals leads to the complete loss of public investment by the home country and the complete profit of these investments by the destination country.

With growing recognition of the significant benefits and burdens of international migration of physicians, debate has surged in recent years regarding the moral implications of this phenomenon. One proposed idea is that foreign medical graduates are perceived by receiving countries to be dispensable commodities, a supply of physicians that can be spontaneously accessed by the wealthier countries who can afford to employ them for their own needs (Wright, Flis, & Gupta 2008, OKOH 2010). Others accuse developed countries of purposefully under-producing medical professionals and filling the void with foreign medical graduates because it is more economically expedient (Bohl 2008, p. 3, OKOH 2010).

In addition to this, a study on nine sub-Saharan countries asserts that the collective investment loss for training those doctors who are currently working abroad approaches $2.17 billion. Reportedly, Kenya alone loses an investment of about US$500,000 for every doctor who migrates. Accordingly, the gains of these investments shift to the receiving countries, who can save on their training investments. It has been estimated that the total financial savings of recruiting doctors from abroad amounted to up to $2.7 billion for the United Kingdom and $846 million for the United States, thereby effectively acting as a subsidy for high income countries health systems (Aluttis et al. 2014).

According to Adams Walter (1968) cited in (Ansah 2002, Boyo 2013), western countries are simply cashing in on the returns of the investments they made in African countries through the dispensing of "foreign aid". Foreign aid from western countries is basically a business investment. Much of this 'aid' money that developing countries invest in education is taken back with higher returns through the absorption of educated individuals from developing countries into developed countries (Ghosh & Ghosh 1966, Boyo 2013). This ultimately boosts the economy of western countries and stagnates those of developing countries (Boyo, 2013).

In addition to the economic dimensions, due to migration the sustainability of healthcare systems in developing countries increasingly comes under pressure as facilities become understaffed, the quality of care decreases, and the morale among the remaining staff deteriorates (Aluttis et al. 2014).

Furthermore, it cannot be always assumed that migrants experience a more satisfactory life in the receiving country. Standard of living should not be equated to quality of life. To assess migrants quality of life, it needs to consider the length of hours they are working, the ease with which they can communicate with relatives and friends in the source country, time spent commuting between the place of residence and the work place, how satisfied they are with the climate, levels of taxation and access to social services. When people decide to leave their home country, they also deal with the opportunity costs of leaving (Grubel and Scott 1977, Johnson 2009).

Johnson (2009) also argue that when highly skilled citizens leave their home countries, they are sending a message to their governments to do better. But, suppose what they are really doing is the complete opposite. If those with the education and intellect to create change in the government leave, then what is expected to happen to the source country? How can we expect that the country will suddenly find alternate resources and human capital to do the work that needs to get done?

The drawback of this approach is that it does not shed light on the factors that attract migrants to the receiving countries (Castles 2009, Boyo 2013). Some nationalists among opponents of brain drain are often criticized for not paying enough attention to the factors that make it difficult for professionals to remain in their home countries. Another criticism of this approach is that it places greater burden on the home country to try and retain and attract its citizens abroad back home through nationalistic discourses on patriotism and allegiance (Ansah 2002, Boyo 2013).

2.5 Factors Influencing Migration of physicians

Most of the existing literatures recognize that the decision to migrate is the result of the interaction between several identifiable factors both from home and abroad which are expressed as push and pull factors. According to (Aluttis et al. 2014) a number of push and pull factors, have been influencing the decisions of health professionals to leave their countries of origin. Push factors are internal in nature, and they are those factors that exist in the country of origin and drive a health worker away from the health system in which they were trained.

Pull factors in turn are external, because they describe those circumstances in the destination countries which provide an incentive for health workers to immigrate.

Different literatures like Boyo (2013), Dovlo (2004), Gebremariam (2010) and many others describe the main push and pull factors which lead physicians brain drain in developing countries as follows:

2.5.1 Push factors

- Low pay (absolute or relative)
- Poor working conditions
- Lack of resources to perform work in an efficient manner
- Limited career opportunities
- Limited education and further training opportunities
- The burden of infectious diseases such as HIV/AIDS
- Unstable and dangerous working environment
- Economic instability

2.5.2 Pull factors

- Higher pay
- Better working conditions
- Well-financed health systems
- Attractive Career opportunities
- Further education opportunities
- Political stability
- Travel opportunities

On the other hand According to Dovlo (2004) both the push and pull factors which lead physicians brain drain reflected in terms of gradient or tensions in the influence of these factors between source and recipient countries. According to Dovlo (2004) the key gradients are:

1. Income gradient, or the difference in remuneration and living conditions between the home and recipient countries.

2. Job satisfaction gradient. The perception of a good working environment and professional and technical proficiency that allows for international peer recognition is important.
3. Organizational environment/career opportunity gradient. This factor expresses how fair and accessible opportunities are for career advancement and for professional specialization. It is also related to governance, politics and ethnicity as factors in demotivating professionals.

4. The governance gradient involves differences in the efficiency with which health services are managed, including the amount of administrative bureaucracy. Other factors include corruption, nepotism and political instability.

5. The protection/risk gradient means that the lack of protective wear at work coupled with a perception of increased occupational risk arising from the HIV/ AIDS epidemic makes the receiving country more appealing to some health professionals deciding to work abroad.

6. The social security and benefits gradient is concerned with security after retirement. Retirement and pension benefits are thus important motivation factors.

2.6 The Consequences of Physician Migration

The strength of any nation depends to a large extend on its productivity, which in turn depends on the well-being of the population. Emigration of health care professionals has both short and long-term consequences on the sustenance of the originating countries. Sub-Saharan Africa in particular faces the greatest challenges, with 11% of the world's population and 25% of the global disease burden; yet the region has only 3% of the global health workforce and accounts for less than 1% of health expenditures worldwide. The proportion of effects of brain drain depends on the extent of a country’s development. Developed countries, overall, have large numbers of healthcare and other professionals, the developing countries may have just a handful. However, a major obligation of any government to its population is to pursue

and implement policies that increase numbers of these key professionals to a desirably stable level, or where they are already approaching stability, to maintain them at those levels (Misau, Al-Sadat and Gerei, 2010).

According to Mutume (2003) many African countries have shown considerable effort to train more medical doctors of their own citizens; however, the rate of brain drain is incomparably outstripping the production rate. According to him Africa, as the most victimized continent is losing professionals that cost it about 3.7 Billion dollars annually. He added that the paradox is that Africa spends about 4 Billion dollars on the salary of about 100,000 European expatriates, which is equivalent to about 35% of the aid donated to Africa.

Similarly according to Bohl (2008) the major consequence of this loss is a dramatic decrease in the availability and quality of healthcare. Fewer doctors means fewer patient visits, less time with patients, more expensive care, and higher rates of disease. The second consequence is the loss of considerable investment on the part of developing nations. While not always a tremendous loss in income for a developing nation due to the significant amount of money that finds its way back in the form of remittances, an individual migration always represents a tremendous loss in human capital. Developed nations, ironically the countries with the strongest healthcare systems benefit from physician migration. Accordingly they save millions of dollars by relying on foreign-trained physicians to fill the gap between the number they need and the number they train (Bohl, 2008).

According to Boyo (2013) and Schnidman (2013) the major and immediate consequence of physicians migration are:

2.6.1 Loss of Essential Personnel and Decline in Quality of Services

The first and perhaps, most obvious consequence of brain drain is the dearth of qualified professionals. The absence of skilled individuals has a direct and negative effect on the delivery and quality of services available to the public in the home country. (Adepoju, 2008, Boyo 2013).

In the healthcare sector, brain drain has resulted in the inadequate delivery of healthcare services (Adepoju, 2008, Boyo 2013). In some parts of sub-Saharan Africa the number of patients that have to be treated by a single physician has increased (Chikanda 2004, Boyo 2013). The availability of a physician or any professional for that matter has serious

implications on the access, effectiveness and quality of care and service in both the public and private sectors of society (Boyo, 2013).

2.6.2 Loss of Investment and Potential Revenue

Another consequence of brain drain is the loss of educational investments. Brain drain results in a financial loss for African countries because the handful of highly skilled individuals that African countries have managed to educate are absorbed by western countries at little to no cost to western countries (El-Khawas 2004, Boyo 2013).

2.6.3 Remittances

Contemporary literature on brain drain is filled with references to remittances as a generally positive aspect of an otherwise negative process of brain drain. Bucklaschuk and Wilkinson (2011) cited in Boyo (2013) define remittance as "monies sent by immigrants to family members in their home country. These monies are used by families to elevate their quality of life and may assist in sending siblings and children to school, purchasing new residences, renovations to existing structures or other familial expenses". Remittances are such a significant aspect of brain drain and furthermore, remittances are now estimated to exceed the amount of foreign aid received by developing countries (Nworah, 2005). Some reports have approximated yearly remittances of African migrants to be between US$10-40 billion (World Bank, 2011). In 2008, remittances to sub-Saharan Africa totalled at US$ 20 billion up from a total of US$4 billion in 2002 (Bollard et al. 2010, Boyo 2013).

2.6.4 Cycle of migration

Another problem that the brain drain causes as stated by Schnidman (2013) is the cycle of migration and recruitment that occurs in some countries. For example, South Africa is one of the middle-income countries that is most affected by the brain drain, losing over 50% of their health care workers each year. South Africa is then forced to recruit expensive foreign expertise, which in turn creates a nearly unstoppable vicious cycle (Schnidman, 2013).

2.7 Cost and Benefit of health workers migration

Generally speaking health workers brain drain has both benefit and cost for sending and receiving countries. Aluttis et al. (2014) put the effects of health workers migration as follows.

2.7.1 Cost of health workers migration

Table 2.7.1 Cost of health workers migration

Sending countries	Receiving countries
_Shortages in domestic healthcare service capacity	_ Some administrative costs involved
_Financial loss in investment of training and educating the workforce	_ Enhanced local competition
_Financial loss of consumption and tax receipts	
_Decline in morale and commitment among remaining workers	
_Loss of social and human capital	
_Knowledge spillover losses	
_Undermining institution building and development as a whole	
_Loss of expert knowledge in academia and education centers	
_Loss of role models for young students	

2.7.2 Benefit of health worker migration

Table 2.7.2 Benefit of health workers migration

Sending Countries	Receiving countries
_Remittances received from people working abroad	_ Relief of supply shortages
_ Improvements in skills of returnees	_ Improved quality of healthcare
_Collaborative partnership between diaspora and local professionals	_ Tax receipts from foreign workers

2.8 How have countries deal with the existing physicians migration?

The problem of brain drain and its devastating impact on the health care systems are clear. Policy-makers are finding that solutions, unfortunately, are not so clear. Yet they are urgently needed. As the shortage in poorer countries rises, so too does the demand from richer countries. To target the issue of recruitment, attempts have been made to establish international codes of conduct (Lofters, 2012).

According to Dovlo (2004) countries in Africa have attempted to mitigate the problems created by the brain drain in health through various means, which are discussed below.

Incentive and Motivation Systems

Remuneration levels are probably the most important factor in retention. A conference of Commonwealth African countries (Commonwealth Secretariat 2003) cited in Dovlo (2004) elicited a variety of local and general incentives tried by countries, though many have not met with significant success. Such as significant rises in allowances, introduced additional duty hours allowance, 'skills and location incentives schemes targeting highly needed skills and deprived areas' aimed at providing incentives to retain certain specific highly demanded specialties etc.

International Recruitment and Inter-Country Arrangements

Richer African countries such as Botswana, Namibia and South Africa have recruited health professionals from other countries. On the other hand, many countries in Africa have had agreements with Cuba and have received groups of doctors especially for rural and deprived-area work.

Bonding and Compulsory Service Schemes

Bonding health professionals to work in public services has not worked well due to the poor efficiency of human resource (HR) management systems; however, several African countries have such policies. Such policies require new graduates to work in assigned locations for a number of years (usually two or three) before becoming fully registered, becoming eligible for specialist training or becoming fully certified to practice.

Management of Migrants' Return

The International Organization for Migration (IOM) has collaborated with some countries to encourage citizens in the diaspora to return to their countries of origin. The IOM instituted a program termed Return of Qualified African Nationals (RQAN) in the early 1990s, which has

now been replaced with the Migration for the Development of Africa (MIDA) program. MIDA is coordinating with the New Partnership for Africa's Development (NEPAD) and other organizations to facilitate the temporary return by professionals to offer their skills in specialized services and investments (International Organization for Migration 2000, Dovlo 2004).

Export Management

It may be argued that migration has brought benefits to source countries in the form of remittances and investments. Several African countries indicate that financial transfers made by nationals living abroad now constitute a major foreign exchange source. The Africa Union's Labour and Social Affairs Commission data cited in Dovlo (2004) show that remittances are now beginning to rival foreign direct investment and overseas development aid in some countries.

Extended Retirement Age

Some countries have changed (or plan to change) the official retirement age in order to extend the working life of health professionals.

Coping Strategies in Educating and Training Professionals

A number of strategies that relate to health professionals' training and profiling have been proposed in some countries to stem the outflow of health professionals and to mitigate shortages.

Profiled Selection of Training Candidates

The use of quotas or geographical criteria for selecting candidates for health professionals' training have been proposed in some countries. Pure academic merit has been faulted for producing elitist professionals, because candidates coming from deprived communities with poor educational infrastructures are simply unable to compete with candidates from the elite urban schools.

Using New Community-Based Curricula

A number of medical schools in Africa, (including Yaounde, Cameroon; Ile- Ife, Nigeria; Jimma, Ethiopia; Transkei, South Africa, etc.) have adopted innovative student-centred, problem-solving and community-based approaches to health professional education and have been praised as producing professionals with locally relevant skills and a community service orientation. A key constraint, however, is an unmet need for the re-orientation of medical

educators away from existing traditions that emphasized the 'international' standards and methods of medical education (Ndumbe 2004, Dovlo 2004).

Tertiary Education's Involvement in Training 'Substitute' Professionals

Produce 'assistant medical officers', 'surgical technicians', (and other staff-run services in rural hospitals) who carry out many of the tasks of doctors. These cadres are usually not university trained and medical education has not shown significant interest in their development. They are country-specific professionals who are not internationally tradable and are retained especially in rural areas.

Increasing the Output of Training Institutions

Increasing the supply of health professionals has often been the immediate response of countries to brain drain and shortage of personnel. Expanding production of trained human resources without an improvement in retention incentives, however, cannot be an effective response. An aspect of brain drain is the loss of tutors which may affect training quality in the face of an expanded intake. Whilst the number of professionals leaving already reflect a pressing problem, the loss of key trainers and specialists undermines the capacity to respond to the brain drain (Dovlo, 2004).

Similarly according to Gebremariam (2010) Several strategies have been developed to overcome the problem of health worker migration and address brain drain both in sending and receiving countries.

In sending countries, several health worker retention strategies have been proposed and some adopted throughout the years. Provision of financial and non financial incentives is one measure. The impact of provision of non financial incentives such as training and study leaves were found to motivate health workers to continue their services in public facilities hence enhancing retention. (Willis Shattuck et al. 2008, Stilwel et al. 2004, Gebremariam 2010).

Other strategies that have been implemented in some set ups include: stay or pay mechanisms whereby health workers who wish to leave the country pay a certain amount of money mainly intended to cover for the free education they have received, mandatory work requirements whereby health workers are obliged to provide services in the public sector for a certain period, training of health workers in local health problems making them less marketable in the global market; and training rural health workers who are believed to be more likely to remain and work in rural areas (Frehywot et al. 2010, Grobler et al. 2009, Wibulpolprasert and Pengpaibon 2003, Pang et al. 2002, Gebremariam 2010).

Recipient countries have also put some commitments to assist the loss of health personnel from poor countries: in Norway, for instance, there has been an advocacy towards including working towards self sufficiency through training of a higher number of health personnel as well as making more efficient use of existing personnel, better organization of the health sector and through qualification schemes for unskilled workers. There have also been efforts to support health systems in developing countries who suffer from health worker shortage through assistance on matters such as research on human research issues, recruitment and training, incentives to promote retention etc. and through the provision of compensating sending countries for their loss. There has also been advocacy to provide compensation for countries from which health worker that come to Norway come from though either monetary or other forms of support such as transfer of knowhow, skills and technology (Norwegian directorate of health 2007, Gebremariam 2010).

Similarly in May 2003, countries of the British Commonwealth, ranging from Canada to small island states such as Malta, adopted an International Code of Practice for the International Recruitment of Health Workers. The main section of this Code focused on discouraging physician recruitment from developing countries with their own shortages. Another critical issue that the Code addresses is the possibility of financially compensating the developing countries for the costs of education and training. However, the Commonwealth countries have yet to implement this policy because they are experiencing difficulty in evaluating the countries' net losses (Schnidman, 2013).

In addition as of 2004, the OECD countries have not signed the Code, but have started to create regulations and have entered bilateral agreements that restrict the length of stay for foreign physicians (Garson, 2004, Schnidman 2013).

For example, the United States implemented a "cultural exchange visa" that limits the stay of foreign health care workers such as doctors, nurses and medical professors or instructors. After their visa expires, workers are required to go home for two years until they are able to apply for re-admittance (Forcier, Giuffrida, & Simoen, 2004, Schnidman 2013). This policy ensures the return of health care workers to their own countries and encourages them to share knowledge and expertise with their colleagues back home. In the future, this policy hopes to promote a "brain exchange" rather than a "brain drain" (Forcier et al. 2004, Schnidman 2013).

2.9 Circular migration

Circular migration is a relatively new phenomenon in the international policy agenda, although not a new happening. It has attracted attention in recent years, because it is believed to provide a solution to the complex problem of health worker migration (Vertovec 2009, Gebremariam 2010). Circular migration refers namely to the temporary return of health professionals to their countries of origin for the purpose of providing professional work, which can be repeated at different times (Gebremariam, 2010).

Circular migration is frequently viewed as one form of temporary migration, in which temporary stay in the host society may be repeated at a later date. It has been indicated by policymakers and researchers alike as a migration 'tool' which creates a 'triple win' situation, producing three beneficiaries: the host society whose labor shortages will be filled; the migrant who will have greater opportunities to increase his/her employability; and the country of origin which will benefit from remittances as well as newly-acquired skills of returning migrants (European Migration Network, 2011).

The International Organization for Migration acknowledges the importance of circular migration and, together with sending and receiving countries, has launched a Migration for Development in Africa (MIDA) initiative in 2002 to facilitate technology and knowledge transfer through Internet communication, and through temporary return of skilled migrants to their countries of origin without the risk of loss of visa status loss in the destination country (IOM 1, Gebremariam 2010).

A number of African countries, including Benin, Burkina Faso, Burundi, the Democratic Republic of the Congo, Ethiopia, Ghana, Guinea, Mali, Mauritania, Morocco, Nigeria, Rwanda, Senegal, Sierra Leone and Somalia, have set up MIDA programs. Through mobility based approach, this initiative is intended to assist African highly skilled nationals to contribute to the development of their countries of origin directly. The program was endorsed by the African Union (AU) in 2001 (IOM 1, Gebremariam 2010).

2.9.1 Advantages of circular migration

Circular migration has a number of advantages. One of the advantages of circular migration, seen in the light of migration theories, is that it allows migrants to stay in their countries of choice, therefore allowing them not to be subjected to the push factors that in the first place

pushed them to migrate. They would still enjoy the benefits of the "pulls" from rich countries. Circular migration also allows for brain drain to be transformed into brain gain, and especially if targeted at those workers most in need, can allow for significant transfer of knowledge. Sending countries benefit by having a temporary return of workers who have acquired better skills and better training abroad, and they still get benefit from remittances (Ogilvie et al. 2007, Hooper 2010, Gebremariam 2010). If migrants experience temporary migration to their home countries with successful return, they might be motivated to go back again because they will have less fear of difficulties with return, and others might look at their experiences, making the process a success on the long term (Gebremariam, 2010).

Circular migration can also have a number of positive effects on both countries of origin and countries of destination. It enables destination countries to meet labor short- ages in a flexible and timely way, and allows them to address shortages that are specifically seasonal or short term. For countries with shortages in particular skill areas, it can allow them to buy time to train sufficient local workers to do key tasks. For those experiencing aging, circular migration may offset the aging of local populations without eventually contributing to the growth of the aged population (Migration Policy Institute ,2013).

Circular migration also reduces the risk of losing human capital to brain drain. The difference between circular migration and permanent migration with respect to brain drain is that the human resources embodied in the migrant are only partially lost during the migrant's absence from the sending community. Moreover, the potentially greater commitment of circular migrants to their place of origin means they are likely to be more engaged in economic and social activities in the sending community (Migration Policy Institute ,2013).

2.9.2 Limitations of circular migration

According Gebremariam (2010) circular migration might suffer from a number of limitations. For such a policy to be effective there is a need for strong collaboration between sending and receiving countries. Even if health workers agree to go back to their home countries temporarily, they have to be able to have a guaranty for keeping their posts in receiving countries, and of being able to return back after the completion of their stay. Thus, the practical and legal implications are many and complex. Thus, what is referred to as process in the policy triangle framework (Walt and Gilson 1994, Gebremariam 2010) will be a difficult

process, influencing the implementation of such a policy. It would also be difficult to implement such a policy in set ups where migrants do not trust governments.

The other issue is that, since this is based on voluntarism, it is difficult to predict the sustainability. Circular migration might be more feasible for fields other than health that might not require the permanent presence of the worker, since it might be possible to follow up the work at long distance, for example through internet communication. If circular migration is to work in the health sector, it might mean that leaving health workers are replaced by others taking on their positions which might need a lot of programming and collaboration (Gebremariam, 2010).

On the other hand circular migration by itself is unlikely to compensate for the huge losses that countries incur due to health worker migration, both in terms of adverse impacts on health and health systems, and in terms of financial losses as Hooper (2008) points out referring to the so called win-win –win anticipated (Gebremariam ,2010).

In order for circular migration to be an effective catalyst for development, systems of circularity must be properly managed and well-governed. Destination countries should design their migration policies and programs to be development friendly, and origin countries should ensure the capital and expertise that migrants bring back are put to good use. Most importantly, destination and origin countries must cooperate to build coherent systems that work for the benefit of all three parties destinations, origins, and migrants (Migration Policy Institute ,2013).

2.10 The practical case of Zimbabwe physicians brain drain

The literature shows that previously Zimbabwe health sector has been in good position compared to other African countries. However, recently the sector has encountered difficulties including brain drain of health workers accompanied by other factors. Therefore it is relevant to see the case of Zimbabwe brain drain of health workers, factors leading the brain drain and the policy responses taken by the government and its outcome to take a lesson from their experience.

According to Chibango (2013) Zimbabwe Medical brain drain has become one of the contributing factors leading to the continuous deterioration of the health sector of Zimbabwe. Before all this, the health sector of Zimbabwe was considered as one of the best in the African

continent. The World Health Statistics 2007 records show that the health sector in Zimbabwe was critically understaffed, especially for a country whose health situation was already in bad shape. It is under these worsening conditions that the country experiences a massive medical brain drain (Chibango, 2013).

Over the past two decades, Zimbabwe has lost more than half of its medical doctors, mainly as a result of worsening economic and political conditions (Clemens and Pettersson, 2006; Docquier and Bhargava, 2006; Gaidzanwa, 1999; Mutizwa-Mangiza, 1999, Chikanda 2010).

Zimbabwe has trained 1200 doctors during the 1990s, but only 360 remain in the country by the year 2000 (Misau, Al-Sadat and Gerei, 2010). Similarly as the political situation has been unstable since 2000, 51% of the Zimbabwean physicians are estimated to be working elsewhere in the world (Clemens and Pettersson, 2008, Chimenya and Qi 2015).

According to Chibango (2013) data from the Central Statistics Office covering a period of four years (1995-1998) show that even though a total of 100 doctors were trained every year, the fact that the number of doctors increased by only 51 during the same period probably shows the extent to which international migration was occurring.

The loss of medical doctors has negative impacts on the quality of care in Zimbabwe. The migration of medical doctors from health institutions in Zimbabwe led to an increase in workload of those who chose to remain. The absolute decline in real numbers of medical doctors in Zimbabwe largely account for the increase in the patient to doctor ratio. The MoHCW estimated the (2004) doctor rate to patient at 1:6000. However, these rates would vary according to the location of the health institutions (Chikanda, 2010).

2.10.1 Push' Factors in Zimbabwe

According to Chibango (2013) about 68% of health professionals interviewed expressed intention to migrate and work in other countries, mostly in the United Kingdom, South Africa and Botswana. Reasons given for intention to migrate had to do with the economic hardships they were going through. Some of the health professionals that considered emigrating sought better salaries in the intended countries of destination, money to buy a car or a house, while others sought better living conditions as they could not see any future in Zimbabwe. Some of the reasons given for emigration included increased political violence in the country, securing a future for the children, lack of resources and facilities in the country, a general decline of

health care services and poor management of those services in the country. The study also showed that the prevalence of HIV/AIDS together with insufficient facilities to prevent possible infection during work created stressful working conditions due to fear of contracting the virus (Chibango, 2013).

Similarly Chikanda (2010) survey findings show that the three most frequently cited reasons for leaving Zimbabwe are the bad political environment, lack of opportunities for career advancement, and the poor economic conditions in Zimbabwe . Other important factors leading to the migration of the doctors from Zimbabwe include unsatisfactory working conditions, inadequate remuneration and benefits and the collapse of health care system.

2.10.2 Effects of Migration on Service Delivery

Medical brain drain has made a negative impact on the health sector. The remaining staff had excessive workloads and this led to low morale. It meant dealing with many patients, who in turn had to wait for long hours in order to be attended to. There were also some unnecessary deaths as some patients died of otherwise curable diseases while waiting in long queues. Migration swept away most of the experienced professionals and this compromised the quality of work. The brain drain has also caused inequity in terms of access to health delivery services. The rural areas were affected most as most skilled health professionals moved to urban areas. Unqualified cadres filled the created gap in the rural areas and this compromised the quality of service delivery (Chibango, 2013).

2.10.3 Factors influencing the Retention of Health Professionals

Chibango (2013) study result showed that many professionals would stay if they were offered better salaries, better fringe benefits and a more pleasant and caring working environment. According to his research finding many intended to stay if there were improved facilities and resources in the health care system and a reasonable workload. A more peaceful social environment in the country motivated some. Others intended to stay if there were more accessible education and training opportunities. Some of the motivating factors included better working relationships in the public health sector, better quality education and training in respective professional fields, provision of adequate day care facilities for children of employees and better leadership in the health sector among many others. Most health

professionals indicated that better salaries would lure the health professionals back to their country of origin. Some indicated better incentives as a major 'pull' factor for doctors abroad.

2.10.4 Policy Responses

According to Chikanda (2010) the main method of reducing medical migration from Zimbabwe is through bonding of newly qualified doctors. After completing five years of medical training, the doctors are bonded to the government health institutions for three years and are required to serve one year of internship and a further two years of community service. It is only after meeting these requirements that the doctors are eligible to receive a certificate of good standing, a document required in most countries in the registration of foreign trained doctors. However the government was later forced to abandon this policy under pressure from the IMF to liberalize the economy and democratize the polity.

In addition in response to the medical brain drain, the Zimbabwean Government went into agreement with the Cuban Government in 2002 and managed to bring 117 Cuban doctors into the country but these were to work on a short-term contract basis. While this eased the shortage, it was felt that the relief was only temporary due to the nature of the contract and language barriers which negatively affected teamwork (Chibango, 2013).

Further with the help of international organizations such as the UN and WHO, many African countries are encouraged to implement changes in local hospitals to reduce the brain drain in their countries. Accordingly the Zimbabwean government worked with representatives of the WHO and developed a plan to increase the retention of skilled health personnel (Chikanda, 2005, Schnidman 2013).

Some of the changes included the provision of housing and transportation allowance, salary reviews, fellowship and scholarship programs and free advanced training seminars. Another critical change that has increased retention of health care workers in Zimbabwe and other developing nations has been enforcement of safety measures that prevent unnecessary exposure to infectious diseases such as HIV. Hospitals in Zimbabwe now provide protective clothing and have increased the use of sterilized equipment by health professionals (Chikanda, 2005).

The Government also introduced several policies in order to improve the public health sector including increase salaries, providing housing and transport allowances. However, health professionals complained of unpaid allowances and the policy that stand-by allowances should not be higher than the salary did not please them (Chibango, 2013).

Chikanda (2010) conclude that strategies that used to work in the past in retaining health professionals, such as regular reviews of salaries and allowances, have become ineffective because of the hyper-inflationary environment in the country. The political and economic instability that Zimbabwe has witnessed over the past ten years makes it impossible for planners to implement workable solutions to solve the brain drain problem.

As can be seen in the above the factors leading brain drain of physicians in Zimbabwe are relatively the same as Ethiopia. The Zimbabwean government has implemented both monetary and non monetary retention mechanisms. However, monetary mechanisms were ineffective. This shows that the Ethiopian government should adopt both monetary and non monetary retention mechanisms giving more focus for non monitory as its capacity to retain physicians is high. Further Ethiopian government can learn from Zimbabwe that bilateral and multilateral agreements with developed countries to compensate the problems existed due to physicians brain drain is relevant.

Summary

The concept of brain drain was first used by the British Royal Society to describe a situation in the 1950s, the phrase "brain drain" is "the departure of educated or professional people from one country, economic sector, or field for another usually for better pay or living conditions".

As shortage of health workers is becoming an increasing problem in both developing and developed countries across the world, the migration of medical doctors from Africa to the developed countries escalates the already existing poor health service and system. The literature shows that one third of Ethiopian medical doctors have already left the country.

Although the factors for migration of medical doctors to the Western and other developed countries are push and pull factors. Push factors are internal in nature, and they are those factors that exist in the country of origin and drive a health worker away from the health system in which they were trained. Pull factors in turn are external, because they describe those circumstances in the destination countries which provide an incentive for health workers to immigrate.

Another phenomenon of migration is circular migration which refers the temporary return of health professionals to their countries of origin for the purpose of providing professional work, which can be repeated at different times which was expressed as brain gain as we

CHAPTER THREE
RESEARCH METHODOLOGY

This part discussed the various methods or techniques applied in this research study and tools employed while gathering different types of data.

3.1 Sources of data

Both primary and secondary data sources were employed to answer research questions. Primary data was obtained through the administering of structured questionnaires and interview. Structured questionnaire was employed to gather data from physicians and interview were forwarded to the management of the hospitals and to Ministry of health official respectively.

On the other hands, secondary sources like past studies and archives were gathered from various published materials related to the subject matter such as books, government publications, proclamations, journals (articles), e-books, statistics reports, research papers and internet on issues relating to the subject under study.

3.2 **Research method employed**

A research design is the program that guides the researchers in the process of collecting, analyzing and interpreting the data. Accordingly the researcher uses the descriptive form of research design to provide solutions to the research problems which involves gathering data that describe events and then organizes, tabulates, depicts, and describes the data collection.

3.3 Target Population

Basically, there are five public hospitals found in Addis Ababa under Federal Administration and Addis Ababa City Administration respectively. As a result, to conduct this study only two hospitals from Federal and Addis Ababa city Administration (namely Minilik II Referral and Yekatit 12 hospital) were considered. Even though, 94 physicians dealt in the study a total of 119 physicians working in the two hospitals were considered as a target population of the study.

3.4 Sample size

As a result of different constraints and difficulty to manage the data in depth, studying each unit of the total population is very difficult. Hence, it is important to draw a sample from which the conclusion of the research can be inferred to the total population. However, as the number of total population is small it is convenient to employ census method. Accordingly the total population of this study was small. Therefore, the researcher employed census method targeting the total 119 physicians working at both selected hospitals and from which 94 return the questioner.

3.5 Sampling method

For the sake of obtaining pertinent and manageable data, a sample which can represent the total population was drawn. Hence, the researcher decided to use purposive sampling particularly convenience sampling method to select the two public hospitals where as, a census method were employed in addressing physicians due to seeking high degree of accuracy in data and also to make an intensive study under review.

3.6 Methods of Data analysis and presentation

It is true that some techniques of data analysis are specifically designed and are only applicable to quantitative data, whereas other techniques have been specifically designed for and are only applicable to data that is qualitative in nature. This study adopts both quantitative and qualitative data analysis techniques to analyze the collected data and arrive at conclusions. A single and multivariate tables and Percentages, frequency and mean were applied to analyze and interpret the research findings and enable the researcher to easily draw conclusions and recommendations.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This Chapter deals with presentation, analysis and interpretation of data collected through both primary and secondary sources. The findings were based on the data collected from primary and secondary sources of data. The section starts with presentation, analysis and interpretation of demographic characteristics of respondents followed by other data related with the research question. For this specific study 119 questionnaires were distributed and 94 were collected back and found useful for the study giving a response rate of 79% whereas 25 or 21% were not collected.

4.1 Demographic Characteristics

Table 4.1.1: General demographic characteristics

Statistics						
		Gender	Age	Experience	Education	Title
N	Valid	94	94	94	94	94
	Missing	0	0	0	0	0

Source: Field Survey

Table 4.1.2: Sex distribution of respondents

		Frequency	Percent	Cumulative Percent
Valid	Male	62	66	66
	Female	32	34	100
	Total	94	100	

As can be seen in the table of the total number of respondents, 66% of physicians were male, while 34% were female. The number of male respondents is greater than female respondents. This reveals that the gender distribution was not fairly balanced. This shows that the intake number and development of female physicians is to the minimum. As a result this needs a special attention to increase the number of capable female physicians in the sector.

Table 4.1.3: Age of respondents

		Frequency	Percent	Cumulative Percent
Valid	25-35	31	33.0	33
	36-45	50	53.2	86
	46-59	13	13.8	100.0
	60 & above	0	0	0
	Total	94	100.0	100.0

In terms of age distribution, 53 % of the respondents belong to the age of 36-45 years old. 33% of the respondents were ranged between 25-35 years old .14 % of the respondents were aged between 46-59 years old and there was no respondent above the age of 59. This figure vividly shows that majority of the respondents are young so that they can cope up with modern medical technologies and make themselves ready to adopt to organizational changes, culture and also brings new thinking philosophies towards the goal and objectives of the public hospitals. On the contrary this also reveals that those who are matured and well experienced physicians has left the hospitals and they are inadequately available in the market. This will in turn have impact on the service delivery as well as the healthy functioning of the general health sector.

Table 4.1.4: Educational level of respondents

		Frequency	Percent	Cumulative Percent
Valid	General Practitioner	62	65.95	66
	Specialist	32	34.05	100.0
	Total	94	100.0	

As far as educational background is concerned, 66 % of respondents were General Practitioner whereas 34 % of the respondents were Specialist. This fact supports the existing hiring practice of the two hospitals under study. As per the discussion made with management bodies of the two hospitals, there is shortage of specialists in the market and the available ones are not interested to join public hospitals, as a result, the hospitals are obliged to focus on GPs' and upgrade them through specialization program though opportunity for specialization is limited. Moreover, according to the data obtained from the human resource

department of the two hospitals, in Minilik hospital, of the total 64 regular physicians 46 are General Practitioner and the rest 18 are specialists, from the total number of General practitioners about 26 have been on education. Apart from this, 8 specialists are working as a supplementary staffs.

Likewise, of the total 113 physicians working at Yekatit 12 hospital 77 are General Practitioner, where as the remaining 36 are specialists .From the total number of GPs', 32 of them are on education.

The above data is summarized in the table below:

Table 4.1.4.1: Number of physicians in education

S.N	Name of hospital	Position	Total staff size	Staffs on education	Regular staffs currently working at the hospitals
1	Minilik II Referral Hospital	General Practitioner	46	26	20
		Specialist	18	-	18
	Sub total				38
2	Yekatit 12 Hospital	General Practitioner	77	32	45
		Specialist	36		36
	Sub total				81
	Grand Total				**119**

Source: Documentary source

NB: Supplementary staffs (residents and academic staffs) were not incorporated in the research under study.

Table 4.1.5: Work experience of respondents

		Frequency	Percent	Cumulative Percent
Valid	0-5	59	62.8	63
	5-10	25	26.6	90
	10-15	8	8.5	98
	15 and above	2	2.1	100.0
	Total	94	100.0	

Considering the experience level, about 63 % of the respondents have been working in the hospital for a maximum of five years; 27 % were ranged from 5-10 years of services, 8 % ranged from 10-15 years and the remained 2 % had served over 15 years in the hospital.

Considering the experience level, the data reveals that about 63 % of the respondents have been working in the hospital for a maximum of five years; 27 % were ranged from 5-10 years of services, 8 % ranged from 10-15 years and the remaining 2 % had served over 15 years in the hospital. As clearly shown in the above figure the numbers of physicians are decreasing as the experience level is increasing. This fact is an imperative insight to the management to reconsider any missed benefits and retaining mechanisms in order to keep more experienced physicians satisfied and wish to stay longer in the service.

Table 4.1.6: Title of respondent physicians

		Frequency	Percent	Cumulative Percent
Valid	General Practitioner	62	66	66
	Internist	11	11.7	78
	Surgeon	7	7.4	85
	Gynaecologist	4	4.3	89
	Paediatricians	3	3.2	92
	Other	7	7.4	100.0
	Total	94	100.0	

As clearly depicted in the table, majority of the physicians (i.e. 66 %) are General practitioners with less than 5 years of experience. As far as specialists are considered from the total respondents 11.7 % are internists, 7.4 % are surgeons, 4.3 % are Gynaecologist where as the remaining Paediatricians and other specialists obtain 3 & 7 % respectively. It is unquestionable that the number of specialists on each title is inadequate and incompatible with the number of patients demanding or seeking health care services critically.

4.2 Descriptive analysis

Under this section data collected through questioner from physicians regarding the current situation existed in the hospital is presented. The researcher employed the linier questioner: the maximum response is 5 and the minimum is 1. The mean of the response has been used in analyzing the data, where as standard deviation used to show the variance between each response.

4.2.1 Work Environment

Table 4.2.1 Work Environment

SN	Items	Mean	Std Dev
1	The management strive to create smooth relationship with employees.	2.32	1.146
2	The work load distribution is fair and convenient	2.32	1.162
3	Adequate medical equipments are available	1.77	.728
4	Adequate laboratory facilities are available	1.87	.893
5	Up -to- date technological equipments are available	1.61	.693

Work environment is a key determinant factor for smooth operation of organization business towards the attainment of its mission and further more for employee's satisfaction and better performance. According to Yumkella (2005) global evidence demonstrates that considerations other than financial incentives help to make employees more satisfied at work.

Having a smooth relationship between management and employees is very crucial for the success and continued existence of the business. However, as can be seen in the table physicians replied that there is inadequate employee- management /supervisor's relationship in the hospital .As demonstrated in the table, they confirm that management employee relationship is unsatisfactory (Mean 2.3).

This signifies that the management effort in creating a conducive environment that let employees to actively communicate and share ideas about their day to day activities is inadequate, this adversely affect physicians moral, performance & distract the attainment of common goals and have negative impact on the overall performance of the hospitals. US-based research has shown that the greatest driver of employee stay/leave decisions is

relationship with the immediate supervisor. The research also suggested the four retention factors linked to the working environment: if employees feel they are connected to the business and can make a difference, managers are effective in providing feedback and recognition, opportunities exist for employees to build skills that will further develop their careers and if the leadership team is effective (Finnegan, 2005, Yumkella,2005).

Concerning work load distribution, physicians replied that number of physician to patients does not commensurate so as to provide excellent health care services (Mean score:2.3). We can understand from this that there is work load on physicians working in the hospital and also leads physicians to lose their patience, moral or work commitment. These in turn will results failure in providing quality service to patients.

As per the interview Made with Yekatit 12 hospital, about 12 (of which 8 General Practitioner and 4 Specialist) physicians had left the hospital in this calendar year (i.e 2008EC). Likewise from Menelik hospital 5 physicians have left the hospital in the same year. Some of the reasons were leaving country for further education and better opportunity. Losing those experienced physicians will aggravate the existing unbalanced physicians to patients' number and increase burden on those who stay, further this will affect the service quality. The management pinpointed that the physicians have been overloaded due to the ever increasing number of patients over time. This is predominately due to small number of physicians compared with total patient size. Furthermore majority of specialists and some General Practitioners have also been engaged on providing academic services which may add burden to physicians and forces patients to wait longer.

The collected response of physicians also reveals that the hospitals don't have adequate medical equipments, laboratory facilities and up to date technological medical equipments which is expressed in mean score of 1.77, 1.87 and 1.6 respectively.

The availability of adequate equipments is fundamental in any sector to perform duties effectively. The shortages of these equipments will results in poor performance, wastage of knowledge and capacity of the available physicians and in general it hampers the effort to provide the service at the expected level.

Similarly the shortage of adequate laboratory facilities exposes patients to incur unnecessary additional cost in private hospitals. It also takes a long time for patients to know their examination result and to take the medication on time; all of this reflects the existing drawback in the health service delivery system.

Medical equipments updated significantly from time to time to improve the service delivery. Providing technologically based services helps the hospitals in achieving organizational objective and also to provide quality service to the society. As mentioned in the table (i.e. mean score of 1.6) physicians claim that the hospitals don't have up to date technological equipments. This will limit the chance to give advanced medical services and underutilize knowledge of physicians if they can't deliver what they have acquired. Generally speaking it stagnate the health sector as a whole.

Interview conducted with the management of the hospitals also shows that though considerable effort is made to avoid the shortage, currently the hospitals doesn't have adequate laboratory equipments as well as other technological equipments like City Scan, MRI, ECG which forces patients to take the examination in private hospitals with high cost.

In addition physicians' response indicates that efforts made by the hospital to create desirable work environment is unsatisfactory. They specified that the hospital doesn't have enough office, rest rooms and toilets which are basic for creating desirable working environment for them.

In general the absence of conducive work environment will result in low job satisfaction which in turn influences employee as well as organizational performance. Undoubtedly employees will look for better conditions if the existing work environment is remained unchanged. This idea is also supported by Kwenin, (2013), which states that well-designed and organized offices and work areas make significant differences to how people feel about their work.

In addition an independent study conducted by the Society for Human Resource Management, demonstrated that physical work environment contributes a major factor affecting the decision of employee's whether to stay or leave the job (Sutherland 2004, Kwenin 2013). Further access to this kind of environment helps to reduce job stress, depression and apprehension which are beneficial for health environment as well (Steel & Griffeth 2002, Kwenin 2013).

Finally, the physicians also commented that the current work environment should be improved through increasing number of physicians to reduce workload, avoiding communication barrier and also through equipping the hospital with latest technological equipments.

4.2.2 Recognition and Rewards

Table 4.2.2 Recognition and Rewards

SN	Items	Mean	Std Dev
1	Managers/supervisors give regular recognitions /praise to employees for their good /outstanding performance	1.97	.897
2	Promotion in the hospital is done based on individual performance or once work contribution	1.94	.931
3	The management is willing to encourage innovative ideas	2.04	.827

Intrinsically, employee recognition and reward considered as one of the key motivational factors which encourage employees to exert their discretionary efforts at work. As stated in the table physicians replied that management encouragement when employees bring innovative ideas wasn't satisfactory, which is a mean score of 2.04. However, bringing new ideas and practice should be appreciated and accepted by the management as it helps to improve physicians' motivation to enhance themselves and organizational performance.

Additionally, respondents shown on the same table replied that the recognition or appreciation given by management for employees' outstanding performance is not sufficient (i.e. mean score: 1.97). They also added that promotion was not done considering employees own performance or contributions (i.e. mean score: 1.94). Inadequacy of the above mentioned recognition and reward system of the hospitals inevitably leads to employee de-motivation and intention to look for better work environment. This finding is also supported by (Ongori 2008, Kwenin 2013) which states that recognition and reward are essential factors in retaining employees. He added that organizations must be able to recognize their employees' outstanding performance and reward accordingly so that they will be able to retain those individuals during downturns in the economy (Ongori, 2008). In addition many scholars also agree on the motivational factor of recognition and reward as it has a potential to create feeling of belongingness of employees.

4.2.3 Career Development Opportunity

Table 4.2.3 Career Development Opportunity

SN	Items	Mean	Std Dev
1	There is access to variety of learning opportunities in the hospital	2.68	1.062
2	There is equitable opportunity for career advancement in the hospital	2.39	.972
3	The hospital gives a chance to attend professional training abroad.	1.75	.884
4	Management give considerable help for employees career development	2.20	.890

According to Astor (2005), career development is defined as a continuous lifelong process of developmental experiences that focuses on seeking, obtaining and processing information about self, occupational and educational alternatives, life styles and role options.

Education and training has become a basic human need. This is because it enables one to acquire appropriate knowledge and skills that would make one to contribute positively to the development of oneself and the society at large. Considering the data presentation in the above table respondents were not given learning and training opportunities to excel their knowledge and add values on their professions adequately.

Accordingly, respondents replied the lowest mean score (i.e. 1.75) with the statement related to foreign training arranged by the hospital. This impedes employees not to advance their level of competency, introduce themselves with the new technological medical equipments and sharing of knowledge and experience and ultimately lowers their capacity to perform better at the desirable level. Foday (2014) support this idea and explained that training and development help employees to master the knowledge skills and behavior emphasized in training programs, and apply them to their day to day activates, and future assignment. Providing training and development opportunities can discourage turnover by keeping employees satisfied and well positioned for future growth opportunities.

As demonstrated on the table physicians replied the management concern for employee's career development is not significant (mean score: 2.20). However it is undeniable that management should give due attention and concern for employee career development. This idea is also supported by the research conducted by (Finnegan 2005, Yumkella 2005).The researcher further calls for organizational policies that hold supervisors and leaders accountable for employee career development and retention result. Likewise (London 1993, Foday 2014)) stated that as career development practices aim at providing learning and development opportunities which in turn enhance employee engagement, motivation and job satisfaction. He added that dissatisfaction with career development is a major reason for employees to look elsewhere. According to him if employees are not given opportunities to continually update their skills; they are more likely to leave.

Furthermore, physicians response shows that equal opportunities for career advancement was not applied (Mean score 2.39). This may discourage physicians to stay longer serving the society and persist on their professions and also create a room for migration to abroad.

On the other hand as can be seen in the table availability of equitable access to a variety of learning opportunities in the hospital was relatively moderate which was expressed in mean score of 2.68. Even though the result is relatively better the remaining mean score shows there is still fairness gap that should be tackled by the concerned bodies.

Physicians claimed that the hospital doesn't have a clearly defined schedule that benefits them via professional training program. On the other hand the hospitals' management argued that since the opportunity for most foreign trainings are given by donors' it is difficult for management to proactively plan. On top of that if training invitations frequently comes to specific work area, the management forced to give repeated chance for `limited individuals. On the same fashion, some local training opportunities unfortunately directed to specific work areas recurrently, which signifies the inequality complains and results in employee dissatisfaction.

Eventually, physicians suggested that government should provide opportunity for further education and training as well as opportunity for career advancement. They also stressed that the government should encourage and support physicians to participate on research and publications programme and work on capacity building.

4.2.4 Compensation and Benefits

Table 4.2.4 Compensation and Benefits

SN	Items	Mean	Std Dev
1	The existing salary structure encourage employees to stay longer in the hospital	1.54	.834
2	The benefits allotted to physicians are encouraging	1.80	.970
3	The hospital facilitates conditions for par time work so as to improve physicians' income.	2.58	1.149
4	The hospital remunerations practice consider experience and education background of employees	2.04	.922

As suggested by different scholars compensation and benefits are the most motivational tools that boost employee morale. On the contrary, unsatisfactory compensations and benefit package is one of the factors aggravating migration of physicians to abroad. As depicted in the table the mean score for salary structure is 1.54 and, for provision of other benefits is 1.8, and the rest 2.58 and 2.04 mean score is observed for opportunity for par time work and fairness of remuneration practice respectively. Though the results obtained in all parameters employed to measure the existing compensation and benefit package reflects physicians' dissatisfaction which affect their organizational loyalty and intention to stay long, the worst mean score were reflected on the prevailing salary, and related benefit packages provided to physicians. They claim that their long time commitment on education and high risk involved in their job is not considered and rewarded well.

Regarding incentive package physicians mostly complain on housing incentive, they claim that previously house was given for physicians by health bureau in collaboration with other government bureau. However, currently this opportunity has closed. The reason given for this was as the number of physicians is increasing the government is unable to provide house for all.

As per the Physicians suggestion regarding the above finding government should revise the existing salary and benefit packages of public hospitals, physicians should be equipped with basic needs such as car and house, secured health insurance for themselves and to their family as well. They also pin point that physicians reward should be addressed taking into account individual performance evaluation.

On the other hand the interview result shows that efforts made by the government to mitigate the problem include provision of house which is not given recently. In order to minimize the risk of losing qualified and experienced physician, the government has been using different mechanisms among others the government use increasing the intake number of medical students, stay or pay mechanism, let physicians to work on private service (i.e. after the normal working hours) and further providing educational opportunity though it is very limited. However, this mechanism by itself cannot bring the required change in retaining capable physicians and in reducing migration rather government should work hard on the push factors as it is internal by nature and can be tackled independently.

Low compensation and benefit relatively results de-motivation and feeling of unrecognized which in turn results need to leave the hospital. This is also supported by the research conducted by Foday (2014) which stressed that pay levels contributes to employee's decision to remain or stay in an organization therefore, organization can lead the market with a strong compensation and reward package. Employees often look elsewhere because of poor compensation and benefits. He added that compensation and rewards are associated with longer tenure.

4.2.5 Political Factors

Table 4.2.5 Political Factors

SN	Items	Mean	Std Dev
1	Bureaucratic work environment existed	3.27	1.507
2	There is freedom to perform once job without any interference	2.27	1.094
3	There is job security	2.21	1.163

The impact of Political factors on smooth operation of any sector is undeniable. According to the finding, though the existence of bureaucratic environment isn't significant (Mean score: 3.3) still considerable number of respondents admit its existence (mean score: 1.7) in terms of their placement, facilitation of training and educational opportunities, which is consuming their precious time. Despite of the fact that below average respondents agree on the existence of job freedom and job security, the majority of respondents (mean score: 2.7 and 2.8) respectively disagree on the point.

Lack of job autonomy limits physicians' power to perform their duty to their maximum capacity. On the same fashion job insecurity leads physicians to refrain from defending their right and reduce their job initiation. All the above mentioned facts results in deterioration of physicians job interest, organizational loyalty which consequently aggravate physicians migration and hamper the service delivery system as a whole. This is also supported by the research study demonstrated by Kwenin (2013) which states that when employees have some control over their jobs and its outcomes, they become owners of the decisions, feel more involved in the organization, feel less stressful and are thus more willing to stay in an organization.

On top of that, physicians in their comment claim that they are not involved in the health sector development programs, health policy formulation and management. They also claimed that those who are in charge don't give the recognition and value to the profession. Therefore, to solve this problem they have recommended that the sector should be run by physicians, bureaucratic system should be improved, there should be job security and government should allow professional freedom.

4.2.6 Satisfaction

Table 4.2.6 Satisfaction

SN	Items	Mean	Std Dev
1	I am happy with the duties and responsibilities assigned to me	2.43	1.212
2	I have all the resources(support and tools) i need to successfully perform my job	1.83	.908
3	I am satisfied with the current job and working environment at the hospital	1.97	.976

It is recalled that, the ultimate goal of work is not only to generate income rather it is also to get satisfaction by doing what we love. Accordingly, mean score i.e. 2.4 which is below average result is observed regarding physicians satisfaction with their job. This further refers majority of respondents were not satisfied with their job which is one of the major factor for physician migration. In addition, less than average numbers of respondents agree with the availability of required resources to perform their job successfully i.e. mean score of 1.8, in

other words majority of them i.e. mean score of 3.2 are not satisfied. Moreover physicians replied that they are not satisfies by their current job and the overall working environment (Mean score: 3).

Satisfaction can be generated from both financial and non financial incentives. As a result it is a driving force for employees' decision to stay or leave an organization. According to Mackey and Liang, 2013 Non-financial incentives, which seek to improve working conditions and social needs are also important, and when done in conjunction with financial incentives, can provide long-term improvement by enhancing worker morale and commitment, moreover improve their satisfaction which create feeling of belongingness and can reduced turnover and reduced intention to leave the company while building loyalty of employees.

4.3 Push & Pull Factors of Brain Drain

It is recalled that, having a shortage of health workers is one of the most serious challenges that health systems face in many areas of the world. Whereas the reasons for this shortage vary across regions, physicians migration has becomes critical in the developing world. To this end, different perspectives have been adopted while looking both factors leading brain drain and its negative impacts. Therefore, in this section data collected through questioner regarding the existed push and pull factors that force physicians migrate to abroad is presented.

Considering this push and pull factors, from the total respondents more than average physicians (67%) express their wish to leave the country for better opportunities if they got the chance. The rest has replied that they don't want to leave their mother land rather they demand a considerable change both in financial and non financial incentives. This shows that majority of them are not happy with the overall circumstance existed in the sector and as a result, if this situation persists there may be a prospect of losing additional physicians which may affect the service delivery of the hospitals and also the sector as a whole. Moreover, policy briefed by WHO (2010) states that migration of health workers will be a symptom of the difficulties faced by the health system, and more generally the society, of the country of origin rather than its direct cause. As a result 63 physicians (i.e. 67%) who wish to leave their country give their response on the push and pull factors existed in the sector.

4.3.1Push Factors of Brain Drain

As per the definitions obtained from various scholars, the term push factors for brain drain is broadly expressed as circumstances that force physicians to leave their countries due to unemployment and underdevelopment, poor economic conditions, lack of opportunities for education and training, low income, poor working condition, limited career advancement opportunities and other related factors.

Table 4.3.1 Push factors

	Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree(%)	Strongly Disagree (%)
Push Factors	Low compensation and benefits	72	17	5	2	4
	Poor working condition	48	20	22	6	4
	Limited career opportunities	54	20	13	11	2
	Limited education and further training opportunities	53	13	19	11	4
	Lack of resources to perform work in an efficient manner	46	36	5	8	5
	Large volume of work	52	13	20	8	7
	Bad politics	46	13	24	10	7
	Poor leadership	50	17	12	17	4
	Low standard of living	67	15	7	7	4
	Job insecurity	46	22	17	13	2

As clearly stated in the table according to physicians response, of the total listed push factor that force physicians to leave low employee compensation and benefits packages took the lion share. As can be demonstrated, 89% of the respondents complained about the existing salary, compensation and benefits structure of the hospitals. This signifies that physicians have a room to migrate with abroad due to low salary considering their education and experience level. This finding also supported in the literature by Chibango (2013) that physicians would stay and serve with their profession if they were offered better salaries and better fringe benefits with a more pleasant and caring working environment.

As demonstrated in the same table according to them poor standard of living and lack of available resource facilities are the second push factor that aggravates migration of physicians (i.e.82%). As depicted in the table the majority of respondents agreed that the impact of the above two factors is very significant. It is true that when the living condition in the home country depreciate many of the professionals tend to seek opportunities in other parts of the world. As a matter of fact the research conducted by Chimenya and Qi (2015) stress that the deteriorated economic conditions of African countries has had adverse effect on the living standard and quality of life as a result professionals migrate to developed countries.

Bucklashuk and Wilkinson (2011) in their research findings stated that money sent by immigrants to their family members to their home country in such a way to elevate families financial problems, purchasing of residences and assisting their families via covering school tuition fee and changing the life standard of themselves are considered as the basic reasons of push factors. On the other hand physicians claims that they have been rendering health care services to the societies with scarce medical technological equipments and other related resources that enable them provide quality services in an efficient manner. Apart from this unavailability of conducive working condition and lack of technologically advanced medical resources harm physicians' moral and psychology which may trigger qualified professionals to look outside of the country as the technology and globalization changes the competency level of employees and also the increasing nature of the business dynamics across the world.

Furthermore as per the study conducted by Alisa (2012), the lack of psychological satisfaction which many professionals in Africa encounter in their working environment often contributes to the migration of skilled personnel from Africa. Many of these skilled professionals get frustrated and relatively deprived when they begin to have the feeling that they can't accomplish what they were initially trained to do.

Limited career advancement, education and training opportunity are among the many factors that push physicians to other countries. On top of this, physicians response shows that migration of skilled physicians is associated with lack of career advancement opportunities (74%) and limited education and training opportunities (66%). This is also explained by Adepoju (2008) that loss of educational investment results in severe brain drain which in turn results a financial loss for the country.

Consequently, as can be seen from the table respondents agree about the negative impact of work load for physicians migration (65%). As a matter of fact a study conducted by Kissick (2012) shows hospitals in Addis Ababa are not limited to providing service for the people residing in the city only. As the city is the centre of the country in many socio-economic aspects of peoples life and due to the expectations that better health service are available in Addis Ababa than in other regional states, health facilities in Addis Ababa provide service to significant number of population in the surrounding areas outside the city and other regional states. As a result, practically high shortage of hospital service is observed. Considering the population of Addis Ababa and the expected number of potential service seekers from the surrounding and regional states, this overloaded physicians. This put a negative impact on healthcare delivery and in many cases likely contributes to health workers' desire to migrate in search of improved working conditions.

Regarding poor working condition and job insecurity 68% of respondents underline its effect on physician's migration. A study by Kissick (2012) revealed that poor working condition, job insecurity and instability has immediate consequences, which may affect the attitudes of individuals and have possible long-term consequences that may affect an individual's health and behaviour. Furthermore, he added that job insecurity is also related to work and organisational attitudes. Accordingly, his study explained that knowing the individual and organisational consequences of job insecurity and all its dimensions emphasises the need to investigate possible processes and factors that may moderate and mediate its effect. Ignoring or neglecting the current and evident future presence of job insecurity may result in dramatic and negative results for individuals, organisations and global growth of business. Furthermore, job insecurity creates job dissatisfaction, increase the turnover and ultimately affect employees' performance and commitments to achieve the strategic objectives of the hospitals under study.

Regarding Poor leadership and bad office politics though the majority of respondents (i.e. 67% and 59% respectively) consider it as push factor it has got the least push factor for brain drain. According to Dolvo (2004) the existence of poor leadership and bad politics exposed professional physicians to job dissatisfaction which is one of the worst situation that directly affect the well being of physicians and loosen their commitment and interest at work place. It is believed that, the existence of bad politics lowers the output of an individual and eventually affects the productivity of the organization. As a result of politics at the workplace, employees fail to achieve targets within the stipulated time frame. Considering physicians response into

account, the existence of the aforementioned push factors ensued to physician's brain drain impacting on the health care service performance, customer satisfaction and overall development of the health sector

4.3.2 Pull Factors of Brain drain

The Pull Factors can be described as the favourable conditions in the receiving countries which attract migrants: better employment opportunities, higher salary, better working conditions, career advancement, educational and training opportunities, and attractive amenities and so on.

Table 4.3.2 Pull Factors

	Items	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Pull Factors	Higher pay or attractive remuneration	74	11	2	4	9
	Better working conditions	67	11	9	11	2
	Career advancement	63	20	7	10	0
	further educational opportunities	68	9	14	9	0
	Political stability	50	9	30	7	4
	Availability of advanced medical equipments	63	13	11	7	6
	Job security	54	15	22	7	2

As depicted in the table attractive benefit packages provided to physicians took the highest response rate from the pull factors (i.e. 85%). Bucklashuk and Wilkinson (2011) in their research findings had stated that money sent by immigrants to home country to elevate their families' financial problem and changing the life standard of themselves are considered as the basic pull factor. On top of this the continuing disparities in pay between richer and poorer countries offer a great deal of pull towards more developed countries

This is clearly observable in our country that government doesn't have a competitive salary structure compared with other countries payment system and private hospital's remuneration mechanism. However, it is convincible that brain drain pulls the best and the brightest from

their homelands as workers seek more rewarding job opportunities abroad, where they believe their marketability will be compensated.

As can be observed from the table career advancement took second highest response rate from the pull factors of brain drain elements (i.e. 83%). Lofters (2012) described that if physicians miss opportunities for career advancement in their home country and if there is attractive opportunity abroad they frequently look outside their country.

Having a better working environment makes physicians to stay longer, show passion of work and high commitment towards success, goals and strategic objectives of the organization. The result obtained from the research study revealed that 78% of the physicians agree on the fact that availability of better working conditions along with attractive benefit packages, respect and recognition in developed countries.

Moreover,77% of respondents said that the existence of better educational opportunity in other countries is another pull factors which lead physicians brain drain, which adversely impacts on the health care service delivery system of the source country.

Accordingly, they need to continually learn and apply new skills and knowledge. Without such learning opportunities, physicians will experience a decline in skills and knowledge, experience professional dissatisfaction, low morale, disillusion, lack of commitment, and reduced interest in their work. Therefore, Investing in education is the most sustainable way to increase the number of physicians as educational opportunities for them at all levels ensure that there is a long-term strategy to address service delivery problem and high attrition rates due to brain drain.

The availability of technologically advanced medical equipment and job security are considered as another pull factors (76% & 69%) respectively which induce physicians to look abroad. Finally, even though political stability in other countries is also one pull factor that trigger physicians to migrate, in this study it gets the least percentage (59%) when compared to other factors

Summary

The research finding shows that the existing work environment is unable to attract new physicians as well as to retain the existing one. Similarly as clearly shown in the finding, the recognition and reward given to physicians were insufficient and doesn't consider their long time on education and the risk involved in the job. In addition, attention given for career development is also insufficient and not to the best interest and satisfaction of the employees. Further, they claimed that the compensation and benefits provided to them is very low and insignificant. They also added that bureaucratic work environment existed in the hospitals and they also have less job autonomy. As a result of this all factors they loss their satisfaction on their job. Similarly from all the listed push factors low compensation & benefits and poor standard of living were the significant push factors where as from all pull factors attractive benefit package and career advancement opportunity taken as the main pull factors.

CHAPTER FIVE
SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of the findings:

- The compensation and benefit packages including salary provided to physicians was not attractive compared with other private hospital's remuneration system. The existing salary is not competitive considering burden of life, experience and qualification of physicians. Further to this, the overall allowance and related incentives do not motivate physicians to love their job.

- As far as working environment is concerned, there is insufficiency effort made by the managements to create conducive environment that let employees actively communicate with concerned management organs. Furthermore, management willingness to accept new ideas emanated from the physicians working at the hospitals is insufficient. In addition regarding the working environment, physicians also added that they do not have adequate offices and rest rooms for taking a nap and rests while they are on duty.

- Regarding work load distribution, physicians are overloaded while treating patients in a convenient manner. The interview result witnessed that the number of physicians to patient's size was not properly balanced. The research finding also states that physicians have been providing health care services where there is inadequate modern equipments that enable them to provide quality service.

- The hospital managements and the physicians explained that laboratory facilities are in short, as a result patients with low income have been enforced to incur unreasonable costs for City scan, MRI, ECG...etc in private hospitals.

- Concerning reward and recognitions, physicians have not been recognized and rewarded well by the management and they were not promoted considering employee's performance or contribution to the success of the hospitals. In addition, even though physician's efforts were relatively valued and appreciated by the

management. Physicians' claimed that their knowledge gained through dedication and the risk associated with the work is not recognized by the concerned organs.

- Considering career development and the learning and training opportunities provided by the hospital's management is not to the best interest and satisfaction of the physicians. Moreover, opportunities for promotion and career advancement in the hospital were not satisfactory and discourage medical doctors to stay longer serving in the hospitals under study. The employee – management relationship is poor so that management do not give due concern about employees future endeavours.

- The interview result showed that the hospital do not have a clearly defined schedules that benefits employees through professional training with abroad and any training or education opportunity were not properly planned or addressed by the management.

- Employees were not satisfied with regard to the current job and overall working environment and the available essential resources in the hospital. There is also a problem of having standard life which leads physicians to migrate. Moreover, physicians claimed on the existence of politics in their work place which enforced them to feel job insecurity in the future. In general the working condition discourages physicians to stay longer in the service and diminish their work motivation which hampers employees work efficiency followed by declining in service delivery which in turn affect the overall sector.

- From the total respondents 67% (i.e. 63) of physicians express their wish to go abroad if they got the opportunity. According to their response from all the listed push factors low compensation & benefits and poor standard of living took the lion share where as poor leadership and bad politics got the least one. On the other hand from all pull factors attractive benefit package and career advancement opportunity taken as the main pull factors where as job security and political stability considered as the least pull factor for physicians migration.

- The response collected from Physicians reviled that physicians become unsatisfied due to low compensation ,poor working environment, work load, low career advancement opportunities etc. This in turn has an impact on the service delivery and the over all health sector development.

5.2 Conclusion

A shortage of health workers is one of the most serious challenges that health systems face in many areas of the world including Ethiopia. On the other hand the development of health sector is very crucial for the well being of the general population. This can be attained with the development and retention of capable and competent physicians. However, migration of physicians for better opportunities has imposed impact on both the service delivery and the overall health sector.

This study finding indicates that physicians are dissatisfied with their job. From all the parameters employed to measure factors leading brain drain of physicians, their response shows that the working environment is unfavourable, the availability of technological equipments are in short, physicians to patients size is incompatible as a result they are overloaded, the remuneration package is not attractive, the availability of career advancement opportunities is not adequate and they are also dissatisfied with the bureaucratic work environment. Accordingly physicians are dissatisfied with the overall system existed in the sector which in turn results migration which ultimately has impact on the effort in improving the service and development of the health sector.

Similarly from the total respondents 67% of physicians would like to migrate to developed countries, in search of better working conditions and more comfortable lifestyles. However, as a number of capable physicians leave the service or migrate the remaining physicians will become ill motivated, not only because of their workload, but also because they are poorly paid, poorly equipped and have limited career opportunities. In other word it places a great strain on the remaining workers who themselves seek to migrate out of the poor working conditions followed by incontestable crisis in the health sector.

However, if physicians have compensated well, if they provided with the tools they require to do their job, training opportunities, recognition for the difficult job they do and if the environment is conducive they are likely to feel motivated to stay and serve their population. However, the overall research revealed that, physicians have lacked almost all the research parameters employed in this research study and which insist them to migration abroad.

With regard to the effect of physicians migration on the overall direct health outcomes, only a few studies exist that try to link health outcomes with migration, as it is very difficult to establish a causal relationship. However, this study finding prove that losing physicians will

lead to a deterioration of quality of health services in the hospitals, which will ultimately lead to more negative health outcomes.

5.3 Recommendations

The issue of health worker migration is complex, driven by a number of factors, many of which are not easy to deal with. Other strategies that have been implemented in some set ups include: stay or pay mechanisms whereby health workers who wish to leave the country pay a certain amount of money mainly intended to cover for the free education they have received, mandatory work requirements whereby health workers are obliged to provide services in the public sector for a certain period. However, only this mechanism will not bring the necessary change therefore the researcher recommend the following points to reduce the existing physician brain drain.

- Existing salary / remuneration packages in health sector is causing physicians brain drain. It is recommended that existing pay packages should be improved so that qualified and experienced doctors may stay in the country.
- At current level, salary differentials between source and destination country are so large that small increases in salary in source countries are unlikely to affect significantly the supply of physician migrants. Therefore, attention should also be directed to other non-monetary incentives (e.g., housing, opportunities for training) and also other motivational factor like, opportunities for career advancement, a favourable environment, including supportive supervision and relationship, there should be recognition and reward for better performance. The sector in general should also be free from politics, they should get professional freedom and also they should be involved in policy making regarding the health sector at large.
- Any problem that exists within a health care system cannot be tackled without adequate staff, and indeed, no health care system can exist without a workforce to staff it. Thus, the concerned management staff should provide rewards and recognitions to experienced physicians.
- Additional financial incentives should be offered to doctors working beyond duty schedules.
- The availability of both high-quality education and opportunities in research are a key means in retaining and attracting regional talent. Therefore, if education and training

opportunities, as well as opportunities for career advancement provided the migratory flow could be reduced.

- Doctors should be provided equal opportunities of advanced medical education within country and abroad.
- Government should provide sufficient funding for medical research so that doctors may be engaged in research to enhance their learning.
- Feelings of insecurity in terms of job sustainability and social security are raised by physicians; therefore, physicians should be given protection from both ways.
- Appropriate policy /measures must be taken to address the medical brain drain like there should be proportional service commitment for both education and training along with other benefits.
- Mass production of physicians only doesn't matter rather the government should focus on retaining mechanisms by reducing the push factors as the cost of training those physicians is very high.
- Enter into bilateral agreements with receiving countries to control skill flow and derive some compensation

IMPLICATION FOR FUTURE RESEARCH

The finding of this research would be more fruitful if it were conducted on a wider scale. Thus, due to time and financial constraints, this research doesn't reveal the overall impact of brain drain on the development of health sector in Ethiopia and confined only two public hospitals found in Addis Ababa. Therefore, future research could add extensions to this study via conducting extensive study at country level in such away to achieve the desired outcome in the sector.

Reference

Adepoju, A. (2008). Perspectives on international migration and national development in Sub-Saharan Africa.

Africa Health Workforce Observatory, (2010). Human Resources for Health Country Profile Ethiopia Aluttis, C., Bishaw, T. and Frank, M. (2014). The workforce for health in a globalized context – global shortages and international migration. Global Health Action.

Alisa, N. (2012). Right to Migrate & 'Brain Drain' [They say that 'grass is always greener on the other side of the fence,' For a. Masters. Utrecht University.

Aluttis, Christoph, Tewabech Bishaw, and Martina W. Frank. "The Workforce For Health In A Globalized Context – Global Shortages And International Migration". Global Health Action 7.0 (2014).

Astor A, Akhtar T, Matallana MA, et al. (2005). Physician migration: views from professionals in Colombia, Nigeria, India, Pakistan and the Philippines. Social Science & Medicine.

Berhan, Y. (2008). medical Doctors profile in Ethiopia: production, attrition and retention in memory of 100-years ethiopian modern medicine & the new Ethiopian millennium. Hwassa University , Medical faculty.

Bohl, D. (2008). The Ethics of Physician Migration And the Implications for the United States. Northwestern University

Borta, O. (2007). Brain drain controversy. Thesis. Linköping University.

Boyo, T. (2013). The African brain drain and the social impact of skilled migration. Masters. University of Toronto

Bucklaschuk, J., & Wilkinson, L. (2011). A Profile of economic and labour market integration among Immigrants in Canada.

Chibango, C. (2013). Zimbabwe's Medical Brain Drain: Impact Assessment on Health Service Delivery and Examination of Policy Responses: A Literature Review. European Journal of Sustainable Development.

Chikanda, A. (2010). Emigration of Medical Doctors from Zimbabwe: Migrant

Chimenya, A. and Qi, B. (2015). Investigating determinants of brain drain of health care professionals in developing countries: A review. Net Journal of Business Management, 3(2).

CIRPEE: Centre Inter Universitaire Sur be Risque. les Politiques Economiques et l'Emplai, (2008). Adverse Selection and Career Outcomes in the Ethiopian Physician Labor Market.

Desta, A. (2014). Reversing Ethiopia's Intellectual Capital Flight.

Dodani, S. (2005). Brain drain from developing countries: how can brain drain be converted into wisdom gain?. Journal of the Royal Society of Medicine, 98(11), pp.487-491.

Dovlo, D. (2004). The Brain Drain in Africa: An Emerging Challenge to Health Professionals' Education. Boston College & Council for the Development of Social Science Research in Africa.

Docquier, F. and Rapoport, H. (2007). Skilled Migration: The Perspective of Developing Countries. Institute for the Study of Labor IZA.

European Migration Network, (2011). Temporary and Circular Migration: empirical evidence, current policy practice and future options in EU Member States.

Federal Democratic Republic of Ethiopia Ministry of Health, (2010). Health Sector Development Program IV 2010/11 – 2014/15. Addis Ababa.

Federal Democratic Republic of Ethiopia Ministry of Health, (2014). Health Sector Development Programme IV Annual Performance Report EFY 2006 (2013/14). Addis Ababa.

Federal Democratic Republic of Ethiopia Ministry of Health, (2014). Policy and Practice information for action. Addis Ababa: Policy and Planning Directorate (PPD), Federal Ministry of Health.

Foday, a. (2014). Perceived Relationship Between Career Development and Employee Retention at Deloitte Kenya. Masters. University of Nairobi.

Gebremariam, M. (2010). Health worker migration: what can be done?. Masters. Oslo University College.

Girma, S., Yohannes, A., Kitaw, Y., Ye-Ebiyo, Y., Seyoum, A., Desta, H. and Teklehaimanot, A. (2008). Human Resource Development for Health in Ethiopia: Challenges

of Achieving the Millennium development Goals. Ethiopian Journal of Health Development, 21(3).

Johnson, N. (2009). Analysis and Assessment of the “Brain Drain” Phenomenon and its Effects on Caribbean Countries. Florida Atlantic comparative studies journal, 11.

Kissick, K. (2012). The “Brain Drain”: Migration of Healthcare Workers out of sub--Saharan Africa.

KNOMAD: Global Knowledge Partnership on Migration and Development, (2015). What really is Brain Drain? Location of Birth, Education, and Migration Dynamics of African Doctors.

Kwenin, D. (2013). Relationship Between Work Environment, Career Development Opportunities and Employee Retention in Vodafone Ghana Limited. Global Journal of Human Resource Management, [online] Vol.1,

Lofters, A. (2012). The “Brain Drain” of Health Care Workers: Causes, Solutions and the Example of Jamaica. Canadian Journal of Public Health, 403(5).

Migration Policy Institute, (2013). What we Know About Circular Migration and Enhanced Mobility. [online] Available at: http://www.migrationpolicy.org.

Misau, Y., Al-Sadat, N. and Bakari Gerei, A. (2010). Brain-drain and health care delivery in developing countries. Journal of Public Health in Africa, 1(1).

Mutume, G. “Reversing Africa's 'Brain Drain': New Initiatives Tap Skills of African Expatriates.”Africa Recovery, July 2003.

Odumasi-Ashanti, D. “Africa Brain Drain: 70,000 Scholars Leave Yearly.” Ghanaian Chronicle, 13 March 2003.

OKOH, M. (2010). The moral paradox of the “brain drain”. Masters. Wake Forest University.

Ongori, H. (2008). Managing behind the scenes: A view point on employee empowerment. University of Botswana.

Schnidman, A. (2013). The Global Effects of the Brain Drain on Health Care Systems. Georgetown University Journal of Health Sciences, 3(1).

Southern African Migration Project (SAMP), (2006). The Brain Drain of Health Professionals

from Sub-Saharan Africa to Canada. African Migration & Development. Cape Town, South Africa and Ontario, Canada: Idasa Publishing.

Yumkella, F. (2005). Retention: health workforce issues and response actions in low-resource settings. Capacity Project Resource.

Addis Ababa University
Faculty of Business and Economics
Department of Public Management and policy

This research questionnaire is intended to assess the impact of physicians' brain drain on the development of health sector in Addis Ababa particularly the case of two public hospitals. Your genuine response is highly appreciated for the successful completion of the study. Furthermore, your opinion will be kept as confidential and employed only for the research under study.

Thank you in advance for your time and consideration!

NB: Don't write your name

Use ***(√) on the space provided***

Part I: Demographic Characteristics

1. **Gender** :

☐ Male ☐ Female

2. **Age** :

☐ 20 – 27 ☐ 28– 35 ☐ 36 – 45 ☐ 46 – 59 ☐ 60 or above

3. **Educational Level**:

☐ General Practitioner ☐ Specialist ☐ Sub Specialist ☐ other (Specify) ……..…

4. Work experience

☐ 0 – 5years ☐ 5 – 10years ☐ 10 – 15years ☐ 15years and above

5. **Your Current Job Title**

☐ General Practitioner ☐ Internist ☐ Surgeon ☐ Gynecologist ☐

☐ Other (Specify) ……..…

Part II: In this section you are kindly requested to reflect what you have actually perceived from the hospital considering into account the brain drain of physicians to abroad.

S.N	Items	Strongly disagree(1)	Disagree(2)	Neutral(3)	Agree (4)	Strongly Agree(5)
	Work Environment					
1	The management strive to create smooth relationship with employees.					
2	The work load distribution is fair and convenient					
3	Adequate medical equipments are available .					
4	Adequate laboratory facilities are available					
5	Up -to- date technological equipments are available					
	Recognition and Rewards					
6	Managers/supervisors give regular recognitions /praise to employees for their good /outstanding performance					
7	Promotion in the hospital is done based on individual performance or once work contribution					
8	The management is willing to encourage innovative ideas .					
	Career Development					
9	There is access to variety of learning opportunities in the hospital .					
10	There is equitable opportunity for career advancement in the hospital					
11	The hospital gives a chance to attend professional training abroad.					
12	Management give considerable help for employees career development					
	Compensation and benefits					
13	The existing salary structure encourage employees to stay longer in the hospital					
14	The benefits allotted to physicians are encouraging					
15	The hospital facilitates conditions for par time work so as to improve physicians' income.					
16	The hospital remunerations practice consider experience and education background of employees					
	Satisfaction					
17	I am happy with the duties and responsibilities assigned to me					
18	I have all the resources I need to successfully perform my job					
19	I am satisfied with the current job and working environment at the hospital					
	Political factors					
20	Bureaucratic work environment existed					
21	There is freedom to perform once job without any interference					
22	There is job security					

Part III: Push and Pull Factor related questions.

Dear respondents , you are kindly asked here to go through with the following factors that could led physician's to migrate from their homeland country to abroad. Please rate your level of acceptance via using the captioned rating techniques. I.e.

Strongly agree	**1**
Disagree	**2**
Neutral	**3**
Agree	**4**
Strongly agree	**5**

Push Factors					
Items	**Rate**				
	1	**2**	**3**	**4**	**5**
Low compensation and benefits					
Poor working condition					
Limited career opportunities					
Limited education and further training opportunities					
Lack of resources to perform work in an efficient manner					
Large volume of work					
Bad politics					
Poor leadership					
Low standards of living					
Job insecurity					
Pull Factors					
Items	**Rate**				
	1	**2**	**3**	**4**	**5**
Higher pay or attractive remuneration					
Better working conditions					
Career opportunities					
Further education opportunities					
Political stability					
Availability of good medical equipments					
Job security					

Part IV: Discussion questions

1. Would you leave your country if you got the opportunity?

☐ **Yes** ☐ **No**

2. If your answer for question number one is yes or no what is your reason?

_____
_____
_____
_____

3. What do you think the significant impacts of brain drain of physicians on hospital's performance?

_____
_____
_____
_____
_____

4. From your perspective what impact does physicians migration impose on the development of the health sector in general?

_____
_____
_____
_____
_____

5. In your opinion, what can be done to stop brain drain of physicians?

_____
_____
_____
__

6. Do you have any other comments you would like to add?

_____
_____
_____
__

Thank you!!!

Interview questions to the hospital management

1. How many physicians does the hospital have?
2. What benefits do the physicians get?
3. How often does the hospital provide training to physicians?
4. Are there up to date technological equipments in the hospital?
5. Does the hospital have capacity to deliver the service to the expected level? (in terms of availability of physicians)
6. Is there any frequent physicians turnover problem in the hospital?
    a. What has been done to create a desirable work setting?
    b. What are physician reasons to leave their job?
    c. Is migration one factor for physician's resignation?
    d. What retention mechanism did you take? Did it work?
    e. Does physicians resignation has impact on the service delivery?
7. Do you think any problem that exists in this hospital has impact on the development of the overall health sector?

Interview questions to Ministry of Health

1. How do you assign new graduate physicians to work?
2. How much is the cost to train a single physician?
3. Are they given work permission to work anywhere immediately after graduation or do they have a commitment to fulfill?
4. How much is the rate of physicians brain drain? What do we lose due to migration of those physicians?
5. What mechanisms taken to retain those who migrate? What was the result?
6. What impact does brain drain impose on the development of the health sector?