Investigating the Determinants of Brain Drain of Healthcare Professionals in Developing Countries: The Case of Registered Nurses in Malawi Health Sector

A Thesis Submitted in Partial Fulfilment of the Requirements for the Degree of Doctor of Philosophy

At The

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By

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DEDICATION

This thesis is dedicated to [my mother Donata, sisters Janerose, Florence, Janet, brother Emmanuel (posthumously), my wife, daughter, brother and sister.

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ABSTRACT

Brain drain is one of the most serious challenges that health systems face in many developing countries. Malawi is not an exception. The determinants of brain drain phenomenon vary across regions and the brain drain of nurses is assuming an increasingly important role in the developing world. This issue has received great attention in recent years. Brain drain studies mostly in developing countries have fallen short of investigating determinants of brain drain from a source country perspective because the focus is mainly on the nurses who have already migrated. In this regard, this research fills the gap by adding to the understanding of major determinants of brain drain among registered nurses in the Malawi health sector. The problem with the knowledge gap is that it makes various stakeholders and experts fail to come up with strategies and measures in an informed, well-focused and systematic manner.

The study employed a qualitative approach and implemented in six public hospitals in rural and urban settings in Malawi to determine the factors of brain drain of registered nurses. The qualitative data were elicited from registered nurses and key informants using semi-structured interviews and focus group discussions. 18 nurses, 9 key informants and 3 focus group discussions of nurses were targeted to provide empirical evidence of determinants of brain drain in the Malawi health sector. The data were analysed using content analysis. Content analysis involved transcribing and reading thoroughly all interviews before identifying themes that were more recurring than others. This allowed compressing many words of text into fewer categories.

The findings of the study reveal the determinants of brain drain among nurses in the Malawi health sector. These factors are low salaries, delays in paying salaries, delays in adjustment salaries, high tax, regionalism, nepotism and tribalism, diseases, heavy workload, long working hours, non-provision of nurse uniform, non-provision of meals and non-provision of medical cover. Furthermore, the findings show that the lack of equipment, lack of medication, small and congested wards, the lack of training opportunities, the lack of scholarships, favouritism and non-reinforcement of bonding contracts are factors that contribute to brain drain of nurses in the Malawi health sector.

This research contributes to the enrichment of the theoretical knowledge pool of determinants of brain drain of registered nurses in the Malawi Health Sector and offers guidance to policy makers and hospital managers most appropriate strategies and measures to put in place to prevent the further loss of these much-needed professionals to keep the Malawi health sector system functional.

KEYWORDS

Brain drain, migration, determinants, nurses, healthcare professionals, Malawi

DECLARATION

I solemnly declare that the piece of work described in this thesis document has not been previously submitted in any form by anyone to the University of Bolton or to any other institution for receiving a degree of or any qualification. I confirm that the intellectual content of the work is the result of my own original research and of no other person.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
CEMCA	Commonwealth Educational Media Centre for Asia
CFSC	Centre for Social Concern
CHAM	Christian Health Association of Malawi
EC	European Commission
EU	European Union
GDP	Gross Domestic Product
GNP	Gross National Product
GTZ	German Technical Cooperation
HSC	Health Services Commission
HIV	Human Immunodeficiency Virus
HRH	Human Resources for Health
ICN	International Council for Nurses
IMF	International Monetary Fund
IOM	International Organization for Migration
IT	Information Technology
MDG	Millennium Development Goals
MOH	Ministry of Health
NAC	National Aids Commission
NONM	National Organisation for Nurses and Midwives
NHS	National Health Service
NMC	Nursing and Midwifery Council
NMCM	Nurses and Midwives Council of Malawi
OECD	Organization for Economic Co-operation and Development
SSA	sub-Saharan Africa
UK	United Kingdom
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNDP	United Nations Development Programme
USA	United States of America
USAID	United States for International Development
USD	United States Dollar
WHO	World Health Organization
WTO	World Trade Organization

Chapter 1 : Introduction to the Study

1.1 Introduction

Chapter one gives the background of the research to explain how this has informed the direction and focus of the study. It contains a brief status of brain drain in developing countries. The chapter sets the thesis in context and justifies the significance of the research. The concluding sections of the chapter discuss the motivation for the study, the problem statement, research aim and objectives, research methodology and contribution to knowledge.

Brain drain is generally regarded as a form of migration marked by the exodus of highly or/and educated personnel from one country to another or from one organisation to another within the same country (Gibson and McKenzie, 2011; Dzimbiri, 2008). This is considered as "flight of human capital of healthcare professionals" (Ahmad, 2004:797) that is critical for effective delivery of services. On the other hand, specific to healthcare professionals, Dodani and LaPorte (2005:487) define brain drain as the "migration of healthcare personnel in search of better standard of living and better quality of life, higher salaries, access to advanced technology and more stable political conditions in different places worldwide" or in other sectors within the country.

1.2 Status of Brain Drain in Developing Countries

According to Nove (2011), Malawi is one of the countries in the sub-Saharan Africa experiencing the brain drain of nurses. This brain drain is a significant contributor to the further weakening of already fragile health systems (Alam et al., 2015) in developing countries. For instance, Denton (2006) states that Malawi one of the world's poorest countries trains 60 nurses per year, yet it loses around 100 nurses annually and more than half of them travel to United Kingdom. Clemens and Pettersson (2008) point out that 17 percent of Malawian nurses are overseas and 633 nurses were validated to work overseas. Kasalika (2014) reveals that Malawi has 75% vacancy rate for nurses. Robinson (2008) emphasises that brain drain is immense and unlikely to go away especially in the poorest regions. This is worsening health outcome in poorer countries and widening global health inequalities (Yeates, 2012).

It is evident from Jensen (2013) that the absence of healthcare professionals threatens the health of individuals and populations, destabilises health systems, and further deepens existing global health inequalities, resulting in more unequal societies. According to Nove (2011), Malawi suffers from a severe shortage of nurses due to a low proportion of young people completing secondary education, the practice of girls marrying young, a shortage of nursing/midwifery tutors, midwifery not being a separate profession from nursing, short life

expectancy resulting in high levels of death in service and brain drain. Brain drain has a negative impact on the country's development because if the individual decides to migrate to a developing country, all the investment the home country provides is wasted. This emigration of nurses from Malawi has left the health service delivery system in a desperate situation hence it is imperative to investigate determinants of brain drain of registered nurses in order to retain them in Malawi.

The World Health Organization (WHO) explains that the brain drain of nurses out of sub-Saharan countries such as Malawi, Zimbabwe and South Africa is a major obstacle to achieving the Millennium Development Goals targeting health (Ahmad, 2004). This is due to huge shortages of healthcare professionals across the globe, both in the global core and especially in the global periphery (Clark et al., 2006; Dauphinee, 2005). For instance, high-income global core countries i.e. The United Kingdom (UK), the United States of America (USA) and Canada have filled domestic shortages by the international recruiting of health professionals, many travelling from low-income countries that are facing critical shortages of health workers (Alam et al., 2015). Consequently, such active recruitment has been subject to ethical debate and challenge. In response, the WHO developed a voluntary code of practice on the international recruitment of health personnel in 2010, in consultation with all relevant partners. This provided ethical guidelines for the recruitment of international health personnel to protect and strengthen health systems in low-income countries, those in economic transition and small island states (WHO, 2010a).

The immigration of healthcare professionals from sub-Saharan countries to the global core results in work force shortages across Africa and drastically reduces the quality of health care (Chikanda, 2007; Clark et al., 2006; Getahun, 2006). For example, countries such as Malawi, Zambia and Zimbabwe experience major shortages of healthcare professionals including nurses and doctors. According to Clark et al. (2006), sub-Saharan Africa experiences a shortfall of 600,000 nurses. About 17 sub-Saharan countries have less than half of the WHO minimum standard for nurses of 100 nurses per 100,000 population whereas many Western countries have more than 100 (MOH and GTZ, 2007). For instance, the United Kingdom and the United States have 847 and 782 nurses for every 100,000 population, respectively (Sagar, 2015). According to Schmiedeknecht et al. (2015), the nurse-to-population ratio in Malawi is 3.4 for every 10,000 population and this ratio is one-third of the WHO's recommended 10 nurses for every 10,000 population.

Developed countries such as the UK, USA and Canada have had in market terms, a higher demand for healthcare workers that has not been satisfied domestically and have recruited such labour from abroad (Prescott and Nichter, 2014). In addition, through recruitment

campaigns and changes to immigration policy, countries of the global core have admitted healthcare professionals from the global periphery to fill vacancies (Crush, 2002; Buchan, 2006). This act of recruiting nurses from health delivery systems that are already stressed has seen the countries involved referred to as 'poachers' and 'global raiders' as they further erode the health delivery systems from which the recruited nurses came from (Crush, 2002; Ahmad, 2004).

It is evident from Buchan (2002) that, the health delivery systems in the global core provide relatively better remuneration, work conditions and opportunities for further training compared to the global periphery. Although data on overseas nurses working in Britain show that the main source countries are the Philippines and India (Buchan, 2002), a substantial number also are from sub-Saharan Africa. For example, Buchan, et al. (2004) find an increase in the number of African nurses recruited to London hospitals. WHO (2006) reveals that nurses and midwives trained in sub-Saharan Africa and working in Organisation for Economic Co-operation and Development (OECD) countries represent 5% of the workforce. For instance, there is an increase of nurses on the Nursing and Midwifery Council (NMC) register in the UK coming from South Africa, Zimbabwe, Nigeria, Ghana, Malawi, Kenya and Botswana (Nursing and Midwifery Council, 2005).

The 1990s and early 2000s saw unprecedented recruitment of nurses from overseas to the UK to work both in the NHS and in the private sector. The active recruitment is due to an ageing population, skills shortages, and increased health care demand (Blackblock et al.., 2012) while Bueno de Mesquita and Gordon (2005) mention the reduced role of the family in caring for older people as the reasons for active recruitment. According to the global estimates, the world faces a shortage of 4.2 million health workers with countries in Africa hit hardest by human resources for health crisis (Jensen, 2013). Furthermore, Africa is home to only 3% of the world's health workers who are fighting 24% of the global disease burden, with less than 1% of world health expenditure (Jensen, 2013).

In many countries in the Global South, the Human Resources for Health (HRH) crisis is exacerbated by the migration of health workers to wealthier countries in the Global North, where their demand is driven up by technological advances and aging populations (European Commission, 2012). Brain drain is often driven by a combination of 'pull factors' in destination countries such as better remuneration and living conditions and 'push factors' in source countries-including lack of infrastructure, few training opportunities and low wages (WHO, 2006:99). Consequently, although the migration of health workers might be a predictable aspect of globalisation, it also reflects and sustains the predominant high levels of global inequality (Mensah et al., 2005).

Many African countries are unable to compete with developed countries in retaining their own health professionals and attract the specialised professionals they need from other countries yet Africa is helping to prop up the health care systems of Western countries through the flows of its highly trained healthcare professionals (Nove, 2015). World Health Report estimates that 453 nurse/midwives who had trained in Malawi are working in Organisation for Economic Co-operation and Development (OECD) countries, representing 4% of the Malawian nurse/midwife workforce (ibid). Figure 1-1 shows the extent of the vacancy rate of nurses and other key health personnel in the Ministry of Health in Malawi.

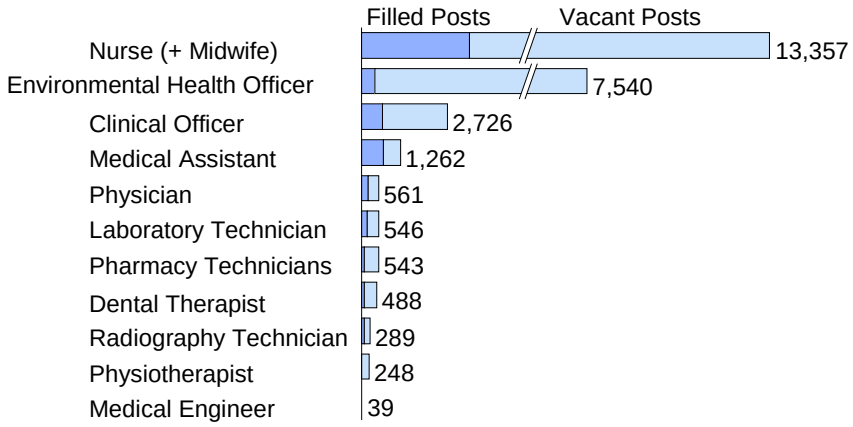

Figure 1-1: Vacancy rates of Nurses and other key health personnel in the MOH in Malawi

(Source: Ministry of Health, 2011)

1.3 Research Problem and Motivation for the Study

There is a shortage of nurses in most developing countries because of migration to developed countries, a phenomenon known as brain drain in the human resource management discipline. According to Nove (2011), Malawi is one of the countries in the sub-Saharan Africa experiencing the brain drain of nurses. This country has 10,000 practicing nurses against a projected population of 16 million (Mzungu, 2015a) and it is estimated that 7,000 of them are enrolled nurses. However, the fact that these enrolled nurses are not registered, they are not recognised at international level as nurses (Nation, 2013a). Enrolled nurses hold a maximum of a diploma in nursing whereas registered nurses have a minimum of a bachelor's degree (Nation, 2013b). For this reason, the study's population comprises registered nurses because of their potential to emigrate.

Preview research in the topic of brain drain has identified different determinants requiring both developing and developed countries to take initiatives in order to control or minimise this brain drain. Although a large amount of research are published in this field, most of them are from destination countries i.e. the developed countries, and little is done from source countries i.e. developing countries (Kalipeni, et al., 2012; Buchan et al., 2005; Larsen et al., 2005; Ngoma and Ismail, 2012). Therefore, this research fills the lacuna by providing a source country perspective through the Malawi case study of the Ministry of Health (MOH) to investigate the determinants of brain drain of registered nurses.

This research contributes to the enrichment of the theoretical knowledge pool of determinants of the brain drain culture of registered nurses in the Malawi Health Sector and offers guidance to policy makers and hospital managers most appropriate strategies and measures to put in place to prevent further loss of these much-needed professionals to keep the Malawi health sector system functional.

1.4 Research Question, Aim and Objectives

According to authors Denzin and Lincoln (2000); Yin (2002), the nature of the problem to be solved and the determined research question should provide a clue of how a researcher would get information.

The following main research question has been developed based on a wide-ranging literature review and answers to the question will address the research objectives in order to achieve the aim of the study:

"What are the determinants of brain drain of registered nurses in the Malawi Health Sector?"

This research intends to investigate the determinants of brain drain of registered nurses in Malawi. This will enable the researcher to have a clear understanding of the determinants of brain drain and develop a theoretical framework with the hope to curb brain drain to improve the country's health service provision and delivery. It is against this backdrop that the purpose of this study is three-fold.

Objective 1: To undertake an in-depth analysis of the major six determinants (economic, political, technological, social, education and globalisation) that influence brain drain among registered nurses in Malawi.

Objective 2: To examine the extent to which the major determinants of brain drain can be improved as an initiative to minimise brain drain in Malawi.

Objective 3: To determine strategies and measures that can be put in place to retain registered nurses in Malawi.

1.5 Preview of Research Methodology

The study requires an in-depth understanding of the current situation of research phenomenon in the Malawi health sector. In order to achieve this, the researcher will interact with participants, namely registered nurses and key informants, in order to obtain current and highly relevant of information. In this regard, the study adapts the interpretivist paradigm because it focuses on gaining in-depth understanding and exploring the loss of nurses in Malawi.

This research employs a case study strategy because it will enable the collection of relevant data within the health sector in Malawi using two data collection instruments. For this study, the Malawi health sector is reckoned as a case.

The study will use semi-structured interviews with nurses and key informants from six sampled hospitals in Malawi. Other key informants are from Nurses and Midwives Council of Malawi (NMCM), Christian Health Association of Malawi (CHAM) and the MOH headquarters. The research will use semi-structured interviews in order to achieve an in-depth understanding of brain drain in the Malawi health sector. Another data collection instrument that the study will use is focus group discussions with registered nurses only. The study uses these qualitative data collections methods so as to be robust by gathering the necessary data for analysis. In fact, the use of a variety of qualitative data collection methods is suitably pivotal for triangulation purposes. A triangulation process is based on the understanding that any bias inherent in a particular data source or method would be neutralised when used in conjunction with other data sources and methods (Creswell, 1994). Chapter three of this research gives a comprehensive discussion of the research methodology and justification for the methods, approaches and techniques employed in this study.

The MOH is the largest provider of health services in Malawi accounting for 60% of the health services. The missions and private sector providers cover the remainder, which is 40%. Appendix 4 shows the number of health facilities in Malawi. The healthcare system in Malawi is based on referral principles organised in a three-tier institutional framework starting with health centres offering basic primary care, district hospitals offering general secondary care, and central hospitals providing tertiary specialist care. Six hospitals are included in the sample to make the study representative of Malawi. These are the four central hospitals in Malawi namely Queen Elizabeth in Blantyre, Zomba Central in Zomba, Kamuzu Central in Lilongwe, Mzuzu Central in Mzimba, and two district hospitals namely Nkhotakota in Nkhotakota and

Mzimba in Mzimba (See Appendix 1). In fact, the locations are purposively chosen to include both urban and rural areas.

1.6 Outline of the Chapters

The study is organised in six chapters as summarised below:

Chapter One (Introduction to the Study): This chapter introduces the research study. It sets the thesis in context and justifies the significance of the study. The chapter explains the motivation for the study, the problem statement, research aim and objectives, research methodology and the contribution to knowledge.

Chapter Two (Literature Review): This chapter is a comprehensive review of the relevant literature. It reviews the brain drain culture and concept. It critically looks at both historic and recent developments of this brain drain behaviour and provides details of brain drain of healthcare professionals in developing countries and its impact. The term 'brain drain', which is specifically related to healthcare professionals, is carefully crafted for this study. Finally, the determinants of the brain drain of healthcare professionals in developing countries are analysed.

Chapter Three (Research Methodology): This chapter discusses the research methodology in terms of how the views have been gathered. Furthermore, the philosophical process that the research is based on is explained and presents the data collection methods that have been used.

Chapter Four (Data Presentation and Analysis): This chapter presents and discusses determinants of brain drain of registered nurses in Malawi. It also notes clearly the extent to which the major determinants of brain drain can be improved as an initiative to minimise or mitigate this brain drain phenomenon.

Chapter Five (Discussion): This chapter describes the determinants of brain drain identified from the analysis in context of the literature. There are different determinants of brain drain under economic factors, political factors, technological factors, social factors, education factors and globalisation. The chapter also provides a summary of key findings. It is from these findings that recommendations of the research are drawn. Through recommendations, the chapter answers the study's third research objective which is: 'To determine strategies and measures that can be put in place to retain registered nurses'. The discussion is based on the research findings from the data collection methods outlined in this study. Full reference to the literature reviewed is presented in the discussion of the findings.

Chapter Six (Thesis Overview and Conclusions): This chapter presents a brief summary of the thesis and reviews research aim and objectives of this research. It also discusses the overall conclusion, contributions to the field of study, limitations of the study and areas for future research.

1.7 Conclusion

This chapter has provided background contextual issues where the research context and the methodology that describe the research approach and design have been clarified. The chapter has highlighted important research problem and the motivation for the study, research question, aim and objectives, research methodology and contribution to knowledge.

The following chapter presents an in-depth analysis of the current literature on brain drain and the main determinants of brain drain problem of healthcare professionals in developing countries. It discusses various perspectives on the brain drain of healthcare professionals in a developing country context.

Chapter 2 : Literature Review

2.1 Introduction

This chapter presents an in-depth analysis of the comprehensive review of the relevant literature on the brain drain and its determinants, among healthcare professionals in developing countries. The comprehensive literature review is done to aid locating debates in the discourse of brain drain. As a starting point, the chapter examines the definition of brain drain. The term 'brain drain', which is specifically related to healthcare professionals is carefully crafted for this study. Both the historic and recent developments of the brain drain issues are reviewed and the brain drain of health care professionals in developing countries and its impact are explained. Furthermore, the chapter analyses determinants of brain drain of healthcare professionals in developing countries.

2.2 Definition of Brain Drain

Grubel and Scott (1966:268) define brain drain as "the emigration of highly skilled individuals to the United States of America". According to World Migration (2003), brain drain describes the cross-border movement of highly skilled persons who stay abroad for a long time where highly skilled persons are defined as having studied or currently studying for a university degree or possessing equivalent experience in a given academic field. Hall (2005) defines brain drain as the departure of skilled labour, which accelerates the depreciation of capital and thus reduces the steady state growth rate of the economy. Beine et al. (2008:631) define brain drain as "the international transfer of resources in the form of human capital and mainly applies to the migration of relatively highly educated individuals from developing to developed countries".

On the other hand, specific to healthcare professionals, Dodani and LaPorte (2005:487) provide a simplified definition of brain drain as the "migration of healthcare personnel in search of better standard of living and better quality of life, higher salaries, access to advanced technology and more stable political conditions in different places worldwide" or in other sectors within the country. However, Bushnell and Choy (2001) illustrate the use of the word brain in the semantics of the term brain drain that it relates to any talent, know-how, competency or attribute that is a potential asset. While the use of the word drain conveys a strong implication of serious loss, it suggests that this rate of migration is at a greater level than what might be preferred. Therefore, linking the two words together implies the departure of the most skilful experts at noticeable and alarming rates (Johnson, 1965) and is heavily in one direction (Wong, 2009). However, Clemens (2009) considers the term brain drain as old-

fashioned and pejorative, so Carr et al. (2005) suggest replacing the term ‘brain drain’ with the term ‘talent flow’ to describe the movement of talented people across borders.

2.3 The Development of Brain Drain

The term brain drain has evolved over time. The following sections discuss first, second and third generations of brain drain.

2.3.1 First Generation of Brain Drain

The term brain drain was first coined by the British Royal Society to refer to the exodus of scientists and technologists from the United Kingdom and Canada in the 1950s and 1960s to the United States (Watanabe, 1969; Vidysagar, 2006) for better opportunities (Tucho, 2009). The term 'brain drain’ is now subsequently widely used and it applies to migration from poor regions to the western world. According to Levatino and Pecoud (2012), brain drain is a cause of underdevelopment in developing countries. However, the governments of sending countries, researchers and experts who denounce the cost of brain drain and seek ways to compensate for it are the key promoters (Bhagwati and Dellafar, 1973).

The brain drain of professionals from developing to developed countries has become a widely discussed global phenomenon. Although the movement of trained personnel across national boundaries is not new, Appleyard (1989) highlights that the scale of movement has increased enormously after 1960 especially to the United States, United Kingdom, Canada, Australia and Europe. Although these countries receive large numbers of highly trained workers from other developed countries after World War II, the salient feature of inflows after 1960 was that most of them came from developing countries.

The developed countries by attracting scarce skilled labour are pursuing policies that are costly to developing countries, both in the short and long terms. The movement of highly skilled workers is now receiving a great deal of attention from scholars of international migration. According to Dumont and Lematre (2005), brain drain is common amongst developing nations, such as the former colonies of Africa and Southeast Asia, the island nations of the Caribbean and particularly in centralized economies such as former East Germany and the Soviet Union, where marketable skills are not financially rewarding.

2.3.2 Second Generation of Brain Drain

According to Bhagwati and Hamada (1974), a more realistic second-generation model that contain market imperfections was developed. There is a general equilibrium framework with two types of imperfections namely, the labour market wage rigidity and unemployment, and the distortion in the finance of education in the sending country. The result is that the emigration of skilled labours may reduce the overall productivity and wages in the sending

country. Consequently, the remaining residents in the sending country encounter a welfare loss. According to McCulloch and Yellen (1975), skilled labourers in the less developed countries migrate to the more developed country in a static model in which there is no capital accumulation.

Miyagiwa (1991) points out that, individuals have freedom of choice either to obtain education or to emigrate. Under the assumption of economies of scale, the more educated the people are in a country, the higher the productivity of each individual and more people in the less developed country are willing to obtain education and migrate to the more advanced country for higher salaries. Literature by Haque and Kim (1995) approaches this issue by presenting an overlapping generation growth model where heterogeneous individuals live for two periods. The amounts of human capital acquired are different across individuals. As one gets old, the only thing to do is work. Galor and Tsiddon (1997) has a similar model but with three periods. In the first period, an individual invests in education by borrowing money from the financial market. In the second period, the model also allows for different human capital acquisitions. In the third period, a person retires and supplies all the savings to the financial market (Galor and Tsiddon, 1997).

If the benefit of migration is greater than the cost of migration, the migration interest is advanced. In this way, the individuals who migrate to a more advanced country are the ones with high human capital stocks. According to Haque and Kim (1995), each individual acquires the average level of human capital from the previous generation. Galor and Tsiddon (1997) highlight that each individual is unique because one's ability to learn is different from the other and an individual inherits parent's human capital level. In spite of different assumptions in the second model, skilled migrants could lead to an overall human capital stock reduction in the sending country.

2.3.3 Third Generation of Brain Drain

The third generation of brain drain literature reveals another force of brain gain effects working in the opposite direction. For instance, uncertainty about the opportunity to migrate could lead to an overall higher education attainment and human capital stock for the sending country. As such, one can expect that the receiving country could accept some immigration applicants and reject some. Literature by Mountford (1997) extends both Miyagiwa (1991) and Galor and Tsiddon (1997) in order to allow the host country take control of the number of visas issued. However, a visa creates uncertainty for the potential immigrants. Literature by Beine et al. (2001) allows individuals to determine the amount they want to invest in education to enhance the opportunity of migration. Docquier et al. (2007) create an endogenous human capital model with physical capital accumulation. Stark et al. (1998) describe the conditions under

which this situation could take place. The key arguments behind these works are the same because an individual can choose the amount either of education or amount of human capital to acquire. In the case of uncertainty about migration, some individuals successfully immigrate to the receiving country while others stay in the sending country. According to Stark et al. (1998), the individuals who succeed reduce the overall human capital level, a brain drain effect, and those who fail to migrate tend to increase the overall human capital level, a brain gain effect for the sending country.

Table 2-1 summarises the characteristics of three generations of the development of brain drain.

Table 2-1 Generation of Brain Drain Summary

First Generation of Brain Drain	Second Generation of Brain Drain	Third Generation of Brain Drain
Exodus of scientists and technologists from UK and Canada in the 1950s and 1960s for better opportunities Understand as a loss of resources for sending countries Course for underdevelopment in sending countries	Emigration of skilled workers may reduce overall productivity and wages in the sending country Remaining residents in the sending country encounter a welfare loss Migration interest is advanced if the benefit of migration is greater than the cost of migration like higher wage rates	Uncertainty about the opportunity to migrate could lead to an overall higher education attainment and human capital stock for the sending country

2.3.4 Critique of Generations of Brain Drain

The early economic literature of the 1960s by Grubel and Scott (1966); Johnston (1965) downplay the negative externalities imposed on those left behind. In contrast, another school of thought by Bhagwati and Hamada (1974); McCullock and Yellen (1975), report that brain drain is a negative externality imposed on those left behind and the rich countries getting richer and the poor countries getting poorer. The international community at policy level should implement a mechanism whereby international transfers could compensate the origin countries for the losses incurred in the form of an income tax on brain drain damage.

The first models that address the issue of the brain drain in an endogenous growth framework also emphasise its negative effects (Miyagiwa, 1991; Haque and Kim, 1995). These arguments are based on the existence of technological externalities related to human capital accumulation can be strengthened by other more pernicious mechanisms. A seminal model developed by Bhagwati and Hamada (1974) points out that the increasing international

integration of the market for skilled workers induces a loss for the poor countries. As such, the higher integration of the skilled labour market generates some leapfrogging effects on low wages. According to Bhagwati and Hamada (1974), skilled emigration reduces unemployment of the educated people and stimulates education but it leads to higher public education expenditures and taxes; higher wages and unemployment of the uneducated.

2.4 Brain Drain in other Sectors in Developing Countries

Although developing countries experience the brain drain of healthcare professionals, Vidyasagar (2006) states that, other fields as well such as computers and information technology experience the problem. A large number of scientists and engineers from developing countries live and work in the United States, Canada and Western Europe (Driouchi et al., 2009) in search of higher salary, better research facilities, better working condition and better employment opportunities (Ngoma and Ismail, 2013; Wosyanju et al., 2012). African University lecturers leave their universities and country to teach elsewhere. For example, Burundian universities have lost 49.9 percent of their teaching faculty and now they depend on external expertise, which costs paradoxically much more than national expertise (Wosyanju et al., 2012). Some continue to half-heartedly provide lessons or teach some classes just to keep one foot in the university and not lose the prestigious title of University Professor. Some young university teachers leave to pursue their postgraduate training abroad but many do not return to their countries and universities of origin. Some South Africans have settled in the United Arab Emirates in addition to Australia, Canada, New Zealand, UK and USA English (Hoppli, 2014). Kenyan public universities have fewer PhD level staff due to brain drain compared to many countries of sub-Saharan Africa (Daily Nation, 2011) in search of higher salaries, developing skills and better quality of life.

According to Odhiambo (2004), African governments take professors as mere teachers not producers of knowledge and therefore as irrelevant to development and policy issues. African scholars in the Diaspora who want to publish have both access to the relevant journals, and the intellectual capacity to do so while overseas but not recognized in their home countries (Wosyanju et al., 2012). Policy matters are reserved for ‘experts’, many of them colleagues coming from the west who are even engaged as ‘consultants’ particularly in cases where the local professionals have superior qualifications yet they are answerable to them (Odhiambo, 2004). In Germany, since the government approved Chancellor Gerhard Schroeder’s ‘green card’ plan in 2000, the law gives 20,000 highly-skilled immigrants 5 year temporary work permits in order to ease the perceived shortage of information Technology workers (Dequiedt and Zenou, 2013). In other words, the presence of brain drain in other education, suggests that the provider nation is at risk of depleting its natural supply of intellectual talent. The brain

drain could continue because of the growing gap in wages, living standard between developed and developing countries (Migration and Remittances Factbook, 2011).

The reasons for brain drain of information technology professionals, scientists, engineers and lecturers and healthcare professionals are similar in nature. The professionals consider higher salary, better research facilities, better opportunity for higher qualification, better working condition and better employment opportunities (Ngoma and Ismail, 2013; Wosyanju et al., 2012), as factors that contribute to brain drain in developing countries. The availability of jobs in other countries has speeded up the spread of brain drain (Apter, 2009). This is facilitated by breakthroughs in information and communication technology processes that have brought time and distance together thereby working as a mechanism for increased spread of ideas (Pillay, 2009) between healthcare professionals and professionals in other sectors.

2.5 Brain Drain of Healthcare Professionals in Developing Countries: An Overview

Most developing countries continue to experience the loss of an increasing number of highly skilled health professionals such as nurses, doctors, dentists, and pharmacists by migrating to developed countries (Kirigia et al., 2006). This is because developed countries such as the UK, USA and Canada have had in market terms, a higher demand for healthcare workers that has not been satisfied domestically and have imported such labour (Prescott and Nichter, 2014; Kaba, 2011). However, Oulton (2006); Littlejohn et al. (2012) reveal that the nursing shortage today is more complicated because there are both greater supply and demand issues than before. An increase in demand or decrease in supply caused the shortage of nurses in the past. However, Oulton (2006) indicates that nowadays a decrease in supply that cannot meet the increased demand affects the society. This is due to increased demand and decreased supply, an aging workforce, shrinking applicant pool and unfavourable working conditions (Buchan and Aiken, 2008; Institute of Medicine, 2011; Oulton, 2006). Understanding healthcare professionals' shortage is important (Fox and Abrahamson, 2009; Yeates, 2012).

The migration of nurses and doctors from sub-Saharan Africa to the Global North is a subsection of wider movements, yet this aspect of migration came to dominate the global public health agenda (England and Henry, 2013). The embarrassing optics of rich countries exploiting the health human resources of African countries devastated by the AIDS epidemic (Wright et al., 2008) is impossible to ignore. According to Clemens and Pettersson, (2008) there is an estimated 10 per cent of nurses and 20 per cent of doctors from Africa who are working overseas. This represents a potential impediment to their source country's capacity to deliver healthcare and to do so equitably (Stilwell et al., 2004). The departure of trained

professionals from low-income countries to find work in high-income countries emerges as a perverse subsidy (Mensah et al., 2005). WHO (2006), reveals that, the African region nurses and midwives make up 51 percent of the workforce.

Although research has most often focused on particular countries' loss of professionals (Chikanda, 2005; Crush et al., 2012), others have noted the significant differences between African countries. According to Ngoma and Ismail (2013), brain drain has significantly amplified where the number of migrants has increased from 75 million in 1960 to approximately 215.8 million in 2010. This will continue because of growing wage differentials, standards of living between developed and developing countries, and prevalence of poverty, unemployment and political instability in many fragile and least developing countries (Migration and Remittances Factbook, 2011). In support of this view, Robinson (2008) states that, brain drain is immense and unlikely to go away especially in the poorest regions. For instance, in Zimbabwe where political situation has been unstable, Clemens and Pettersson (2008) stipulate that 51% of the Zimbabwean physicians and 24% of nurses are working elsewhere in the world. WHO (2006); Kirigia et al. (2006) point out that there are 1,213 nurses and midwifes trained in Kenya working in seven OECD countries. Although, most of the literature addresses south to north migration or migration from developing to developed countries, intraregional migration also occurs in some areas (Chikanda, 2005; Dovlo, 2007; Kalipeni et al., 2012). Nursing scholars and health planners identify nurse migration as a global health priority (Chaguturu and Vallabhaneni, 2005; Chen et al., 2006; Dovlo, 2007; Garrett, 2007; Mackey and Liang, 2012). According to Chen et al. (2006), there is a global shortage of 4.3 million health care workers. The healthcare professionals are concentrated in higher-income countries, and the burden of shortages most acutely felt in lower-income countries. Some African and Caribbean countries suffer from the most acute shortages because transnational migration out-strips annual production (Connell et al., 2007; Denton, 2006; Dovlo, 2007; Kalipeni et al., 2012). A research by Juraschek et al. (2012) calculates a deficit of more than 900,000 nurses by 2030 with the greatest shortages in the southern and western states.

Table 2-2 below shows the lowest health worker density worldwide and seven EU countries with the highest health worker density worldwide. In addition, the table shows that the lowest health worker density is mostly in developing countries. The highest health worker density is in developed countries.

Table 2-2 Eleven countries with the lowest health worker density and seven EU countries with highest working density

Country	Doctors/10,000	Nurses and Midwives/10,000	Total
Norway	42	319	361
Finland	29	240	269
Denmark	34	161	195
Ireland	32	157	189
Sweden	38	119	157
Germany	36	111	147
United Kingdom	27	101	128
Mozambique	<0	3	3
Mali	<0	3	3
Malawi	<0	3	3
Liberia	<0	3	3
Bhutan	<0	3	3
Tanzania	<0	2	2
Sierra Leone	<0	2	2
Ethiopia	<0	2	2
Somalia	<0	1	1
Niger	<0	1	1
Guinea	1	<0	1

(Source: The Kaiser Family Foundation, 2013; WHO, 2012)

2.5.1 Brain Drain: African Overview

Literature by Kaba (2011) states that in the diagnosis of Africa's emigration brain drain, 16 million Africans are out of the continent and the magnitude of it in Africa is wide, largely due to South-North brain drain. Worldwide, WHO estimates there are around 60 million healthcare professionals, and like any other group of professionals who tend to migrate to areas where working conditions are best (WHO, 2010b). This means that healthcare professionals generally migrate from developing countries to more developed countries, leaving a scarcity of health workers where the need is greatest (ibid). Mensah (2005) highlights that attempts to restrict international recruitment for skilled health-care workers to stay have proved largely ineffective in sub-Saharan Africa.

Table 2-3 below shows a comparison of healthcare professionals per 100,000 population in sub-Saharan countries. As can be seen from the table, Malawi has the lowest physicians and nurses per 100,000 people and brain drain is one of the contributing factors.

Table 2-3 Comparison of healthcare professionals per 100,000 populations

Cadres	**Botswana**	**South Africa**	**Tanzania**	**Malawi**
Physicians	28.7	25.1	4.1	1.6
Nurses	241	140.2	85.2	28.6

(Source: Ministry of Health and GTZ, 2007)

Malawi with 3000 nurses in the public sector has the lowest number of nurses in the SADC (Nurses and Midwives Council of Malawi, 2006 quoted in Maluwa et al., 2012). In fact, about 17 sub-Saharan countries have less than half of the World Health Organization minimum standard for nurses of 100 nurses per 100,000 populations whereas many Western countries have more than 100. As Table 2-3 above indicates, Botswana, South Africa, Tanzania and Malawi have 241, 140.2, 85.2 and 28.6 nurses respectively per 100,000 people (MOH and GTZ, 2007). A report by World Health Organization (in Mullan et al., 2011) indicates that sub-Saharan Africa alone has an estimated 145 000 physicians to serve a population of 821 million and one of the contributing factors to the shortage is brain drain. In addition, sub-Saharan Africa has 24 per cent of the global burden of disease and 3 per cent of the world's healthcare workers (Kumar, 2007; WHO, 2006). Jensen (2013) illustrates that 36 out of 57 countries in SSA suffer from a severe shortage of health workers.

On the other hand, WHO (2006) highlights that over 75 per cent of the countries do not meet the WHO minimum standard of 20 physicians per 100,000 people. However, Simoens et al. (2005) opine that high nurse vacancy rates are no longer the problem of developing countries alone. With few exceptions, nurse shortages are present in all regions and constitute a priority concern (ICN, 2004). For example, besides African countries, brain drain also affects Latin America and the Caribbean where almost 80 percent of college graduates from Haiti, Belize, Grenada and Guyana are currently living in the USA (Ngoma and Ismail, 2013). A study by Adkoli (2006) estimates that there is one Indian doctor in the United States for every 1325 Americans compared to one Indian doctor in India for every 2400 people. Roughly, 30% of doctors employed by Britain's National Health Service were born in India and 56% of graduates from Delhi's All India Institute of Medical Sciences went abroad (Adkoli, 2006). In Sri Lanka, between 1997 and 2000, 28% of postgraduate medical trainees left the country and an estimated half of Pakistan's 4000 medical graduates left for Great Britain or United States of America (Adkoli, 2006). Brain drain is not immune even in Europe because with the

progressive opening of the European Union, Poland's health workers are going to countries such as Great Britain and Italy (Lesniowska, 2008).

Many developed countries as well experience outflow of some of their skilled workers. For instance, Canada experiences a net loss of skilled workers like physicians to the United States (Wong, 2009). Physicians in the carousel mobility pattern leave their source countries and migrate to several countries over the course of their professional lives, each time developing their skills and credentials until they reach the US, identified as the epicentre of international migration (Martineau et al., 2002). Nurses are duplicating this multiple step pattern. For example, forty percent of the surveyed Filipino nurses employed in the UK had previously worked in Southeast Asia and the Middle East (Opiniano, 2002 quoted in Kingma, 2008). The dearth of healthcare professionals is one of the major obstacles to achieving the United Nations Millennium Development Goals (Buchan and Aiken, 2008; Hancock, 2008; Kinfu et al., 2009; ICN, 2005).

The global healthcare workforce is experiencing a major nursing shortage (Buchan and Aiken, 2008; Institute of Medicine, 2011; Oulton, 2006). In this view, a nursing shortage is measured in relation to a country's historical staffing levels, resources and estimates of demand for healthcare services (Buchan and Aiken, 2008; Ministry of Health, 2011). However, the shortage is not easily quantifiable but defined in terms of professional capacity standards or from an economical perspective (Buchan and Aiken, 2008; Institute of Medicine, 2011; Oulton, 2006; Fox and Abrahamson, 2009). According to Aitken and Kemp (2003), increased demand for health workers in high-income countries leads to a growth in career options for qualified health personnel.

2.5.2 Brain Drain of Nurses in Malawi

According to Vidal (2015), the Ministry of Health report states that the human resources situation in the Malawi health sector is critical, dangerously close to collapse. Health care is a highly political issue in the country of nearly 17 million people, more than half of whom live in poverty and with gross domestic product (GDP) per capita of US $226.46 in 2013. In the early 2000s, a drastic shortage of workers due largely to emigration severely affected the delivery of health services (Vidal, 2015). Malawi currently still counts with insufficient health workforce for its fast-growing population. The shortage of health personnel constitutes a major constraint to the improvement of health care and the achievement of health related MDGs. For instance, the provision of HIV/AIDS related treatment, safe delivery, maternal and child health at birth and the introduction of an essential health package, meant to bring the poor population access to basic care, require a far larger health workforce, in particular of nurses (McCoy et al., 2008;

Joint Learning Initiative, 2004). Migration has become an important option for Malawian nurses leaving the public health service.

In this realm, Denton (2006) reveals that Malawi one of the world's poorest countries trains 60 nurses per year, yet it loses around 100 nurses annually and more than half of them travel to United Kingdom. Furthermore, the Malawi Ministry of Health reported a nearly 80 percent vacancy rate for registered nurses in 2003 and 65 percent in 2006. With such a low density of health workers, the coverage and quality of health services is significantly constrained (Vidal, 2015). According to Clemens and Pettersson (2008) 17 percent of Malawian nurses were overseas in 2000, and 633 nurses had been validated to work overseas (See Table 2-4). The total number may appear small, but it represents a significant proportion of nurses in Malawi. Validation figures provide important data on intention to migrate and refer to those nurses requesting appropriate documentation to migrate. In 2014, the National Health Service (NHS) in the United Kingdom employed 454 Malawian including 138 professionally qualified clinical staff (Vidal, 2015). For nurses to gain employment overseas in Malawi, they seek validation from the Nurses and Midwives Council of Malawi and then provide proof of qualification from their training institution.

According to Winkelmann-Gleed (2006) all migrant nurses working in the NHS and the independent sector (for example, a private care home) need to register with the UK NMC in order to practice. Malawi has 10,000 practicing nurses against a projected population of 16 million (Mzungu, 2015a). It is estimated that 7,000 of them are enrolled nurses and not recognised at international level as nurses because they are not registered nurses (Nation, 2013a). Enrolled nurses hold a maximum of a diploma in nursing whereas registered nurses have a minimum of a bachelor's degree (Nation, 2013b). Malawi's nurse to patient ratio stands at 1 to 3000 compared to 1 to 1000 recommended by the World Health Organisation (Kadzakumanja, 2015). According to Mzungu (2015b) in Malawi about 18 years ago, the nurse to patient ratio was 1 nurse to 20 or 30 patients and service delivery was of high quality. In contrast, recent literature points out that Malawi has 75% vacancy rate for nurses (Kasalika, 2014) because of low outputs from training institutions and brain drain (Tambulasi and Chasukwa, 2015).

Table 2-4 Number of Malawian nurses validated to work overseas, 2000-2008

Year	Number of verifications/validations
2000	90
2001	111
2002	90
2003	81
2004	85
2005	98
2006	30
2007	23
2008	25
Total	633

(Source: NMCM unpublished data, 2009)

Table 2-5 below shows the number of Malawian nurses verified/validated to migrate to other countries 2009-2015 for either employment or further studies. The number of nurses working outside the country may have been even higher as some emigrated to pursue careers other than nursing and did not require qualifications validation (Vidal, 2015).

Table 2-5 Number of Malawian nurses verified/validated between 2009 and 2015

Year	Number verifications/validations
2009	15
2010	12
2011	33
2012	25
2013	19
2014	14
2015	10
Total	128

(Source: Nurses and Midwives Council of Malawi, 2016)

2.5.3 Summary of Brain Drain of Healthcare Professionals in Developing Countries

Developing countries continue to experience the loss of an increasing number of highly skilled health professionals such as nurses, doctors, dentists, and pharmacists by migrating to developed countries. The developed countries have had in market terms, a higher demand for healthcare workers that has not been satisfied domestically and have imported such labour. Today, a decrease in supply that cannot meet the increased demand has affected the society. The migration of nurses and doctors from sub-Saharan Africa to the Global North is a subsection of wider movements, yet this aspect of migration came to dominate the global public health agenda. The departure of trained professionals from low-income countries to find work in high-income countries emerges as a perverse subsidy. However, increasing trend would continue because of growing wage differentials, standards of living between developed

and developing countries, and prevalence of poverty, employment and political instability in many fragile and least developing countries. The dearth of healthcare professionals is one of the major obstacles to achieving the United Nations Millennium Development Goals because global healthcare workforce is experiencing a major nursing shortage. This shortage of nurses is measured in relation to a country's historical staffing levels, resources and estimates of demand for healthcare services. Increased demand for health workers in high-income countries leads to a growth in career options for qualified health personnel. Brain drain has become an important option for Malawian nurses and other countries leaving the public health service.

2.6 Impact of Brain Drain on Developing Countries

Brain drain has long been a common concern for migrant-sending countries, particularly for developing countries where high-skilled emigration rates are highest. The movement of healthcare professionals has both positive and negative consequences.

2.6.1 Positive Impact of Brain Drain on Developing Countries

The emigration of healthcare professionals has positive repercussions on the development of countries of origin. For example, there are economic growth, remittances, skills and knowledge that are gained in the country of destination.

2.6.1.1 Remittances

Brandi (2001); Taylor (2006); Shinn (2008); De Haas (2009); Abdelbaki (2009) suggest that some of the positive effects of human capital flight from less developed countries include remittances migrants send to their native countries, return migration, incentives to acquire higher education, and the creation of migration networks. African immigrants in developed countries are among the households with relatively high incomes who remit money back to their family members (Nica, 2013; Dimaya et al., 2012). The increased consumptions are important for the families who are unable to meet minimum requirements of food and shelter. Furthermore, the remittances help to reduce poverty by providing families in the countries of origin with additional income (IOM, 2005; Hanson, 2008). The flow of remittances from workers from abroad leads to increased welfare and consumption for their families in the expelling country and contributes to the alleviation of poverty levels (Abdelbaki, 2009).

A remittance is an important part of export earnings. However, there seems to be no consensus on whether these remittances are enough to offset the losses incurred by the source country when its professionals emigrate (Kingma, 2006). Some countries such as the Philippines train more nurses and doctors than required for export purposes and the economy

benefit from the remittances (Oberoi and Lin, 2006; Chibango, 2013). For instance, the Philippines represent major contributors to the Philippine economy through their remitted incomes, with $20.1 billion remitted in 2011 constituting 11% of the Philippine gross domestic product for that year (Dimaya, 2012; Atienza and Web, 2013). In addition, the Philippines ranks third in the world in receipt of total remittances behind only China and India but on a per capita receipts basis, 2009 annual receipts were $214 per person compared to less than $45 per person for its Asian neighbours (World Bank, 2011).

Remittances have a multiplier effect to increase national income, increasing retail activity and introducing more money into the economy, creating more jobs (Oberoi and Lin, 2006). Workers overseas send over US$400 billion per year to developing countries roughly triple the volume of all official aid (World Bank, 2014). According to Grubel and Scott (1966), remittances from highly skilled emigrants can serve to replenish the stock of human capital potentially depleted by the brain drain. Table 2-6 shows remittance flows to developing countries as a benefit to developing countries.

Table 2-6 Remittance flows to developing countries

$ billion	**2009**	**2010**	**2011f**	**2012f**
Developing countries	307.1	325.5	345.6	373.6
East Asia and Pacific	85.7	91.2	97.7	105.9
Europe and Central Asia	35.4	36.7	39.1	43.2
Latin America and Caribbean	56.9	58.1	62.5	68.8
Middle-East and North Africa	33.7	35.5	37.1	39.5
South Asia	74.9	82.6	86.8	92.2
Sub-Saharan Africa	20.6	21.5	22.4	23.9
Growth rate (%)				
Developing countries	-5.5%	6.0%	6.2%	8.1%
East Asia and Pacific	0.3%	6.4%	7.2%	8.5%
Europe and Central Asia	22.7%	3.7%	6.5%	10.4%
Latin America and Caribbean	-12.0%	2.0%	7.6%	10.0%
Middle-East and North Africa	-6.3%	5.3%	4.5%	6.7%
South Asia	4.5%	10.3%	5.1%	6.3%

(Source: Canuto and Ratha, 2010)

Remittances enhance investment, reduce poverty, and improve health and educational expenditure (World Health, 2006; Slote, 2011; Atienza and Webb, 2013). However, De Haas (2009) argues that remittances cannot be substitutes for states' investment in basic services, goods and institutions like education, health, public transportation and housing. Remittances may not boost the economy if the costs of personnel and skills are greater (Oberio and Lin, 2006). However, Wong (2009); Dodani and LaPorte (2005); UNDP (2007), posit that even relatively small amounts of remittances can substantially improve the livelihoods and well-being of migrants and their families in sending countries.

Table 2-7 shows the 30 largest remittance receiving countries due to brain drain, ranked by absolute magnitude (column 1) and by share of GDP (column 2). The largest remittance-receiving countries in 2010 by dollar value are India and China, which received $55 billion and $51 billion respectively. Countries with small populations but large migrant flows end up at the top of this list, led by Tajikistan (where remittances amount to 35 percent of GDP) and followed by Tonga (28 percent), Lesotho (25 percent), Moldova (23 percent), and Nepal (23 percent). Seven countries are on both top 30 lists, with large absolute remittances that also account for a substantial share of GDP; the Philippines, Bangladesh, Lebanon, Serbia, Guatemala, Jordan, and El Salvador. Not only are remittances large in aggregate magnitudes, they also loom large as one of the most important financial activities of migrant workers at the individual level. The most direct evidence of this is that remittances make up a substantial fraction of the earnings of migrant workers (Yang, 2011).

Table 2-7 Top remittance recipient countries

Remittances received (in 2010) US $ billion		**Remittances received as % of GDP 2009**	
India	55.0	Tajikistan	35
China	51.0	Tonga	28
Mexico	22.6	Lesotho	25
Philippines	21.3	Moldova	23
France	15.9	Nepal	23
Germany	11.6	Lebanon	22
Bangladesh	11.1	Samoa	22
Belgium	10.4	Honduras	19
Spain	10.2	Guyana	17
Nigeria	10.0	El Salvador	16
Pakistan	9.4	Jordan	16
Poland	9.1	Kyrgyz Republic	15
Lebanon	8.2	Haiti	15
Egypt	7.7	Jamaica	14
United Kingdom	7.4	Bosnia and Herzegovina	13
Vietnam	7.2	Serbia	13
Indonesia	7.1	Bangladesh	12
Morocco	6.4	Philippines	12
Russian Federation	5.6	Albania	11
Serbia	5.6	Togo	10
Ukraine	5.3	Nicaragua	10
Romania	4.5	Guatemala	10
Australia	4.3	Cape Verde	9
Brazil	4.3	Guinea-Bissau	9
Guatemala	4.3	Senegal	9
Netherlands	4.1	Armenia	9
Colombia	3.9	Grenada	9
Jordan	3.8	Sri lanka	8
Portugal	3.7	Gambia	8
El Salvador	3.6	Dominican Republic	7

(Source: Yang, 2011)

2.6.1.2 Economic Growth

The emigration of healthcare professionals can have positive repercussions on the development of countries of origin. For example, this has been the case in some Asian countries, where Diasporas have helped to foster economic development and establish close economic and political links between countries of origin and destination. India is a case in point. The professionals from the Indian Diaspora manage 19 of the top 20 Indian software businesses (IOM, 2005). Indian migrants particularly those in the United States have contributed significantly to the growth of the Indian software industry, not only through the transfer of knowledge and technology, but also by opening up new markets for Indian products and services. Skilled workers tend to earn high wages before their departure and usually have saving rates higher than the average rate in the economy. The outflow of some of these high-income workers could pull down the average saving rate of the remaining population, and this means that the local investment rate and thus economic growth can be hurt.

Grubel and Scott (1966) indicate that a country that loses highly skilled individuals is valid when the objective of the country is to increase military or economic power. This concept however is outmoded and instead proposed to use the concept of country as a collection of individual whose collective welfare is to be maximised. Most important determinants of human welfare in the long run is the standard of living, the quantity of goods and services available for consumption thus emigration should be welcomed whenever two conditions are fulfilled that is emigrant improves one's own income and the departure does not reduce the income of those remaining behind (Grubel and Scott, 1966).

Remittances from expatriates living abroad constitute a significant proportion of foreign revenue for many developing countries. For instance, in Bangladesh, US$ 2 billion was received from citizens who emigrated overseas, and these remittances are the second largest source of foreign revenue (Dodani and LaPorte, 2005). The World Bank estimates that remittances to sub-Saharan Africa in 2007 reached $20 billion, more than the total foreign direct investment flow and nearly equal to foreign aid. Remittances to North Africa are even higher about $35 billion with Egypt, Morocco, and Algeria the leading recipients and the primary recipient in sub-Saharan Africa is Nigeria at about $2.5 billion annually. In addition, Cape Verde relies heavily on remittances, especially from the United States (Yang, 2011). After many generations, persons from Cape Verde maintain close ties to their homeland, often retaining rights to land on which they eventually retire. Remittances amount to between 10-50 percent of GNP in Lesotho and 25-50 percent of the value of exports in Malawi. One study by Shinn (2008) indicates that the Ghanaian Diaspora remits about $400 million each year. Ghanaian remittances are the fourth largest source of foreign exchange after cocoa, gold, and

tourism. Countries in the horn of Africa are especially dependent on remittances. Eritrea, a country of less than 4 million people, relies heavily on remittances. In 2003, remittances totalled $462 million and constituted about 70 percent of Eritrea's GDP (Shinn, 2008).

The Ethiopian Central Bank reports that formal remittances reached $500 million in 2006 and including informal remittances, the total was about $1 billion. With a Diaspora of more than 1million persons, remittances have become crucial for the operation of the economy in both Somalia and Somaliland. The UN Development Program estimates that remittances to Somalia is at $500 million annually (Shinn, 2008). The externality associated with skilled workers could be high in developing countries because there is usually widespread unemployment of unskilled workers. The complementary between skilled workers and unskilled workers means that the loss of a skilled worker to another country could lead to a drop in the economy's demand for unskilled workers.

2.6.1.3 Skills and Knowledge

According to WHO (2006), if health workers return, they bring significant skills and expertise back to their home countries. However, just depending on foreign experience and externally innovated technologies may hinder the way of development of domestic technologies and professionals (WHO, 2006). According to Dodoo et al. (2006), there is lack of data for empirical analysis that may lend credence to the concept of brain drain as a purely negative phenomenon. Although plausible arguments exist on the negative effects of brain drain on the source country, strong arguments abound on the potential positive impact of brain drain to the individual migrants and their families, and on human capital stock in the source countries.

The United Nations Development Program's (UNDP, 2007) case evidence on brain gain based its conclusions on modernisation theory and dependency theory to predict long-term positive effects due to direct return or network building process of the emigrated knowledge elite. Hunger (2002); De Haas (2009) opine that a qualitative gain arises from the experiences the migrants gather by living in a developed country. Talented people make a positive contribution to economic welfare whether they have much infrastructure to work with or not (Hall, 2005; Vinour, 2006). In countries where physical inputs for research and science are absent, the exercise of their own intellectual capability as the principal resource involved is likely to be of special value (Hall, 2005). The value and effectiveness of individuals depends on their connection to the people and organizations that enable knowledge creation, and together constitute a propitious environment (Hart, 2006).

The healthcare professionals such as nurses contribute their knowledge, clinical and research skills to their native countries by developing collaborative training programmes, research

projects and teaching their own fellow citizens (Dodani and LaPorte, 2005). A substantial body of work on the theoretical aspects of the brain drain reflects on transfer of skills and knowledge from the sending countries (Bhagwati and Hamada 1974; Bhagwati and Partington, 1976; Stark et al., 1997; Abdelbaki, 2009). Scientists, political leaders and decision makers in developing and developed countries, and international development agencies, need to appreciate the social and synergistic nature of knowledge sharing so that policies and education systems promote and enable research and development (Dodani and LaPorte, 2005). Literature by Singh Das (2002) points out that the controversy on the brain drain debate is worthless because the sending and the receiving countries could both utilize the skills of these professionals in the global economic market, as well as the individual skilled migrant. Instead of focusing on brain drain, Singh Das (2002) encourages scholars mostly Africans to use the term brain gain or brain exchange.

Developing countries may consider encouraging or supporting their highly skilled professionals to take part in brain circulation, instead of trying to contain them or seek their permanent return (Iravan, 2011; Gaillard and Gaillard, 1997). The mobility of the highly skilled is a normal process in an increasingly interdependent environment. It is not associated with the loss, but with the circulation of trained workers within a global labour market. In the same vein, individual migrants are conferred a particular role as development actors. As is often the case in globalisation debates, discussions have also built upon the importance of transnational networks, new communication technologies, and the role of knowledge in economic development (Levatino and Pecoud, 2012).

2.6.1.3.1 Brain Drain to Brain Circulation

Hovart (2004) highlights that brain drain is not a permanent loss of highly skilled and educated people who are the vital driving force for any country as there is now a paradigm shift from brain drain to brain circulation (Cao, 1996; Meyer and Brown, 1999). Cao (1996) pinpoints that in this era of globalisation, when cultural barriers are dismantling, strategies and policies that seek to block or hinder the movement of highly skilled personnel are bound to be ineffective and unacceptable**.** It is also the case as Cao (1996) hints that the international mobility of human capital is driven more by global market considerations over which national governments have little or no control Some of the national governments include South Africa, Zimbabwe, Ghana (Bradly, 2014) and Malawi (Vidal 2015). The international mobility of highly skilled personnel (HSP) is a contributor to and a consequence of globalisation. It is also one of the indicators of the interdependence and convergence of the world economy. Cao (1996) states that, international mobility of human capital is an ongoing and global phenomenon that is neither permanent nor irreversible. Therefore, instead of devising policies and strategies

that seek block or hinder the mobility of HSP, Cometto et al. (2013) opine that adopting effective policies to address international health workforce migration requires both understanding the local drivers of (inward or outward) migration, as well as identifying evidence-based policy options.

There is an increasing mix of temporary and permanent migration (Timur, 2000) with a noted growth in temporary migration (Findlay and Lowell, 2002). The return rate is quite high at least 50 percent of skilled emigrants return from most stints abroad, which tend to be for a period of 5 years (ibid). Literature by Buchan et al. (2005) finds that 85 percent of the international nurses plan to stay in the United Kingdom for 5 years or less. The business world of the rich countries are discussing with great interest the phenomenon of reverse brainpower. When countries like Taiwan, Korea and Japan in the past, India and China most recently, create the right environment of openness of freedom from governmental restraints and of promotion of science and free market economy, there is hope for the return of expatriates (Vidyasagar, 2006). The UNDP report identifies the return of IT companies backed by Indian expatriates to the city of Bangalore as one of India's success stories (Kanth, 2005 quoted in Vidyasagar, 2006). Brain circulation shifts the emphasis from either blocking the brain drain or seeking the permanent return of those highly skilled and educated emigrants to more flexible and realistic approach that seeks to minimise the detrimental effect and maximise the benefits of lost human capital through migration.

Brain circulation is a multi-dimensional strategy implemented through different policy options. These include encouraging the temporary return of lost human capital for visits; maintaining a virtual contact with the home country through global advances in communication technology; setting up Diaspora networks and, most importantly, matching these policies with a genuine improvement in the home country's political, social and economic environment (Cao, 1996). In addition, 'long term strategies to promote economic growth are needed to enable developing countries to re-attain and draw back their highly skilled and address the negative effects of brain drain' (Quaked, 2002:153). Other indirect preventative or protective measures such as democratisation and socio-economic development can help minimise loss through brain drain without the need to prohibit migration (Iredale, 2009). Brain circulation as migration form and strategy is seen as both a cause and a consequence of political and socio-economic development in both source and destination countries. In this sense, a well-developed scientific infrastructure, higher investments in the science sector and the stability of a consolidated democratic government that assures human rights and academic freedom all provide a suitable environment that allows this form of migration to occur (Horvat, 2004).

Literature by Hovart (2004) states that brain circulation plays an important role in the success of a country's transitional process of economic development and democratic consolidation by utilising the reservoir of knowledge and skills located in those expatriate nationals if the political will exist. According to Borjas and Bratsberg (1996), average skilled workers have a tendency of return migration. As the economic environments of the sending country improve over time, it becomes appealing for skilled workers to migrate back to their country. Stark et al. (1997) present a model that allows for heterogeneous ability individuals. Literature by (Mountford, 1997; Stark et al., 1997, 1998; Beine et al., 2001; Stark, 2004) makes a case for brain-drain induced brain gain. The researchers assume that if a proportion of skilled workers migrate and earn a higher wage abroad, the brain drain raises the expected return on education. This in turn induces additional investment in education in the source country, which may result in a net brain gain, which in turn leads to increased welfare and growth, assuming that the resulting brain gain is larger than the initial brain drain.

However, based on both static partial and general equilibrium conditions, Schiff (2005) argues that the positive net brain gain claims might be an exaggeration and shows that a beneficial brain drain cannot take place since a net brain loss is likely during the transition between brain drain and brain gain. In these two works, only those migrants with relatively lower abilities return to the sending country. In reality, return migrants could be skilled workers and could bring the new human capital acquired in the receiving country back to the sending country.

In terms of the economic incentives that attract migrants back to the sending country, Borjas and Bratsberg (1996); Mayr and Peri (2008) pay their attention to the wage premium because it serves as the instrument in attracting brains back to their motherland. However, the challenge is to keep skilled professionals at home through various incentives. Return of the brainpower, however, occurs in small doses and in few countries. According to Heenan (2005), as many as 1000 former US immigrants leave US every day. This expresses severe concerns that such reverse brain drain may create a generation gap in human capital for America. The poor countries also express the same fears.

2.6.2 Negative Impact of Brain Drain on Developing Countries

Brain drain has negative repercussions on the development of countries of origin because of the shortage of staff that affects the delivery of service, reduction in revenue, reduction in quality of public service and financial loss.

2.6.2.1 Shortage of Staff

In developing countries, the loss of healthcare professionals due to migration has resulted in high vacancy rates, leading to inadequate healthcare coverage threatening the functioning of the healthcare system and the health of the population (Stilwell et al., 2003; Dugger, 2006). In many cases, educational capacity is not large enough to support increased out-migration and increased domestic supply (Vujicic et al., 2004), contributing further to high vacancy rates. In 2000, more than twice the number of new graduates from nursing programs in Ghana left the country for employment in the industrialised countries (Zachary, 2001). In Malawi, between 1999 and 2001, over 60% of 114 registered nurses in a single hospital left for employment in other countries (Martineau et al., 2002). One hospital in Swaziland lost 30% of their 125 nurses due to migration abroad (Kober and Van Damme, 2006).

Staff shortages are also an important obstacle to the attainment of the health-related targets for the Millennium Development Goals (Rolfe et al., 2008; ten Hoope-Bender et al., 2006; Gerein et al., 2006). If MDG 5 (maternal and child health) are not met, then neither will the other goals be achieved (Serour, 2009). Success stories in the reduction of maternal mortality point to HRH as a crucial factor (Chilopora et al., 2007; Dogba and Fournier, 2009), as many maternal clinical interventions can only be successfully achieved within a functioning health system with skilled birth attendants and emergency back-up services. Maternal mortality remains high and the absence of staff and facilities are the most substantial barrier to progress to improving maternal health (Bradley and McAuliffe, 2009). Not only is the capacity to deliver quality healthcare diminished, the net effect of out-migration increases the workload on remaining health workers (see IOM, 2007; Ikenwilo, 2007).

There is a strong consensus that difficult conditions and heavy workloads worsen when nurses migrate, and remaining health workers may deliver lower quality care because of time constraints (Kingma, 2006; Muula et al., 2006; Adzei and Atinga, 2012). In Malawi for example, most of the times, it is guardians who provide frontline care to patients in wards because nurses are so few to attend to every sick person admitted to Kamuzu Central Hospital as three nurses are responsible for the care of close to 80 patients per shift (Khunga, 2016). The workload burden leads to demotivation and stress, encouraging health workers to migrate or resign (Buchan, 2006). Nurses may also have trouble in coping with the knowledge that their colleagues abroad may be having a better life (ibid). Although some studies acknowledge a potential positive effect of human capital migration on skill formation, a negative impact on economic growth of the developing countries exists (see Miyagiwa, 1991; Haque and Kim, 1995; Galor and Tsiddon, 1997). In addition, migration creates an experience gap affecting the recruitment and training of health workers (Bach, 2006 cited in IOM, 2007).

According to Todaro (1977), one of the more general impacts of the brain drain is the dampening effect on the structure and growth of developing countries' economies through the reduction of the supply of vital professional and technical personnel. Brain drain is severe in sub-Saharan Africa (Dodoo et al., 2006; Chikanda, 2004; Takyi, 2002). About 20,000 skilled Africans leave for developed world every year (Sriskandarah, 2006) and this brain drain makes African nations worse off (World Bank, 1995; Stark, 2004). A study by Wosyanju et al. (2012) holds a similar view that when skilled health workers leave, the remaining workforce face greater workloads that leads to declining and weakening of the health care system. The brain drain looks particularly harmful if concentrated in some strategic occupations like healthcare and if migrants were trained in their respective countries of origin (see Beine et al., 2011; Koser, 2007). African countries are unable to compete with developed countries in retaining their own health professionals and attract the specialised professionals they need from other countries (Kuehn, 2007; Connel et al., 2007), yet Africa is helping to prop up the health care systems of Western countries through the flows of its highly trained healthcare professionals.

2.6.2.2 Reduction of Revenue

The loss of the services of skilled people reduces total output and therefore tax base and scale of economies. Depending on the length of the skilled workers' absences, such a loss could also reduce an economy's entrepreneurship, the ability to absorb new technologies and various positive spill overs from skilled to other workers and society in general (Winters, 2002). The more underdeveloped a country is economically, the more it loses by brain drain while only developed countries profit from the process (Iravan, 2011). Since human capital is an important growth factor, brain drain can adversely affect economic growth. Brain drain reduces the revenue base through decreases in incomes and corporate taxes, as well as other forms of tax collections like the Value Added Tax (Todaro, 1977). This according to Dumont and Lematre (2005) inevitably affects amongst other things, government's allocations for education, health, law and order. For each individual there is a net gain wherever the benefits of life in the destination country exceed those in the country of origin (Hall, 2005). For example, health professionals in Kenya are among the relatively well-paid persons and major contributors to the country's income-tax collection (Kirigia et al., 2006). However, due to brain drain of healthcare professionals, the incomes of emigrants are not liable to tax administration systems of Kenya, and emigration leads to a net loss in tax revenues (Kirigia et al., 2006). Wong (2009) argues that brain drain can have dynamic effects on the source country's economy. For example, private investment and consumption spending decline as emigrants normally take all their savings/investment when they leave the country. This usually has broader implications on all sectors of the economy (Faini, 2007).

2.6.2.3 Reduction of Quality of Public Service

According to Kana (2008), demand for health workers in many countries in the Organization for Economic Cooperation and Development has greatly increased due to changes in population dynamics. In response, some of the countries are relying increasingly on imported labour with potentially damaging consequences for the healthcare systems in many developing countries, especially Africa (Kana, 2008). According to Record and Mohiddin (2006), the damage done to poor countries losing a high proportion of medical and nursing graduates makes headlines. The flight of health professionals to more lucrative jobs in rich countries impedes Africa's progress toward achieving MDGs particularly the three related to better health: reduction of child mortality; improvement of maternal health; and combating HIV/AIDS, malaria and other diseases (Sankore, 2006; United Nations, 2006). As one of the world's poorest countries, Malawi has a low life expectancy, high infant mortality and a high prevalence of HIV/AIDS (Record and Mohiddin, 2006).

In South Africa, a regional referral centre for spinal injuries near Johannesburg closed down because a new Canadian spinal injuries unit recruited both anaesthetists (Martineau et al., 2004). In the Philippines, because of the wholesale recruitment of its nurses to overseas jobs, an entire cardiovascular unit in a provincial hospital closed down (Alkire and Chen, 2006). Nurses are one of the most critical components of the workforce (Buchan and Aiken, 2008) with the global nurse shortage adjudged not just an organizational challenge or a topic for economic analysis, it has a major negative impact on health care (Buchan, 2006). The most precious resource are nurses and doctors (Johnson, 2005) for sub-Saharan African countries (Coombes, 2005). The loss of skilled health workers is described in emotive and/or hyperbolic terms as part of a confounding of the provision of doctors and nurses with the provision of health (Bradby, 2014). The robbing, raiding (Johnson, 2005) and poaching of trained professionals who constitute poor countries educated elite is lamented as deeply immoral (Hooper, 2008). The devastating consequences for the source countries (Larsen et al., 2005) is indicted as criminal (Mills et al., 2008) and compared to slavery (Heath, 2007).

A nursing shortage is not just an organisational challenge or a topic for economic analysis because it has a major negative impact on health care (Buchan 2006). As such, failure to deal with a nursing shortage -be it local, regional, national or global- would lead to failure to maintain or improve health care. Different studies reach similar conclusions on the negative effects of brain drain (Miyagiwa, 1991; Haque and Kim, 1995). Bhagwati and Hamada (1974) argue that the loss of high-level work force does not lead to any gains. The theorists' view highlights the potential adverse effect of brain drain on national development of the sending countries. Kalipeni et al. (2012) indicate that the negative consequences of healthcare professionals'

migration are strongly felt in the healthcare system of the source country. A study (Yan, 2002 cited in Buchan, 2006) finds that when too many nurses migrate, the health system in the source country is not able to function effectively. As such, the population is forced to rely on alternative ways to obtain healthcare such as seeking treatment outside the country (Serour, 2009). Good health is a critical factor in poverty reduction and economic development (WHO Commission on Macroeconomics and Health cited in Conroy, 2006).

2.6.2.4 Financial Loss

In the views of Kim (1976); Albano (2012); Makondo and Makondo (2014), there is a loss of human capital in excess of the normal contractual process of migration because developing countries invest in the education and training of young health professionals. Such individuals are particularly expensive to educate (Tanner, 2005), and the limited budgets of countries of origin that can be devoted to education mean the loss of this cream is keenly felt (Zhen, 2008 quoted in Kaba, 2011). This translates into a loss of considerable resources when these people migrate with the direct benefit accruing to the recipient states who have not forked out the cost of educating them. According to Kaba (2004), there are 10 million African-born emigrants living in USA, UK, and other countries outside Africa. For example, one-third of the African budget spent on education of African nationals is working as a supplement to the American education budget, as most of the African graduates end up in the USA. Training of eventually migrant health workers is costly, because of the long duration, the high costs of materials and techniques (and the common need for postgraduate education and training programmes) and is a burden on relatively poor states.

However, there have been few estimates of the costs of the ensuing brain drain and a variety of methodologies and conclusions. For instance, the costs of training and education exacerbate the already weak health systems across Africa (Kirigia et al., 2006). In addition, scholars state that developing countries are subsidizing the costs of healthcare in developed countries and calculating the financial loss of training nurses who migrate (Kalipeni et al., 2012; Kirigia et al., 2006; Mackey and Liang, 2012; Yan, 2006). This calculation does not account for numerous other losses that undermine development and healthcare capacity building like losses of health services, mentors for health sciences trainees, functionality of referral systems, role models, public health researchers, custodians of human rights, entrepreneurs, government tax revenue, and the loss of a middle class (Kirigia et al., 2006). Calculations for the potential loss of human capital from sub-Saharan Africa alone as a result of this brain drain vary but are estimated to be in the billions of US$ (Mensah et al., 2005; Mills et al., 2011).

To illustrate, Muula et al. (2006) estimate that Malawi loses $9,330 in training costs for each enrolled nurse-midwife that emigrates, and $31,726 for each degree nurse-midwife; while the projected life-time losses are respectively in the range of $71,000 to $7.5 million and $241,000 to $25.6 million (Muula and Panulo, 2007). In addition, the cost of training one medical doctor in Malawi is $56,947 and that lost investment over the working life of a doctor that emigrates soon after graduation is in the range between $433,000 and $46 million (Muula and Panulo, 2007). According to Kirigia et al. (2006), it costs Kenya $65,997 to train one doctor and $43,180 to train a registered nurse. A study was conducted in nine sub-Saharan African countries namely Ethiopia, Kenya, Malawi, Nigeria, South Africa, Tanzania, Uganda, Zambia and Zimbabwe. According to Mills et al. (2011), the costs in lost investment in the education of a doctor range from $21,000 for Uganda to $58,700 for South Africa with an estimate total loss of returns from investment in doctors working destination countries at $2.17 billion in 2010. In the study, the major losers are Zimbabwe and South Africa while the main beneficiary destination countries are the UK and the USA at $2.7 billion and $846 million, respectively (Mills et al., 2011). The investment that source countries forego in the outflow of their health workers is termed a 'perverse subsidy' with losses from Africa estimated in the region of $500 million annually (Joint Learning Initiative, 2004; Pagett and Padarath, 2007).

Sankore (2006) highlights that Africa spends approximately US$4 billion in annual salaries of 100,000 foreign experts while incurring a loss of US$184,000 per emigrating trained doctor or nurse using its meagre resources. Kalipeni et al. (2012) pinpoint that developing countries invest about US$500 million annually in training health professionals but are recruited by or move to developed countries. When large numbers of nurses leave, the countries that financed their education lose a return on investment and end up unwillingly providing the wealthy countries to which their health personnel have migrated with a kind of perverse subsidy (WHO, 2006). The loss of health workers has direct effects on economy in relation to the loss of investment in the training (Pillay, 2009). For example, it costs approximately 300,000 Rand to train a nurse in South Africa as well as the loss of contribution that nurses make to the gross domestic product (Pillay, 2009). However, WHO (2006) reports that the loss of return on investment is not the most damaging outcome, but when the country has a fragile health system, the loss of its workforce can bring the whole system close to collapse and the consequences can be measured in lives lost. In these circumstances, the calculus of international migration shifts from brain drain or gain to fatal flows (WHO, 2006).

The source country feels the economic effects of nurse migration in two ways. Firstly, the loss of the economic investment in the training of a nurse who then leaves the country (Serour, 2009) and the additional costs faced by the country to address the shortfall caused by migration. Globally, low-income countries have spent an estimated 500 million USD training

health workers who have then migrated (Kuehn 2007 cited in Serour, 2009). The 2006 World Health Report estimates that 453 nurse/midwives who had trained in Malawi are working in OECD countries, representing 4% of the Malawian nurse/midwife workforce (Nove, 2011). According to Muula et al. (2006), for each registered nurse who migrates, the investment lost ranges from 241,508 to 25.6 million USD at 7 percent and 25 percent interest rate per annum for 30 years, respectively. It is difficult to measure the exact cost of the professional education of health workers because of data issues in sub-Saharan Africa (Robinson, 2007). In any case, the economic loss can be significant since health worker training is costly because of its long duration and high material expenses (Connell et al., 2007), and countries are often unable to recoup their investments (Pagett and Padarath, 2007).

2.6.3 Summary of the Impact of Brain Drain on Developing Countries

The emigration of healthcare professionals has positive repercussions on the development of countries of origin where Diasporas help to foster economic development and establish close economic and political links between countries of origin and of destination. However, the outflow of some of these healthcare professionals could pull down the average saving rate of the remaining population so this means that the local investment rate and economic growth can be hurt. If health workers return, they bring significant skills and expertise back to their home countries. The healthcare professionals contribute their knowledge, clinical and research skills to their native countries by developing collaborative training programmes, research projects and teaching their own fellow citizens. However, just depending on foreign experience and externally innovated technologies may hinder the way of development of domestic technologies and professionals.

In developing countries, the loss of healthcare professionals to brain drain has resulted in high vacancy rates, leading to inadequate healthcare coverage threatening the functioning of the healthcare system and the health of the population. When healthcare professionals leave, the remaining workforce face greater workloads, leading to declining and weakening of the health care system. The more underdeveloped a country is economically, the more it loses by brain drain while only developed countries profit from the process. Since human capital is an important growth factor, brain drain adversely affects economic growth because it reduces the revenue base through decreases in incomes and corporate taxes, as well as other forms of tax collections like the Value Added Tax. Developing countries invest in the education and training of young health professionals and such individuals are particularly expensive to educate with limited budgets. Training of eventually migrant healthcare professionals is costly, because of the long duration, the high costs of materials and techniques. Table 2-8 summarises positive and negative aspects of brain drain to developing countries.

Table 2-8 Positive and Negative impact of brain drain on developing countries

Positive impact	Negative impact
Remittances	Shortage of staff
Economic growth	Reduction of revenue
Skills and Knowledge	Reduction of quality of public service
	Financial loss

2.7 Determinants of Brain Drain in Developing Countries

Many factors cause the brain drain of healthcare professionals from source country to destination country. They include economic, political, technological, social, education and globalisation factors.

2.7.1 Economic Factors Related to Brain drain

According to World Bank (2011), the economic conditions of African countries have been on the decline for decades so this deteriorating state of affairs has adverse effects on the living standards and quality of life of Africans. Rasool et al. (2012) point out that people who emigrate are unhappy with the level of taxation, and living costs. Based on this assertion, Beine et al. (2008); Docquier (2006) highlight that difficult economic climate, causes migration of people from Africa to developed countries. As outlined by Docquier (2006:2) 'migration is expected to intensify in the coming decades given the rising gap in wages and the differing demographic features in developed and developing countries'. World Bank (2011) opines that the economic conditions in African countries have been on a steep decline. Perhaps this is why among the regions classified as developing countries World Bank (2003) and Iyoha, (1999) categorise sub-Saharan Africa's economic performance as the poorest. This rising incidence of poverty combined with unemployment partly account for why skilled workers migrate to the developed countries for better opportunities and better living conditions (Chimenya and Qi, 2015).

Research by Iredale (2009) suggests that favourable rewards for labour and the need to escape the harsh economic realities in the region partly account for the migration of skilled human capital to the developed countries. However, literature reviewed by Shinn (2008) outlines that a weak economy, high significant corruption, periodic famine and substantial poverty are prime factors for brain drain in developing countries. The literature by (Dzvimbo, 2003; Dimaya et al., 2012; Ngoma and Ismail, 2013) share a common finding that higher wages and better employment opportunities in developed countries create incentives for skilled workers from developing countries to migrate. The remuneration gap for skilled medical staff between Malawi and developed countries remains a significant pull factor. For example, a newly qualified nurse in the United Kingdom earns GBP 19,166 (US $33,290), about ten

times what a nurse would earn in Malawi (Vidal, 2015). It is necessary to improve salaries for all nurses to improve retention, even though this option is politically and economically difficult. This should include correcting the injustice of wage disparities with other sectors in the country (Kingma, 2006).

The Malawi Health Sector Strategic Plan (HSSP) 2011-2016 continues the 2004 EHRP. In the same spirit, it focuses on improving the retention of healthcare professionals at all levels, particularly in hard-to-staff areas by maintaining the 52 percent salary top-ups, institutionalizing a performance management incentive scheme and extending [a] housing scheme to health cadres (ibid). In the words of Stilwell et al. (2004), factors affecting migration varies from person to person and the patterns are common within countries. In Cameroon for example, a lack of promotion opportunities, poor living conditions, and a desire to gain experience rank above poor wages as reasons why health-care professionals choose to migrate. By contrast, in Uganda and Zimbabwe, wages are the most important factor (Stilwell et al., 2004). Even when there are wage incentives, studies by Vujicic et al., (2004); Cometto et al., (2013); Haupt and Kane, (1998) find that the size of the wage differential between source and destination country does correlate with the migration of health workers. The findings by Oberoi and Lin (2006) state that salaries in Botswana were increased but there was no reduction in the number of workers leaving the country. However, in their study, Ngoma and Ismail (2013) highlight that improved convergence and reduction in wage differentials can cause migration to fall in the end. According to Mwapasa (2005), the recent salary increase in Malawi has not improved job satisfaction, mainly because salaries remain much lower than offered outside Malawi or in the private sector.

Although, Gibson and McKenzie (2011) indicate that, economic incentives for migration or income gains play a weaker role in determining highly skilled migration as compared to career opportunities and enabling environment. Muula and Maseko (2006); Ngoma and Ismail (2013) consider salary as an important factor when it comes to brain drain. A different research by Freitas et al. (2012) indicate that the brain drain in sub-Saharan Africa is linked to the structural adjustment programmes imposed on by international financial institutions like the IMF or the World Bank. These programmes according to Freitas et al. (2012) which include privatization and the cut of public expenses on areas such as education and health have proved unsupportive of economic development, eventually inciting many of skilled professionals to search for better positions abroad. From this perspective, brain drain appears as a symptom of underdevelopment rather than its cause.

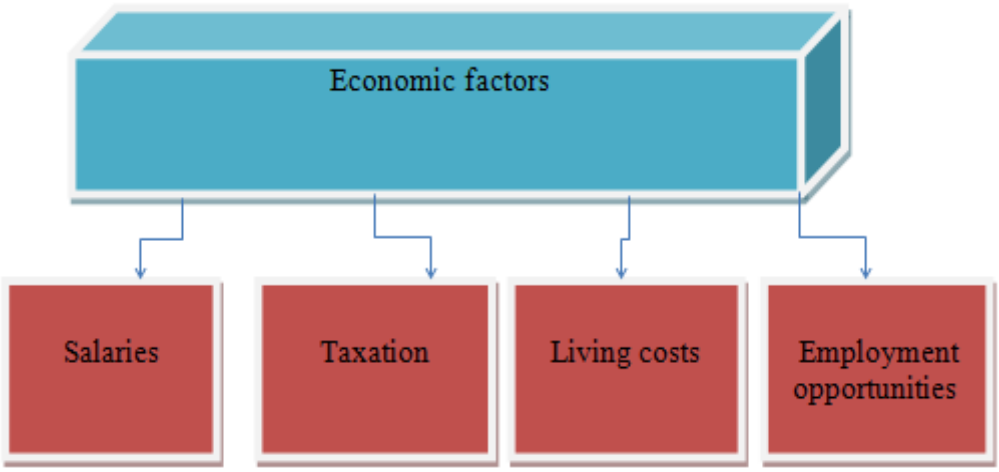

Figure 2-1 Economic Factors

2.7.2 Political Factors Related to Brain Drain

Many African countries experience ongoing violence and crime (Rasool et al., 2012). Some of these endless battles originate from inter- and intra-tribal tensions with strong ethnic biases. The political instability on the continent may also be traced to the cold war between the superpowers that create regional and ethnic dynamics, which often pitted tribes against one another, and occasionally result in violence. The frequent tribal tensions and consequent inter-tribal wars create a situation of abject poverty, ill health, and a destabilized continent (ibid). Other factors include oppressive political climate, lack of funding and limited career structures (Hardill and MacDonald, 2000). According to previous studies Akpokari, (1998), the rising migration not only to the inability of the states to distribute resources optimally and equitably among competing constituents, but also the consequent revival of old tensions which aggravates conflicts which in turn lead to refugees and migration. The unstable political environment, very weak economies, a history of military coups, and non-existent democratic institutions encourage individuals from Africa to emigrate to other nations, especially developed economies in Europe and the United States (Adepoju, 1991; Akpokari, 1998; Takyi, 2002). The annual average growth rate of skilled migration from Africa to the United States and other OECD countries between 1975 and 2000 is twice as large as the growth rate of total immigration (Docquier and Rapoport, 2007). Thus, educated and skilled individuals from Africa often migrate to more stable economies primarily to flee from the unstable and often dire political climate, and, more importantly, for a better quality of life for the emigrants and their families(ibid). In the words of Adepoju (1991), the alarming increase in the emigration rates from Africa is due to the rapidly declining socio-economic and political climate in the region. According to McGregor and Ranka (2010), Zimbabwe's brain drain problem is due to the broader global, political, economic and cultural trends that all migrants in the world have to

navigate. Countries such as Uganda, Zimbabwe, Kenya and Mozambique suffer a high rate of emigration of their highly educated because of political conflict, instability and wars within those countries (Gyimah-Brempong and Traynor, 1999).

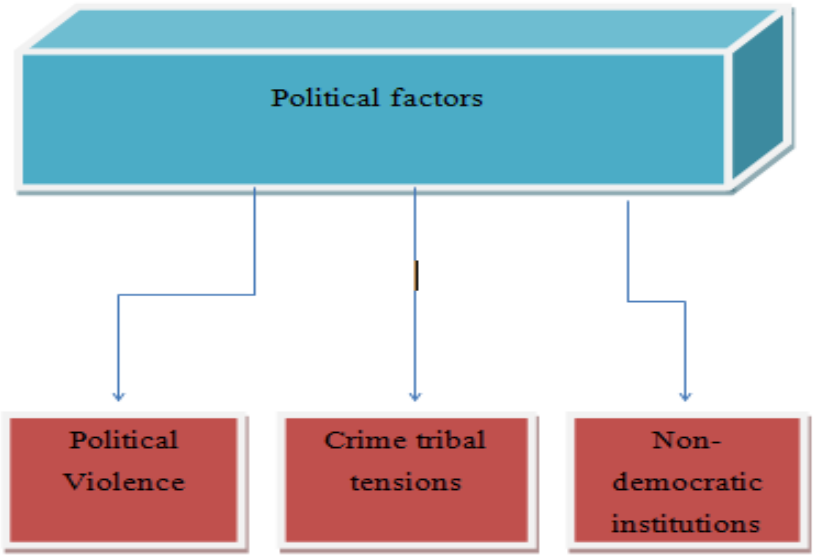

Figure 2-2 Political Factors

2.7.3 Technological Factors Related to Brain Drain

According to Ngoma and Ismail (2013), technology in developed countries creates incentives for skilled workers from developing countries to migrate. The lack of technology and equipment to perform professional tasks reduce job satisfaction among employees (Dovlo, 2007). According to previous studies (Winters, 2002), some countries have made significant investments in infrastructure and education but have not achieved the scientific development and technological and innovative capability either to retain or to recover the human capital that they have generated. In Malawi for example, hospital infrastructure is outdated and provides work conditions that are not conducive to delivery of quality patient care (Maluwa et al., 2012). However, this raises the question of whether it is justified to continue losing human capital or to make the additional investment in science and technology and bring about the innovations needed to stop the loss and convert it into wealth generation.

Maluwa et al. (2012) in their study point out that the lack of basic equipment is one of the challenges in developing countries. Dodani and Laporte (2005) extend a similar view by stating that the context and conditions in which science and technology prosper require political decisions, funding, infrastructure, technical support, and a scientific community but these are generally not available in developing countries. Sortor (2005) finds that social networking is a motivational factor for many African medical professionals to attempt the journey from Africa

to Europe and other Western countries. Social networking based on new technologies, such as mobile phones, internet, twitter, facebook make it easier for any a would-be migrant to secure the journey while staying in permanent contact with family members and friends at home and abroad (Sortor, 2005).

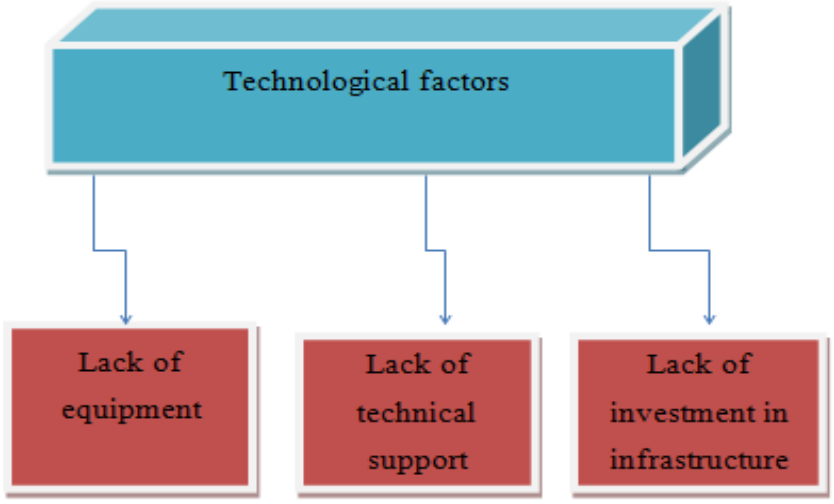

Figure 2-3 Technological Factors

2.7.4 Social Factors Related to Brain Drain

According to Pang et al. (2002) the brain drain in the health sector in developing countries has worsen the already depleted healthcare resources and widens the gap in health inequities worldwide. In addition, most developing countries suffer from disease burdens necessitating adequate skilled personnel and have high population rates. To this end, Schrecker and Labonte (2004) observe that in Southern Africa, rapid out-migration of health professionals is compounding the problems of health systems already faced with budget constraints and the impacts of HIV/AIDS. This observation perhaps makes Stark (2004:15) to conclude that 'there is a strong consensus that deficiency in human capital is a major reason why poor countries remain poor'. Furthermore, the migration of healthcare professionals produces negative externalities (Awases et al., 2004; Logan, 1992) especially in those places where the workforce is threatened by the presence of epidemics, for example the case with Africa and the problems associated with famine and AIDS. However, Skeldon (2009) has challenged this position because the migration of healthcare professionals stems from the poor state of a country's health system. Bhargava and Docquier (2008) assert that HIV prevalence rates in these countries creates a vicious circle, by increasing the emigration of physicians and nurses, which in turn increases the deaths from AIDS and the numbers of orphaned children.

Research by WHO (2006); Tawfik and Kinoti (2003) point out that HIV/AIDS renders the health workplace a dangerous place in sub-Saharan Africa. As such, the fear of contracting HIV/AIDS through work related injuries is a push factor related to the functioning of the health systems. According to WHO (2012), there are approximately 35.3 million people living with HIV worldwide and sub-Saharan Africa is the most affected region, with nearly 1 in every 20 adults living with it. Sixty-nine per cent of the people living with HIV are living in this region (WHO, 2012). Only a few African countries, notably Swaziland and Zambia have programmes to counsel, support and treat health workers exposed to HIV. According to Buchan (2006), between 15% and 30% of nurses in sub-Saharan African countries is HIV positive. Literature by Brady (2014) states that one of the world's poorest countries; Malawi has a low life expectancy, high infant mortality and a high prevalence of HIV/AIDS due to shortage of healthcare professionals. The literature of Dodoo et al. (2006) share a common view that the brain drain of health care professionals hit sub-Saharan Africa hard, where the increasing level of poverty, diseases and corruption is greater than the level of producing healthcare professionals to face the burden of the region health issues. The National Association of Nurses in Malawi (NONM) estimates that each month four nurses are lost because of HIV and AIDS-related illness (Vidal, 2015) in Malawi. Brain drain and other internal challenges in Africa make it harder for the continent to establish a democratic society and create the basis of its economic, political, and social development (Bradley, 2005). Table 2-9 shows the people living with HIV/AIDS by region. Sub-Saharan Africa is the most affected region hence encourages healthcare professionals to migrate to other countries.

Table 2-9 HIV prevalence and incident by region 2013

Region	**Total No.(%Living with HIV)**	**Newly Infected**	**Adult Prevalence Rate**
Global Total	35.0 million (100%)	2.1 million	0.8%
Sub-Saharan Africa	24.7 million (71%)	1.5 million	4.7%
Asia and the Pacific	4.8 million (14%)	350,000	0.2%
Western and Central Europe and North America	2.3 million (7%)	88,000	0.3%
Latin America	1.6 million (5%)	94,000	0.4%
Eastern Europe and Central Asia	1.1 million (3%)	110,000	0.6%
Caribbean	250,000 (<1%)	12,000	1.1%
Middle East and North Africa	230,000 (<1%)	25,000	0.1%

(Source: The Kaiser Family Foundation, 2014)

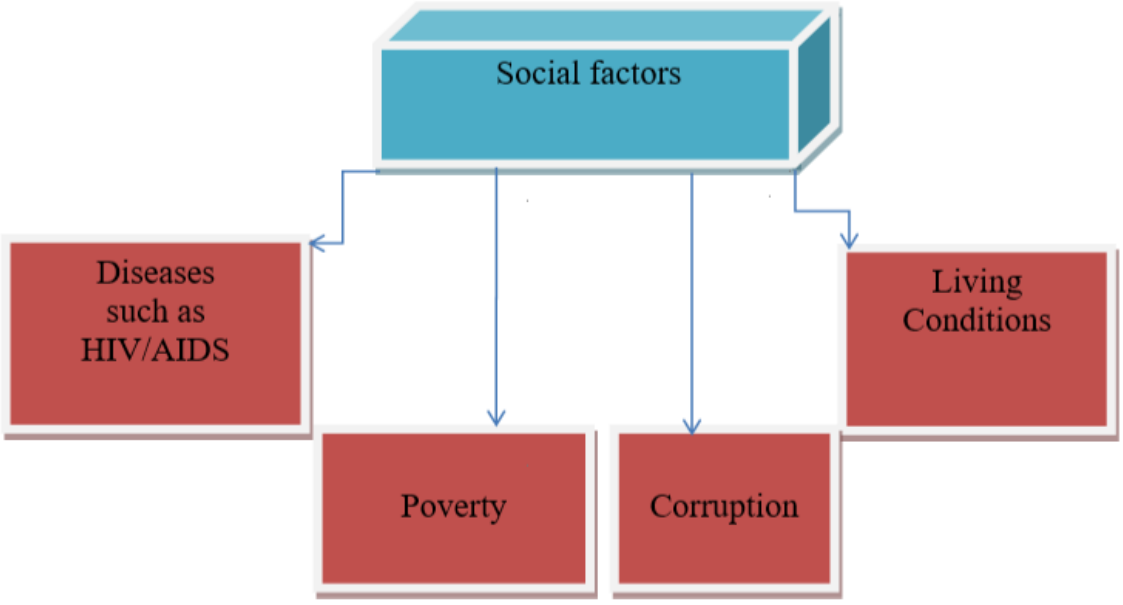

Figure 2-4 Social Factors

2.7.5 Education Factors Related to Brain Drain

In the study on skilled migration by Skeldon (2008), the basic trend reflects an increase in the volume of skilled migration as part of global population movement. An influx of Africans to Europe as the destination of choice for higher education is characterised by the colonial era in Africa. According to Takyi (2002), this is due to the cultural and political ties to the countries that colonized the region. Post-independence in Africa and the emergence of the developed states is a global technological and industrial nation that leads to a growing increase in the number of Africans migration for the purposes of higher education (Takyi, 2002). A study on 111 countries from 1960 to 1990 found that a one-year increase in the average education of the labour force of a nation increases the production per worker by 5% to 15% (Sameta, 2013). Reciprocally, the low average levels of education can slow down the economic growth, damage the gains of the slightly qualified workers and increase poverty (Sameta, 2013). Many migrants in the developed world are highly skilled and in many situations, their educational capital is the only available vehicle for the action of migration (Massey et al., 1993; Haupt and Janeba, 2009). Owing to a number of factors, their education and skills may be underutilised in the host country (Reitz, 2005; Alcobendas and Rodriguez-Planas, 2009). Findings from existing research on push factors (Rasool et al., 2012) state that education standards in some developing countries have declined hence encouraging brain drain.

However, research by Iravan (2011) indicate a different view that when skilled workers enter developed countries for further education, they are often in the most productive phase of their

professional life and by the time they return, if they do, they are often spent force with wrong ideas not suited even for their native underdeveloped countries. Although brain drain benefits individuals, Zhen, 2008 (quoted in Kaba, 2011) regards it as a cost since emigrants usually take with them the value of their training sponsored by the country of origin. However, WHO (2006) argues that if health workers return, they bring significant skills and expertise back to their home countries because it is possible for them to introduce new technologies back home using the experiences gained from developing countries. Research by Kirigia et al. (2006) hold a different view, for example in Kenya, there is no evidence that health professional working abroad ever return home after working for a few years to share the knowledge acquired abroad.

A study by Slote (2011) argues that technical skills may not be transferable because developing countries may lack the necessary technology resources, equipment and scientific advances. Perhaps this is why WHO (2006) states that just depending on foreign experience and externally innovated technologies may hinder the way of development of domestic technologies and professionals. Literature reviewed (Hall, 2005) observe that when individuals develop their skills there is a positive contribution to the country whether they have much infrastructure to work with or not. However, Carrington and Detragiache (1999) highlight that education in a developing country may not lead to faster economic growth if a large number of its highly educated people leave the country.

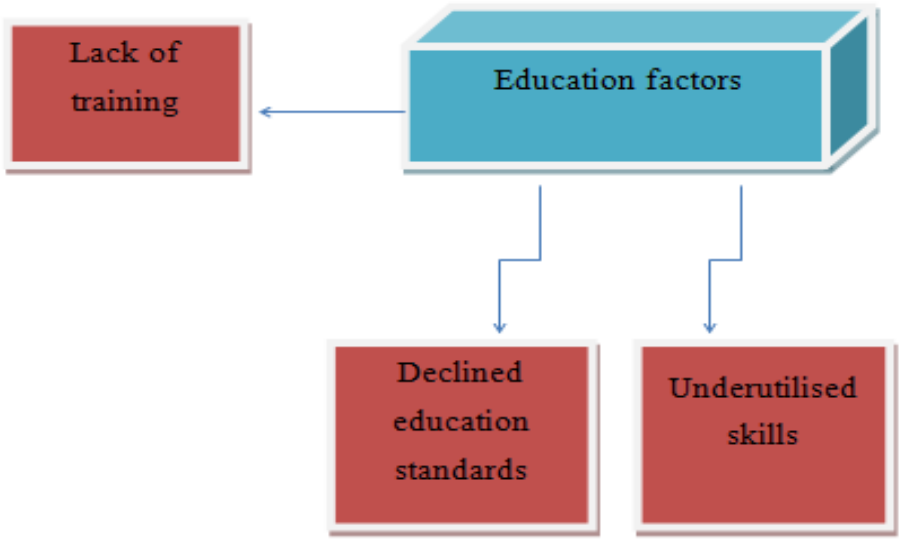

Figure 2-5 Education Factor

2.7.6 Globalisation Factors Related to Brain Drain

According to Kuehn (2007), the global free movement of labour and competition for human resources enables developed countries to fill their shortages of health workers with nurses and doctors from less developed countries. In their study, Held et al. (1999) point out that, globalisation entails the widening, deepening and speeding up of worldwide interconnectedness in all aspects of contemporary social life. A study by Ohmae (1993) pinpoints that globalisation is a borderless world where events taking place in one part of the world are quickly spread across the globe. To this end, this "borderless" world Baruch et al. (2007: 99) has created opportunities largely for skilled workers. Added to this, factors such as better job prospects, rapid advancements in technology, travel and communication that are more affordable and skills that are highly interchangeable, encourage people with skills to move beyond their national borders (World Bank, 2003).

For instance, Pagett and Padarath (2007) opine that rapid mobile phone expansion in Africa has increased global linkages and raised awareness of potential opportunities overseas. Koser (2007) points out that cheaper transport is also making migration more feasible. Kofman and Raghuram (2006) highlight that, the crisis in nursing and recourse to foreign nurses in many parts of the world has meant that nursing now operates in a truly global labour market. The migration of Global South-trained nurses increased substantially in the 1980s and 1990s amidst neoliberal economic policies in the West that cut funding to nurse education and health care provision (Kingma, 2006). These cuts deepen the nurse shortage in many countries, particularly the UK and the USA by limiting places in nurse-training programmes and making nursing a more demanding job. Keohane and Nye (2000) state that globalisation phenomenon is complex with various dimensions grouped according to the types of flows and perceptual connections that occur in spatially extensive networks.

Brain drain has evolved with the new phase of globalisation. According to Stiglitz (2002), the main characteristic of this new phase is its tendency to integrate nations and people across political boundaries in order to facilitate free flow of people, goods and services, capital, knowledge and skills. Pillay (2009) observes that globalisation has resulted in a growing demand for skilled personnel because as societies become interdependent and interconnected, the mobility of skilled personnel is also increasing. According to Rizvi (2005), in an age of globalisation, the key issue has become not where people are physically located but what contribution they are able to make to the social, cultural and economic development of the countries with which they identify. Most of the literature on globalisation emphasises the economic aspect which points to the development of an international capitalist trade and financial system (Studlar, 2006) resulting into international economic integration.

At the core of economic globalisation are the removal of national economic barriers; the international spread of trade, financial and production activities; and the growing power of the transnational corporations and international financial institutions. With economic globalisation, foreign direct investments are a norm and the multiplicity of multinational corporations facilitate this. This entails the creation of global capitalist system which Veltmeyer (2004) describes as a new global world. In fact, the World Trade Organisation (WTO), the International Monetary Fund (IMF) and the World Bank, sustains and regulate the new economic global world. According to Boas and Vevatne (2004), the creation of the WTO is a conscious attempt to establish a strong global regulatory framework in support of increased trade liberalisation. The IMF reconfigures territories in order to make them most attractive to international capital (Taylor, 2004). Similarly, Nustad (2004) points out that the World Bank is perceived as directly seeking to influence the economic policy of its customers and the whole world.

According to Skogstad (2000), the political dimension of globalisation highlights a restructuring of power relations with the emergence of new supranational centres of political authority so that citizens are now subject to multiple layers of political authority. They include international organisations, international non-state actors, powerful country blocs and countries that influence nation-states. This has seen the limits of national politics and shifts in the state centred traditional orientations towards global political economy, global commons, and the role of global institutions (Kofman and Youngs, 1996). As a result, political authority is no longer constrained by the boundaries of nation states. The flow of ideas across borders and continents has been with us forever, the speed with which ideas can cover vast distances is perhaps the most distinctive aspect of contemporary globalisation (Bisley, 2007). According to Apter (2009), globalisation has brought about misery, desperation, and mass migration mainly to poor nations and unable to sustain their economic development due to intense international competition. In their study, Grubel and Scott (1977) conclude any kind of migration whether skilled or unskilled is a hindrance to the source country's maximum economic output.

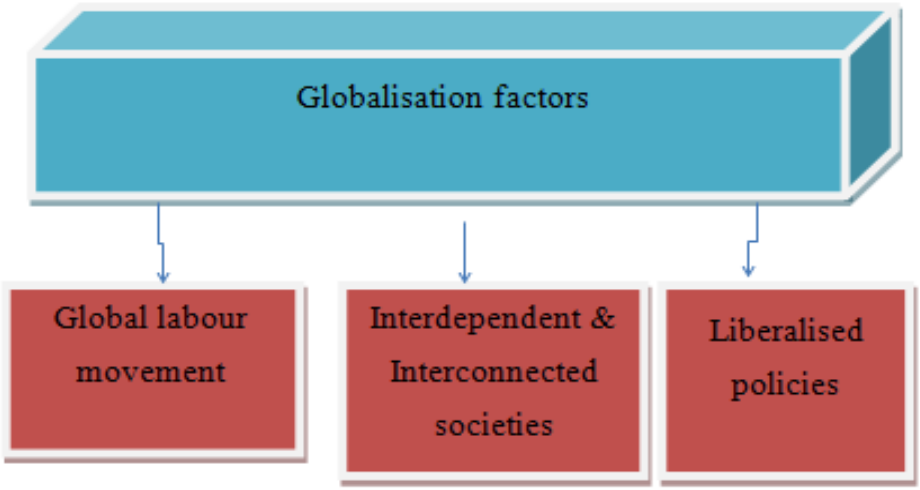

Figure 2-6 Globalisation Factors

2.8 Summary of the Determinants of Brain Drain in Developing Countries and Conceptual Framework

Worldwide, there is brain drain of nurses. An increase in the brain drain of nurses from their home countries to recipient countries is having an effect on the healthcare system. This phenomenon stems from economic, political, technological, social, education and globalisation factors. Brain drain has a significant impact on both the individual and national level. This chapter has summarized the determinants of brain drain.

Brain drain would intensify in the coming decades given the rising gap in wages and the differing demographic features in developed and developing countries. Higher wages and better employment opportunities in developed countries create incentives for brain drain from developing countries. The economic conditions in African countries have been on a steep decline. Furthermore, favourable rewards for labour and the need to escape the harsh economic realities in the region partly account for brain drain to developed countries.

Many African countries experience ongoing violence and crime. The unstable political environment, very weak economies, a history of military coups, and non-existent democratic institutions encourage individuals from Africa to emigrate to other nations, especially developed economies in Europe and the United States. Thus, educated and skilled individuals from Africa often migrate to more stable economies primarily to flee from the unstable and often dire political climate, and, more importantly, for a better quality of life for the emigrants and their families.

Technology in developed countries creates incentives for brain drain because lack of basic equipment is one of the challenges in developing countries. The lack of technology and equipment to perform professional tasks reduce job satisfaction among employees. Some countries have made significant investments in infrastructure and education but have not achieved the scientific development and technological and innovative capability either to retain or to recover the human capital that they have generated. This raises the question of whether it is justified to continue losing human capital or to make the additional investment in science and technology and bring about the innovations needed to stop the loss and convert it into wealth generation. However, conditions in which science and technology will prosper require political decisions, funding, infrastructure, technical support, and a scientific community but these are generally not available in developing countries.

The number of sub-Saharan Africans living in extreme poverty has risen. According to WHO (2006), it is estimated that over a billion people in the developing world are too poor to feed themselves adequately. Factors such as crop failure and famine contribute to economic instabilities experienced by sub-Saharan countries. There is also fear of contracting HIV/AIDS through work related injuries which is a push factor related to the functioning of the health system. The AIDS pandemic has contributed to the economic instability of some sub-Saharan countries by depleting human capital due to an increased death rate among professionals. Healthcare professionals also tend to migrate directly from their home countries to developed countries due to colonial relationship.

Post-independence in Africa and the emergence of the developed states is a global technological and industrial nation that leads to a growing increase in the number of Africans migration for the purposes of higher education. Reciprocally, the low average levels of education can slow down the economic growth, damage the gains of the slightly qualified workers and increase poverty. Many migrants in the developed world are highly skilled and in many situations, their educational capital is the only available vehicle for the action of migration. Owing to a number of factors, their education and skills may be underutilised in the host country and education standards in some developing countries have declined hence encourage brain drain.

The global free movement of labour and competition for human resources enables developed countries to fill their shortages of health workers from less developed countries. Globalisation entails the widening, deepening and speeding up of worldwide interconnectedness in all aspects of contemporary social life. It assumes a borderless world where events taking place in one part of the world quickly spread across the globe. Globalisation has resulted in a growing demand for skilled personnel because as societies become interdependent and

interconnected, the mobility of skilled personnel is also increasing. Over the same period that globalisation has gathered pace, a number of sub-Saharan countries have emerged from dictatorships and liberalised their emigration policies.

Figure 2-7 is a conceptual framework showing the determinants of brain drain of healthcare professionals

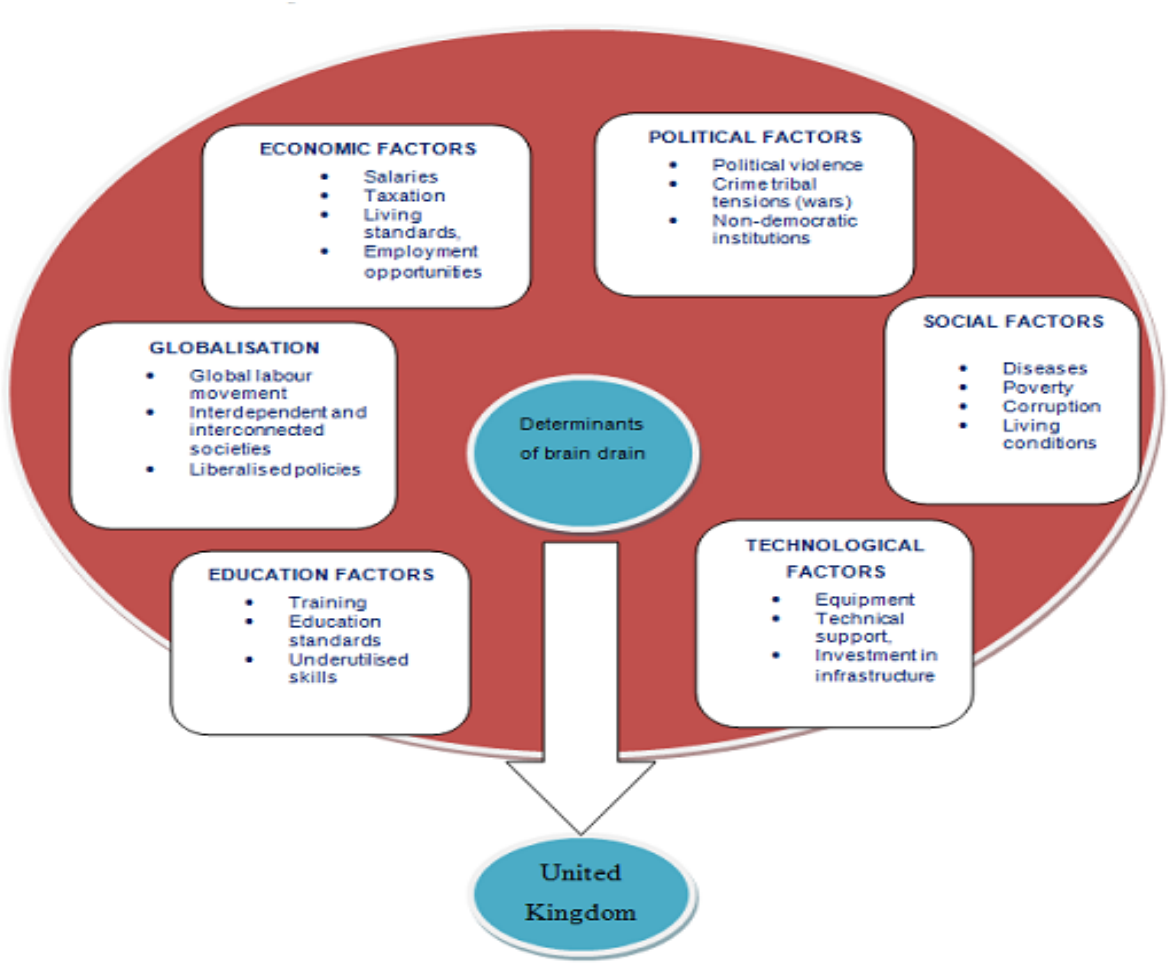

Figure 2-7 Framework for brain drain of healthcare professionals

The framework illustrated in figure 2-7 shows that the developing countries' healthcare professionals are influenced by economic, political, technological, social, education and globalisation factors.

2.9 Conclusion

The current chapter discussed the brain drain of healthcare professionals in developing countries. There are various determinants of brain drain of healthcare professionals in developing countries, which require both developing and developed countries to take initiatives in order to control or minimize brain drain. The current framework demonstrates that at the heart of healthcare professionals' decisions to immigrate are economic factors. Other

factors include political, technological, social, education and globalisation. Due to shortage of nurses, the UK government changed their immigration policies to facilitate employment of foreign nurses. The UK government influenced the NMC to facilitate registration of international nurses. Based on the review of available literature, the brain drain definition specifically related to healthcare professionals, theories and the concepts has been discussed.

Most countries in the African region continue to experience the loss of an increasing number of healthcare professionals to developed countries. In an increasingly globalised world, African countries are unable to compete with developed countries in retaining their own health professionals, let alone attract the specialized professionals they need from other countries. Though predominantly common in Africa countries, brain drain also occurs in Asia and Europe. The chapter has also discussed the concept of brain drain and the impact of brain drain on developing countries. The next chapter explores the study's research methodology.

Chapter 3 : RESEARCH METHODOLOGY

3.1 Introduction

Remenyi et al. (1998) define methodology as the procedural framework within which the research is conducted. Similarly, Hussey and Hussey (1997) define methodology as the overall approach to the research process. The two definitions describe an approach to a problem that can be put into practice in a research study. However, they could only differ according to the problems to be investigated. In any study, it is crucial to make a decision on an appropriate research methodology. In other words, identifying the research methodology that best suits a research under study is crucial because it will benefit achieving the set objectives of a research and research credibility. This chapter presents in detail the research methodology that was used in the study and the justification for doing it.

3.2 Research Process

A research process is a systematic process of collecting, analysing, and interpreting information (data) in order to increase our understanding of the phenomenon the researcher is interested in or concerned with (Leedy and Ormrod, 2005). Encompassing the methods and strategies to be followed in a study to attain a set objective, methodology generally enables researchers to understand the processes and procedures involved in those methods and strategies (Silverman, 1994). It is important at the beginning of any research work, a researcher should decide on an appropriate starting point for undertaking the research, and on an overall strategy within which the evidence will be collected (Remenyi et al., 1998). Saunders et al. (2012) describe the process as an onion (See Figure 3-1). This research framework is a systematic approach to research methodology that logically describes philosophical positions and approaches to the research. Saunders et al. (2012) state that, it is essential the outer layer of onion be peeled away before coming to the centre of the research onion. Bryman (2012) opines that research onion usefulness lies in its adaptability for almost any type of research methodology and can be used in a variety of contexts. The research process onion is suitable practically because modifications can be made to include another layer like qualitative data collection methods.

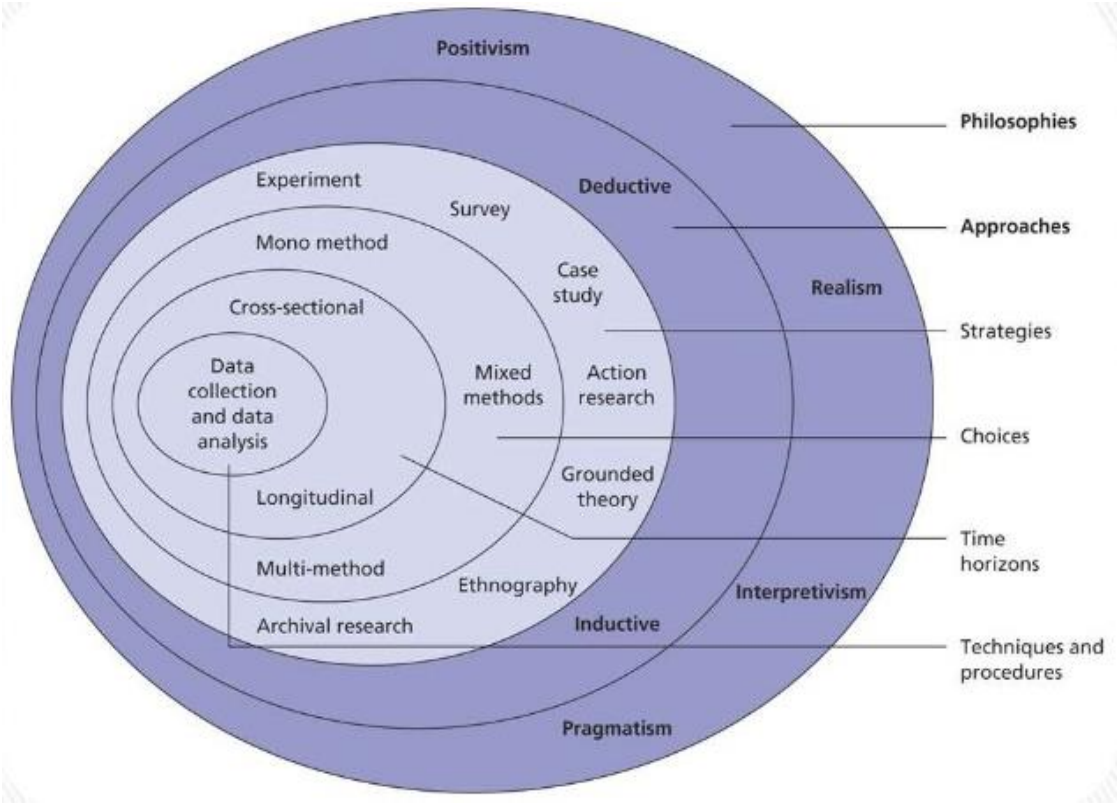

Figure 3-1 Research Process 'Onion'

(Source: Saunders et al., 2012)

The research onion process explains the stages that must be covered when developing a research strategy. When viewed from the outside, each layer of the onion describes a more detailed stage of the research process (Saunders et al*.,* 2007). This justification provided for philosophy, approaches, strategies, and time horizon and data collection methods.

3.3 Research Paradigm

Patton (2002) defines a paradigm as a worldview-a way of thinking about and making sense of the complexities of the real world. A paradigm refers to the progress of scientific practice based on people's philosophies and assumptions about the world and the nature of knowledge; in this context, about how research should be conducted (Collis and Hussey, 2003). A paradigm offers a framework comprising an accepted set of theories, methods and ways of defining data. It tells us what is important, legitimate, and reasonable (Patton, 2002). The term 'paradigm' has come into vogue among social scientists particularly through the work of Thomas Kuhn. Kuhn (1962) describes the progress of scientific discoveries in practice, rather than how they are subsequently reconstructed within textbooks and academic journals. According to Kuhn, science progresses in tiny steps, which refine and extend what is already known. However, occasionally experiments start to produce results that do not fit into existing theories and patterns (Easterby-Smith et al., 2002).

Morgan (1979) cited by Collis and Hussey (2003) suggests that the term paradigm can be used at three different levels. At the philosophical level, it is used to reflect basic beliefs about the world. At the social level, it is used to provide guidelines about how the researcher should conduct his or her endeavours. At the technical level, it is used to specify the methods and techniques, which ideally should be adopted when conducting research.

The period of revolution ends when a new paradigm surfaces as the ascendant one and a new period or normal sets in. A new paradigm is in reaction to the application of positivism to the social world stems from the view that the world and reality are not objective and exterior but that are socially constructed and given meaning by people (Husserl, 1946 quoted in Easterby-Smith et al., 1991). Reality is socially constructed rather than objectively determined. Hence, the task of the social scientist should not be to gather facts measure how often-certain patterns occur, but to appreciate the different constructions and meanings that people place upon their experience. One should therefore try to understand and explain why people have different experiences, rather than search for external causes and fundamental laws to explain their behaviour. Human actions arise from the sense that people make of different situations, rather than as a direct response from external stimuli (Easterby-Smith et al., 1991).

Although there is no difficulty with the word paradigm in general usage, there is some controversy about the use of the word among researchers (Remenyi et al., 1998). Kuhn (1962) uses the paradigm concept in no less than twenty-one different ways consistent with three broad senses of the term; (1) as complete view of reality, or a way of seeing; (2) as relating to the social organisation of science in terms of schools of thought connected with particular kinds of scientific achievements, and (3) as relating to the concrete use of different kinds of tools and texts for the process of scientific puzzle solving (Morgan, 1997). According to researchers Denzin and Lincoln (2000); Ponteroto (2005); Kuhn (1962); Hunt (1994), philosophical anchors of a paradigm are epistemology, ontology and methodology. The positions of the major paradigms with respect to these philosophical anchors define their world-view or how reality is perceived. However, Fitzgerald and Howcroft (1998) put these research paradigms into two broad categories: positivist and interpretivist. Two other philosophical foundations, Axiology and Rhetoric Structure (Ponterotto, 2005) are included.

The following paragraphs explain briefly the philosophical foundations of the paradigms namely epistemology, ontology and methodology. A thorough appreciation of these philosophical foundations is required to understand the positions of paradigmatic schemas especially the ontological and epistemological questions that are central to the understanding of the research problem.

3.3.1 Epistemology Philosophical Stance

Epistemology is the study of knowledge, and so of science: the study of its nature, its validity and value, its methods and its scope (Alain Thietart et al., 2001). According to Hussey and Hussey (1997), epistemology is concerned with the study of knowledge and what we accept as being valid. This involves an examination of the relationship between the researcher and that, which is being researched. Epistemological assumptions underpin any approach to research (Remenyi et al., 1998). As the study of knowledge, Thomas (2004) states that epistemology, is concerned with the following questions: How can we know anything with certainty? How is knowledge to be distinguished from belief or opinion? What methods can yield reliable knowledge? As the study of justified belief, epistemology aims to answer questions such as: What is the nature of the knowledge we can generate through our research? How can we generate scientific knowledge? What is the value and status of this knowledge? (Alain Thietart et al., 2001). Epistemology questioning is vital to serious research, as through its researchers can establish the validity and legitimacy of their work. A particularly central issue in this context is the question of whether the social world can and should be studied according to the same principles, procedures, and ethos as the natural sciences (Bryman, 2004). Recognizing that they have these presuppositions, allows researchers to control their research approach to increase the validity of the knowledge produced and to make this knowledge cumulative (Alain Thietart et al., 2001). Epistemology provides a set of criteria for evaluating knowledge claims and establishing whether such claims are warranted. According to Maykut and Morehouse (1994); Punch (2005), epistemology explains the nature of knowledge, what is accepted as knowledge and the relationship between the knower and the known.

3.3.2 Ontology Philosophical Stance

Ontology is the assumption we make about the nature of reality (Easterby-Smith et al., 2002). According to Punch (2005), ontology is the concept explaining reality and why everything exists in the world, including the nature and form of reality. As the study of the nature being and existence, Maykut and Morehouse (1994) state, that ontology is concerned with the following questions: What is the nature of the world? What is real? What counts as evidence? With the ontological assumption, it has to be decided whether it is considered the world is objective and external to the researcher, or socially constructed and only understood by examining the perceptions of the human actors (Hussey and Hussey, 1997). The world is complex as different qualitative research has different views of the multiple realities. As such, any methodology that tries to understand the research domain and explain research phenomenon become complex. Research process reflects researcher’s action to respond to

the research assumptions. In this view, when explaining one particular theoretical aspect, it is not necessarily to decrease the understanding of the relevant concepts. However, it believed that new concepts gather and interact in complex ways to create theory and develop a new perspective of the research domain. Corbin and Strauss (2008) highlight that it is significant for the research to generate as many multiple perspectives as possible of complex research phenomenon.

3.3.3 Methodology Philosophical Stance

Collis and Hussey (2014) define methodology as an approach to the process of the research encompassing a body of methods. It describes an approach to a problem that can be put into practice in a research programme or process. Methodology, unlike method, defines the procedure by which an inquiry is conducted. It encompasses the methods and strategies employed to guide the design of a study. Methods refer to the various means by which data can be collected and/or analysed (Collis and Hussey, 2003) or "procedures, tools and techniques" of research (Schwandt, 2000:158). Regardless of which paradigm a researcher is employing, it is important that attention is paid to all the features, and ensure that there are no contradictions or deficiencies in the methodology (Collis and Hussey, 2003).

Axiology and Rhetoric Structure: Axiology refers to the role of researcher values in the scientific process (Ponterotto, 2005). These values help to determine what are recognised as facts and the interpretations which are drawn from them (Collis and Hussey, 2003). Rhetoric refers to the language, which is used to present the procedures and results of research to one's audience (Ponterotto, 2005). Rhetoric structure depends on the researcher's epistemological and axiological stance. According to Collis and Hussey (2014), Axiological assumption is concerned with the role of value as follows:

- Positivists believe that the process of research is value-free. Therefore, positivists consider that they are detached and independent from what they are researching and regard the phenomena under investigation as objects. Positivists are interested in the interrelationship of the objects they are studying and believe that these objects were present before they took an interest in them. In addition, they believe that the objects they are studying are unaffected by their research activities and will still be present after the study has been completed.

- In contrast, interprevitists consider that researchers have values, even if they have not been made explicit. These values help to determine what are recognised as facts and

the interpretations drawn from them. Most interprevitists believe that the researcher is involved with that which is being researched.

3.4 Research Philosophy

The upcoming subsections critically examines four paradigms or rather worldviews namely positivism, interpretivism, critical theory, post positivism and pragmatism to ascertain their suitability for the current research.

3.4.1 Positivism

The nineteenth-century French philosopher and sociologist August Comte between 1798 and 1857 in attempt to discover universal truths in both the physical and the social world (Thomas, 2004:42-43) coined the term 'positivism'. According to Willis (2007), this term was a direct reaction to religious and metaphysical beliefs that dominated society during the 19th century. Historically, the positivism in the social science is based on the approach used in the natural sciences (Collis and Hussey, 2003). Positivism is an epistemological position that advocates the application of the methods of the natural sciences to the study of social reality and beyond (Bryman and Bell, 2011). Positivism seeks the facts or causes of social phenomenon, with little regard to the subjective state of the individual. The key idea of positivism is that social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectivity through sensation, reflection or intuition (Easterby-Smith et al., 1991). As such, knowledge is gained with experimentation and quantitative methods (ibid). Positivism is founded on the belief that the study of human behaviour should be conducted in the same way as the study in the natural sciences (Hussey and Hussey, 1997).

3.4.1.1 Limitation of Positivism

A drawback with positivism is its apparent disregard for socio-cultural perspectives. The study of socio-cultural phenomena requires to some extent 'immersion' of the investigator into the setting of the participants (Banks, 1998; Schein, 1999). This kind of principle disregards any independent relations between the researcher and the subjects and 'masking' of the former's values and emotions. Positivism especially in the social sciences is not regarded as an approach that will lead to interesting or profound insights into complex problems especially in the field of business and management studies (Remenyi et al., 1998). Apart from its dominance in management research, a number of researchers have criticized this paradigm. Hussey and Hussey (1997) outline basic criticisms of the positivistic paradigm as follows:

It is impossible to treat people as being separate from their social contexts and that they cannot be understood without examining the perceptions they have of their own activities.

Furthermore, a highly structured research design imposes certain constraints on the results and may ignore relevant and interesting findings. Researchers bring their own interest and values to the research and that capturing complex phenomena in a single measure is, at best misleading.

For this particular study, there was a focus on investigating the determinants of brain drain of registered nurses in Malawi to understand the current situation and attempt to curb brain drain rather than testing an existing framework theory. In addition, the researcher of this project believes that different researchers have different assumptions of reality so there is more than one way to understand a situation. In view of this, positivist's approach was found less appropriate hence not adopted for this study.

3.4.2 Interpretivism

According to Collis and Hussey (2014), interprevitism is underpinned by the belief that social reality is not objective but highly subjective because it is shaped by our perceptions. The term subsumes the views of writers who are critical of the application of the scientific model to the study of the social world and who are influenced by different intellectual traditions. They share a view that the matter of the social sciences-people and their institutions is fundamentally different from that of the natural sciences (Bryman and Bell, 2011). Advocates of interpretivism such as (Glaser and Strauss, 1967; Mittman, 2001; Denzin and Lincoln, 2000; Myers, 1997) highlight that, use of qualitative orientation or approaches is ideal for theory development and research in the management sciences. Methodologies in particular, ethnography, exploratory analysis, field experiments are encouraged. According to Schwandt (2000) and Sciarra (1999), hermeneutical approach underlying interpretivism maintains that meaning is hidden and must be brought to the surface through deep reflection. The interaction between the investigator and the object of investigation is central to and a distinguishing characteristic of interpretivism. In fact, it is only through this interaction that deeper meaning can be uncovered (Ponterotto, 2005). In this respect, the research process is not directed by an external knowledge goal, but consists of developing an understanding of the social reality experienced by the subjects of the study. By immersing oneself in the context, the researcher is able to develop an inside understanding of the social realities being studied (Alain Thietart et al., 2001). According to Bryant and Higgins (2009), interprevitism is influenced and shaped by the pre-existing theories and researcher's view of the world. Interprevitists do not believe in making general statements. Instead, they require an in-depth understanding of a particular situation. Strauss and Corbin (1990) add that interprevitism explores the richness, depth and complexity of phenomenon.

For the interpretivist researcher, reality is not a rigid thing, but a creation of individuals involved in the research. Collis and Hussey (2003); Saunders et al. (2012) state that reality does not exist within a vacuum, its composition is influenced by its context, and many constructions of reality are therefore possible. The interpretivist paradigm is based on a relative ontology and subjective epistemology. For the relativist, reality is socially constructed. Relativism is the doctrine that no absolutes exist. It is expressed by the dictum that Man is the measure of all things; that are that they are, and of things that are not that they are not. In its epistemological application, relativism holds that what counts as warranted knowledge, truth and reason are always relative to (that is conditioned by) some historical epoch and/or place and/or cultural context and/or (as Kuhn‘s case) paradigm.

According to Saunders et al. (2012), the heritage of interpretivism comes from two intellectual traditions: phenomenology and symbolic interactions. Other authors Collis and Hussey (2003); Hussey and Hussey (2007) refer postmodernism to interpretivist paradigm. Postmodernism is concerned with understanding human behaviour from the participants own frame of reference. For the intepretivist, the act of investigating reality has an effect on that reality such that considerable regard ought to be paid to the subjective state of the individual by focusing on the meaning rather than the measurement of social phenomena, as in positivism.

According to Ponterotto (2005), an interprevitist’s view is that, reality is subjective and influenced by the context of the situation, namely the individual’s experience and perceptions, the social environment, and the interaction between the individual and the researcher. In particular, the researcher will recognize and grasp the participant’s problems, motives and meanings. The research problem and interviews were carried out to investigate determinants of brain drain of registered nurses in the Malawi health sector. Employees’ experience, perception, understanding of brain drain issues could not be underestimated as far as this study was concerned. In this view, Shah and Corley (2006) suggest that, in order to have an in-depth understanding of the particular research phenomenon, the researcher should directly interact with people in the field. Reinharz (2007) supports this view by highlighting that even in this technological age, the best overall source of information still mainly originates from people.

An interprevist paradigm was adopted for this research because communication between the researcher and participants in the Malawi health sector was required in order to obtain richness of information to have an in-depth understanding of determinants of brain drain phenomenon. Rubin and Rubin (1995) confirm that using semi-structured interviews with the participants help to have a comprehensive understanding of the current phenomenon.

3.4.2.1 Limitation of Interprevitism

The major limitation of the interpretivist approach lays in the researcher‘s proximity to the investigation. It is argued that the research is so personal to the researcher that there is no guarantee that a different researcher would not come to radically different conclusions. However, in this study this limitation was overcome by triangulation where different data collection methods through semi-structured interviews and focus group discussions were used.

3.4.3 Critical Theory

According to O’Donnell (1999), critical theory is a self-evaluation that is aimed at emancipation from exploitation by a highly commercial world. The theory is an intellectual tradition inspired by Marx initiated by the Frankfurt school in the early 1930s and 1940s (Partington, 2002). It is used to tackle the injustices of society and focuses on authorizing human beings to transcend the constraints by race, class and gender (Fay, 1987) while (Kincheloe and McLaren, 1994, 2000) state that critical theory is aimed at disrupting the status quo. Crotty (1998) who argues that present social critics aim their criticism at the social order itself supports this. Critical researchers see organizations in general as social historical creations, born in conditions of struggle and domination (Alvesson and Deetz, 2000). Critical theorists, actors and authors are often caught up in an ideological milieu of which they themselves are unaware. This means that a truly critical hermeneutic understanding must seek to reach beneath the everyday presentation of things and the seeming obviousness of human situations (Partington, 2002). Critical theory offers extremely powerful and inspiring stimuli for rethinking contemporary society and its institutions, including management (Alvesson and Deetz, 2000). However, researchers are cautioned to interpret critical theory broadly, as there is no single critical theory (Kincheloe and McLaren, 2000).

3.4.3.1 Limitation of Critical Theory

Both Positivists and Interpretivists analyse the critical theory. Positivists claim that it is anti-scientific while post-modernists declare that its scientific and rationalistic aspirations to enlightenment are imaginary (Morrow and Brown, 1994). From a critical theory point of view, a post-modern approach has three downsides. It fails to provide language to articulate what are arguably indispensable concerns with autonomy, rights and justice. Positivists and Interpretivists criticise critical theory for failing to provide a clear exposition of the impact of their approach upon research methods. As such, it creates a gap between extensive traditions of critical empirical research on the one hand and guidelines on how to conceptualize and conduct such research on the other hand.

3.4.4 Postpositivism and Pragmatism

Postpositivism, as articulated by Campbell and Russo (1999), recognizes that discretionary judgment is unavoidable in science, that proving causality with certainty in explaining social phenomena is problematic. Both quantitative and qualitative, are needed to generate and test theory, improve understanding over time of how the world operates, and support informed policy makers and social program decision making. Postpositivism is a variant of positivism as it accepts true reality with some modification. According to Ponterotto (2005), postpositivists claim reality can only be apprehended and measured imperfectly. In other words, reality is perceived as existing independently of human thoughts, but is interpreted through social conditions. Postpositivists recommend a modified dualism/objectivism as the researcher may have some influence on that being researched. Nevertheless, objectivity and researcher-subject independence remain important guidelines for the research process. Postpositivist paradigm was not suitable for this research because the individual and experiences of the participants in the Malawi health sector predominantly guided the research.

On the other hand, Pragmatism is a paradigmatic schema, which brings together the philosophical foundations of positivism and interpretivism. There are many forms of this philosophy, but for many, pragmatism as a worldview arises out of actions, situations and consequences rather than antecedent conditions as in postpositivism (Creswell, 2009). Pragmatism has multiple perspectives on ontology, epistemology and methodology. Individual researchers have a freedom to choose the methods, techniques and procedures of research that best meet their needs and purposes (Creswell, 2009). The use of aspects of positivism as a paradigm makes it limited for this research.

Much of the research literature considers to some extent, the research philosophy to determine largely which approach the researcher should choose (Bryman, 1984). Miles and Huberman (1984 cited in Kandadi, 2006) state that knowing what you want to find leads inexorably to the question of how one will get the information. According to authors Denzin and Lincoln (2000); Yin (2002), the nature of the problem to be solved and the determined research questions should provide a clue. Saunders et al. (2003) state that there is no best tradition in terms of bringing best results among the available research approaches. It depends on the context of the study and the nature of the questions being asked.

3.4.5 Determination of the Research Philosophy for the Research

The subsections above have analysed contemporary paradigms in the social sciences. Their appropriateness of the application of each of the paradigm in this research has been evaluated. Ponterotto (2005) states that with an interprevitist's view, reality is subjective and

influenced by the context of the situation, namely the individual's experience and perceptions, the social environment, and the interaction between the individual and the researcher. Reality does not exist within a vacuum, its composition is influenced by its context, and many constructions of reality are therefore possible (Collis and Hussey, 2003 and Saunders et al., 2009). Interpretivist approach helps offer many avenues to answer the research question in this research. Saunders et al (2009) state that an interpretivist perspective is highly appropriate in the case of business research particularly in such fields as organizational behavior, marketing and human resources management. In this study, the research problem and interviews sought to investigate determinants of brain drain of nurses in the Malawi health sector. As such, participants' experience, perception, understanding of brain drain issues in this study could not be underestimated. This was the sole reason this philosophy was chosen in this research to necessitate the development of brain drain framework. Although, the major limitation of the interprevitist approach lays in the researcher's proximity to the investigation this study's limitation was overcome by triangulation where two different data collection methods were used. Triangulation provided the researcher with the opportunity to develop a balanced and analytical thesis.

3.5 Research Approach

It is a good practice for a researcher to decide which type of research approach needs to be undertaken. According to Hair et al. (1995), a research can be either confirmatory or exploratory. Confirmatory studies are those studies that seek to test or confirm a pre-specified relationship while exploratory studies are those which define relationships in only the most general form and then allow multivariate techniques to estimate a relationship. In this research, the researcher is not looking to confirm any relationships specified prior to the analysis, but allows the method and the data to define the nature of the relationships. Easterby-Smith et al. (2002) explain three important reasons for adopting a particular research approach. They clarify that, it enables a researcher to take a more informed decision about research design; It helps think about those approaches that will whether work or not for the researcher and enables the researcher to adapt the research design to cater for any constraints.

While working on a research project, it is very important to decide which research approach would be best for researcher. Saunders et al. (2003) classify research approaches into two broad categories namely deductive and inductive (See Table 3-1). Understanding of these approaches is essential to support the choice of appropriate research approach. Both the approaches are completely different from each other. Deductive research approach is associated with the positivism paradigm, whereas inductive research approach is associated with interpretivism. Deductive research approach allows the research to establish a hypothesis

by using theory. The researcher to confirm or reject the hypothesis to resolve issue (Gill and Johnson, 2010) collects a variety of data and information. There are various steps in using deductive approach. They include development of theory, hypothesis, observation through data and information and confirmation. On the other hand, inductive approach is totally reverse form deductive approach. Observation, pattern, tentative hypothesis and theory are important steps of the inductive approach. Inductive research is a flexible approach because there is no requirement of pre-determined theory to collect data and information. The researcher uses observable data and facts to reach at tentative hypothesis and define a theory as per the research problem. This helps the research to give inductive arguments (Mertens, 2008).

Table 3-1 Difference between deductive and inductive approaches

Deduction	Induction
• Scientific principles; moving from theory to data.	• Gaining an understanding of the meanings humans attach to the events
• Moving from theory to data	• A close understanding of the research
• The need to explain causal relationship between variables	• The collection of qualitative data
• The collection of quantitative data and Researcher independence of what is being researched	• A more flexible structure to permit changes of research emphasis as the research progresses
• The application of controls to ensure validity of data and a highly structured approach	• A realisation that the researcher is part of the research process
• The operationalisation of concepts	• Less concern with the need to generalise

(Source: Saunders et al., 2003)

As Table 3-1 above shows, inductive approach is highly associated with the interpretivism philosophy. Ridenour et al. (2008) opine that inductive approach allows the researcher to provide subjective reasoning with the help of various real life examples. Based on the fact that the main aim of this study was to investigate the determinants of brain drain and develop a framework with the hope to curb the brain drain for the Malawi health sector but derived from a small sample of subjects, an inductive approach was used (Trochim, 2006). According to Zikmund (2002), inductive reasoning is the logical process of establishing a general proposition based on observable facts. Empirical evidence was obtained from the nurses and key informants about their experience, perception and understanding on brain drain phenomenon and then identified critical factors that influence nurses to emigrate. Saunders

et al. (2003) clearly state that when inductive approach is adopted, qualitative data is collected and theory is developed as a result of data analysis whereas when a deductive approach is adopted, theory and/or hypothesis is developed and then research strategy is designed to test it. According to Ritchie and Lewis (2003), deductive approach is linked with the positivism philosophy, which include hypothesis to prove assumptions. In this kind of approach, it is necessary for the researcher to be general. However, this research involved inductive research approach as Saunders et al. (2003) state that researchers adopting an inductive approach are more likely to work with qualitative data and use different methods of data collection in order to establish different views of a phenomenon.

3.5.1 Choice: Qualitative Research

This is an empirical study based on qualitative research design. According to Gorman and Clayton (2005), qualitative research is a process of enquiry that draws data from the context in which events occur, in an attempt to describe these occurrences, as a means of determining the process in which events are embedded. Research methods are necessary to give the researcher the needed mechanism to carry out effective research in the field of study. According to Saunders et al. (2012); Khotari (2006) and Kumar (2007), a research method mainly defines the design of the problem under investigation. Whatever the preferred research method, Bryman (2012) states that, there are three distinct approaches to addressing any research problem namely qualitative, quantitative, and mixed methods. This actually reflects that based on the approach, a research study can take any of the following: either qualitative, quantitative or a mixture of qualitative and quantitative methods. These research approaches and their applications have their roots in one research philosophy or the other. In other words, the research philosophy that defines the assumptions constructed about the phenomena of interest, also determines the ontological, epistemological and methodological scope of the study (Guba and Lincoln, 1994; Ritchie and Lewis, 2003). According to Bryman (1984), much of the research literature considers to some extent, the research philosophy to determine, mostly, which approach the researcher should choose. There are fundamental differences between qualitative and quantitative methods. Qualitative data involves words whilst quantitative data involves numbers (Punch, 2006). Again, in qualitative research, a hypothesis is not needed to begin research whilst quantitative research requires a hypothesis before research can take place. Note should be taken that the differences do not make one more scientific than the other. For the purpose of this research, qualitative method was chosen.

3.5.2 Justification for Qualitative Choice

The justification for using the qualitative approach is that qualitative research methodologies are data driven, flexible and they celebrate richness, depth, nuance, context, multidimensionality and complexity (Yin, 2009; Mason, 2002; Vandenabeele and Horton, 2005) all of which are fundamental for the generation of reliable and valid data for investigating determinants of brain drain in the Malawi health sector. Moreover, qualitative research meaningfully operationalises research by unearthing various dynamics of the phenomenon under study and helps to build a narrative about brain drain through an in-depth enquiry.

The qualitative choice provided avenue for in-depth investigation and obtained rich insights into the Malawi health sector brain drain. Punch (2006); Taylor and Bogdan (1998) opine that a researcher is the primary instrument for data collection and analysis. With qualitative research, there is a relationship between the researcher and data (Williams, 2007). The qualitative approach is applicable to description, interpretation, verification and evaluation, and should serve one of these purposes (Leedy and Ormrod, 2005). According to Liamputtong and Ezzy (2005), qualitative research has its foundation on an interpretative orientation that focuses on a complex process of making sense and preserving the meaning of data. Qualitative research approach aims at capturing lived experiences of the social world and the meanings people give to these experiences from their own perspectives (Corti and Thompson, 2004).

Qualitative methodologies consist of the philosophical perspectives, assumptions, postulates and approaches that researchers employ to render their work open to analysis, critique, replication, repetition, and /or adaptation and to choose research methods (Vaismoradi et al., 2013).

As supported by Bryman (1988), qualitative research is a naturalistic, interpretive approach concerned with understanding the meanings which people attach to phenomena (actions, beliefs, decisions and values) in their social worlds by stating the way in which people being studied understand and interpret their social reality. However, literature by Mason (1996) acknowledges that there is no consensus on what constitutes qualitative research and it is no surprise that qualitative research does not represent a unified set of techniques or philosophies and that it has grown out of a variety of intellectual and disciplinary traditions. Miles and Huberman (1984) point out that qualitative research is essentially an investigative process, not unlike detective work. However, a disadvantage of qualitative approach is that participant responses cannot be compared easily. Data collected are analysed as distinct categories due to the fact that they can only be conceptualized (Tesch, 1990). Having

identified these strengths and weakness, research strategies such as case studies, ethnography and phenomenology are widely employed in qualitative studies instead.

For this study, the researcher attempted to understand the determinants of brain drain in the Malawi health sector, with the assumptions of recommending strategies and measures to retain nurses. In this regard, it led the researcher to get into the field at six government hospitals and interacted with nurses and their seniors. In addition, the researcher interacted with officials from the NMCM, CHAM and MOH.

3.6 Research Strategies

According to Saunders et al. (2009), research strategy is the general plan of how the researcher goes about answering the research questions. Saunders et al. (2007) provide ethnography, action research, case study, grounded theory, surveys, experiment, and archival research as a list of seven research strategies. Ethnography, action research, case study and grounded theory are classified as qualitative whilst surveys, experiment, and archival research are classified as quantitative. As stated earlier and based on the research approach adopted for this study, only the qualitative strategies were evaluated and the most suitable one adopted for the research design.

3.6.1 Ethnography

Hancock and Algozzine (2006) define ethnography as a phenomenological methodology that stems from anthropology. Anthropology is defined as the study of people, especially of their societies and customs (Collis and Hussey, 2014; Hussey and Hussey, 1997). Saunders et al. (2009) and LeCompte and Schensul (1999) describe ethnography as a research setting where the researcher investigates a phenomenon by being a participant observer within the context in which it occurs. This is where a researcher attempts to participate fully in the lives and activities of subjects and thus becomes a member of their group, organisation and community (Saunders et al., 2003). Observation is an essential method of gathering data (Gummesson, 2000; Thomas, 2004). The aim of the methodology is to be able to interpret the social world in the way the members of that particular world do.

This is a research strategy that is very time consuming and takes place over an extended period (Saunders et al., 2003). The time factor alone means that ethnographic study should not be under strictly timetabled such as academic calendar, and the problem of gaining access to an organisation like hospital set up in our case for a longer period of time would make this type of research one that requires a lot of diplomacy before it commences. As ethnographic

approach usually requires a long-term study over a large number of years (Remenyi et al., 1998), this strategy therefore was not suitable for the study.

3.6.2 Action Research

Walter Lewin, then a professor at Massachusetts Institute of Technology, first coined the term action research in about 1944, and it appears in his 1946 paper 'Action Research and Minority Problems'. In the paper, Lewin describes action research as 'a comparative research on the conditions and effects of various forms of social action and research leading to social action' that uses 'a spiral of steps, each of which is composed of a circle of planning, action, and fact-finding about the result of the action'. Lewin sees the process of enquiry as forming a cycle of planning, acting, observing and reflecting (Collis and Hussey, 2003). Action research is not just about describing, understanding and explaining the world, but to change it as well. According to Rapoport (1970), action research aims to contribute to the practical concerns of people in an immediate problematic situation and to the goal of social science by joint collaboration within a mutually acceptable framework. The process of action research has been one of an interactive inquiry process that balances problem-solving actions implemented in a collaborative context with data-driven collaborative analysis to understand underlying causes enabling future predictions about personal and organizational change (Reason and Bradbury, 2002).

Researchers have commented upon the situational nature of action research. Scholl (2004) asserts that, if the process of action research were replicated it would not be identical; neither would it produce the same results. Checkland (1981) highlights unsuitability of action research that characterises scientific enquiry namely reductionism, repeatability and refutation are not ideals of valid knowledge from action research. Hult and Lennung (1980) provide four main dimensions of information systems action research: It aims at increased understanding; it assists in practical problem solving; it is performed collaboratively, which enhances competencies of the various actors; it is applicable for change processes social systems.

Frequently action research needs a considerable amount of time for the effects of the intervention to be observed. As such, it is not usually appropriate for a relatively short-term research project. Action research is frequently not seen as sufficiently rigorous and if used at PhD level, it needs to be implemented with considerable care and attention (Remenyi et al., 1998). As such, given the stature and aim of this study, an action research was not considered as a suitable strategy as a PhD full time study has short time frame of completion. Ghauri and Gronhaug (2010) opine that the time available for the study is of great importance.

3.6.3 Grounded Theory

In grounded theory, data collection starts without the formation of an initial theoretical framework. Grounded theory procedures are designed to build an explanation or generate a theory around the core or central theme that emerges from collected data (Saunders et al., 2003). Data lead to generation of predictions that are then tested in further observations which may confirm, or otherwise, the predictions. Grounded theory brings together empirical data and theory to develop new theory (Orlikowski, 1993; Eisenhardt, 1989). Thus, essentially, grounded theory methods consist of systematic inductive guideline for collecting and analysing data to build middle-range theoretical frameworks that explain the collected data (Charmaz, 2000). Throughout the research process, grounded theorists develop analytic interpretations of their data to focus further data collection that they use, in turn, to inform and refine their developing theoretical analyses. In this case, data are collected to saturate the categories, which represent a unit of information composed of events, happenings and instances; and the researcher begins analysis of data while additional data is collected (Strauss and Corbin, 1990). Grounded theory particularly emphasises induction. This means that grounded theory tends to be flexible and is good at providing both explanations and new insights. However, it may take more time, and researchers often have to live with the fear that nothing of interest will emerge from the work (Esterby-Smith et al., 2002). However, with ground theory, there is the difficulty of dealing with the considerable amount of data that is generated during the course of the research and the problem of the generalisability of the findings (Collis and Hussey, 2003).

Grounded theory methods have come under contention; postmodernists and poststructuralists dispute the positivistic premises assumed by grounded theory's major proponents and within the logic of the method itself (Denzin, 1996, 1998). What grounded theory is and should be is contested. Glaser and Straus move in conflicting directions. Glaser's (1978, 1992) position comes close to traditional positivism, whereas Strauss and Corbin's (1990) stance is close to postpositivism. Glaser and Strauss's (1967) work is revolutionary because it challenges (a) arbitrary divisions between theory and research, (b) views of qualitative research as primarily a precursor to more 'rigorous' quantitative methods, (c) claims that the quest for rigor made qualitative research illegitimate, (d) beliefs that qualitative method are impressionistic and unsystematic, (e) separation of data collection and analysis, (f) assumptions that qualitative research can produce only descriptive case studies rather than theory development. The data collection technique of grounded theory method presented a challenge to its use as the preferred strategy for this study. The grounding process requires excessive focus on the data. Hence, it was difficult to collect data until the categories were saturated.

3.6.4 Case Study

Robson (2002) defines case study as a strategy for doing research, which involves an empirical investigation of a particular contemporary phenomenon within its real life context using multiple sources of evidence. This ensures that the issue is not explored through one lens, but rather a variety of lenses that allows for multiple facets of the phenomenon to be revealed and understood.

Other scholars Ghauri and Gronhaug (2010) state that case study methodology is used when a researcher wants to study either a single organization or study a number of organizations with regard to a set of variables which have been identified or assumed. As Hussey and Hussey (1997) define, case study is an extensive examination of a single instance of a phenomenon of interest and is an example of a phenomenological methodology. It allows the researcher to concentrate on specific instances in an attempt to identify detailed interactive processes which may be crucial to understanding, but which are transparent to interviews, experiments and analysis of archival evidence (Remenyi et al., 1998).

A case study is viewed as a common research strategy in many research sectors. It hugely contributes to several disciplines such as organisational, social, political and business studies (Gilgan, 1994; Ghauri and Gronhaug, 2002). In fact, a case study is bounded by time and activity, and researchers collect detailed information using a variety of data collection procedures over a sustained period of time (Stake, 1995). Ghauri and Gronhaug (2010) opine that it is the research problem and the objectives that decide whether the case method is useful or not. A case study as an empirical inquiry investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident (Yin, 1994). Moreover, case study strategy is most often used in exploratory research (Saunders et al., 2012). However, this is not their only form as Scapens (1990) adds the following types:

- descriptive case studies where the object is restricted to describing current practice,
- illustrative case studies where the research attempts to illustrate new and possibly innovative practices adopted by particular companies,
- experimental case studies where the research examines the difficulties in implementing new procedures and techniques in an organisation and evaluating the benefits,
- Explanatory case studies where existing theory is used to understand and explain what is happening.

Stake (1995) and Yin (2003) use some similar terms to describe a variety of case studies. Yin (2003) categorizes case studies as explanatory, exploratory, or descriptive and differentiates between single, holistic case studies and multiple-case studies. Stake (1995) identifies case studies as intrinsic, instrumental, or collective. This research takes an exploratory approach. Yin (1993) and Bryman (2004) contest the assertion that case study is a qualitative approach. It can also be used as both qualitative and quantitative method. The data collection methods employed in a case study strategy can be questionnaires, interviews, observation, documentary analysis (Saunders et al., 2012; Hussey and Hussey, 1997; Thomas, 2004). A case study research gives a holistic view of a process (Gummesson, 2000) and a researcher makes recommendations (Jankowicz, 1995). Yin (1994) identifies the following characteristics of case study research:

- The research aims not only to explore the phenomenon, but also to understand them within a particular context,
- The research does not commence with a set of questions and notions about the limits within which the study will take place,
- The research uses multiple methods for collecting data, which may be qualitative and quantitative.

Case studies are particularly appropriate in the following circumstances (Yin, 2009): when, how or why questions are being asked; where contextual conditions are highly relevant to the phenomenon of study; when investigating a contemporary phenomenon within its real-life context; where researchers have no control over actual behavioural events.

3.6.4.1 Limitations of Case Study Methodology

A question arises as to the ways in which case studies might offer a stepping-stone to generalisation. Abercrombie et al. (1994) portray the conventional wisdom when they suggest that a case study cannot provide reliable information about the broader class. Case studies have such a total absence of control as to be of almost no scientific value (Campbell, 1975). It is argued that results generated from the cases can be generalised to other populations (Yin, 2009; Stake, 1995). Case studies are not meant to generate wider generalisations but rather to be used for in-depth understanding of the uniqueness of the case in question (Punch, 2005; Stake, 1995). However, Flyvberg (2006) strongly promotes the view that generalisation from case studies is possible. It is generally agreed however, that these generalisations are tentative (Stake, 1978). Yin (1994) criticizes the case study methodology because it lacks dependability, reliability and validity. However, in this study to ensure the reliability of the study a case study protocol was developed to guide the researcher in collecting data from the case study. The credibility and trustworthiness of the data collected was achieved by triangulation.

The case study as an area of research is fraught with danger primarily due to the problem of subjectivity and bias (Remenyi et al., 1998). One of the common pitfalls associated with case study is that there is a tendency for researchers to attempt to answer a question that is too broad or a topic that has too many objectives for one study. However, in order to avoid this problem, several authors including Yin (2003) and Stake (1995) suggest that placing boundaries on a case can prevent this explosion from occurring. Suggestions on how to bind a case include: (a) by time and place (Creswell, 1998); (b) time and activity (Stake, 1995); and (c) by definition and context (Miles and Huberman, 1994). Binding the case ensured that researcher's study remains reasonable in scope.

3.6.4.2 Choice and Justification of Research Strategy

The case study was adopted as a distinctive research strategy for this research because it highlighted many advantages to the research and high potential of in-depth investigation of determinants of brain drain of nurses in the Malawi health sector. The case study was adopted for this research because it is a valid method for judging theoretical propositions on their merits (Vandenabeele and Horton, 2005). Stake (2000) opines that case study methodology enjoys richness in capturing the required data in the case's natural settings (Stake, 2000) and has a holistic focus, aiming to preserve and understand the wholeness and unity of the case (Punch, 2005).

A case study methodology provides a rare opportunity to carry out an in-depth and detailed examination on the phenomenon within its real life context (Yin, 2009). It allows the use of multiple sources of data collection. The use of multiple sources of data collection allowed the researcher to address the three research objectives and answer the main research question adequately. In addition, case study strategy has considerable ability to generate answers to the question 'why?' as well as 'what?' and 'how?' questions (Ghauri and Gronhaug, 2010). In this study, by investigating determinants of brain drain of nurses in the Malawi health sector with multiple sources of data collection, a 'what' question has been answered. Baxter and Jack (2008) elaborate that a case study is an excellent opportunity to gain tremendous insight into a case, which in this research was operationalised through the Malawi case study of the Ministry of Health. This study enabled the researcher to gather data from a variety of sources and converged the data to illuminate the case.

3.6.5 Sampling Technique: Purposive Sampling

Sampling is the ability of the research to select a portion of the population that is truly representative of the said population (Frey et al., 2000) because it is practically impossible to conduct a case study research of the whole population (Saunders et al., 2003). Different

sampling techniques such as quota, purposive (judgmental), snowball, self-select and convenience can be located in business research (Saunders et al., 2009).

For the purpose of this research, purposive sampling also known as judgemental sampling was adopted. Purposive sampling is a sampling method usually used in a small sample whereby the researcher knows the population and that, the data collected from the selected sample is able to answer the research question and meet the research objectives (Saunders et al., 2009). Similarly, Punch (2005) defines purposive sampling as a non-probability technique where sampling is done in a deliberate way, with some purpose or focus in mind. The composition of such a sample is not made with the aim of being statistically representative of the population. Such samples comprise individuals considered to have the knowledge and information to provide useful ideas and insights (Remenyi et al., 1998).

To justify the use of purposive sampling in this study, Bhattacharyya (2006) opines that, judgemental sampling can be used in case studies, 'rare event' and if the targeted population is made of people with positions in the organisation or society. Schutt (2006) tells us that researchers should try to select interviewees, who are knowledgeable about the subject of the interview, open to talking and represent a range of perspectives. This is where the respondents were purposively selected in this study based on their nature of work and association with the Ministry of Health. The population consists of registered nurses, and people with close proximity to policy and decision making in the Malawi health sector (See Appendix 3). Purposive sampling allowed for respondents to the research to tailor fit the characteristics required by the researcher, to answer the research question. It was also less time consuming and less expensive. For the actual selection of the respondents in purposive sampling, the procedure is to establish contact with a key person, or highly placed manager, [in order] to take his or her help in identifying the right persons (Ghauri and Gronhaug, 2002). According to Stake (1995), this is critical in order to maximise what can be learned because it enables the selection of information rich cases for in-depth analysis related to the central issues being studied (CEMCA, 2002). Yin (2009); Saunders et al. (2009) propose that it is ideal for very small samples such as in case study research and when selecting cases that are informative and explanatory.

The health care system in Malawi is based on referral principles organised in a three-tier institutional framework starting with health centres offering basic primary care, district hospitals offering general secondary care, and central hospitals providing tertiary specialist care. Six hospitals were chosen for the study. These were four central hospitals in Malawi namely Queen Elizabeth Central in Blantyre, Zomba Central in Zomba, Kamuzu Central in Lilongwe, Mzuzu Central in Mzimba, and two district hospitals namely Nkhotakota in

Nkhotakota and Mzimba in Mzimba (See Appendix 1). Queen Elizabeth and Kamuzu Central Hospitals are teaching hospitals with links to the College of Medicine and Kamuzu College of Nursing. The Central hospitals are responsible for professional training, conducting research and providing support to districts.

An interview guide was used to interview sampled participants. The rationale for choosing the six hospitals was motivated by the significant brain drain of nurses in these hospitals. In addition, the hospitals were purposively chosen to include both urban and rural areas to make the study representative of Malawi as a whole. The interview guide was aimed at Registered Nurses, Chief Nursing Officers and a Manager each from Nurses and Midwives Council of Malawi (NMCM), Christian Health Association of Malawi (CHAM) and Ministry of Health Headquarters. They all had experiences of the brain drain of nurses in the Malawi health sector and provided substantial insights for the research. The nurses were selected with the support of Chief Nursing Officers and Administrators by virtual of holding their positions. In fact, two Administrators as Table 3 indicates were included in the sample because they represented District Nursing Officers who were not available at the time the researcher visited the two district hospitals. Chief Nursing Officers are ward managers at central hospitals while District Nursing Officers are ward managers at district hospitals. Eighteen nurses in total thus three from each hospital participated in the research and represented the whole potential population.

The justification for including Chief Nursing Officers, District Nursing Officers and Administrators was to get not just multiple data but to relate them to the views of nurses and other key informants in order to have valid results. They had the knowledge and provided substantial insights for the research.

CHAM is a key partner to the Government of Malawi through the Ministry of Health in implementing the Health Sector Strategic Plan, including delivery of the Essential Health Package and training of human resources for health, and in other sector-wide initiatives. The NMCM is the sole regulatory body of nursing and midwifery education, training, practice and professional conduct of nursing and midwifery personnel in the country. It has a mandate to formulate professional education and/training standards and to regulate health services based on professional standards (Nove, 2011). Table 3-2 shows semi-structured interviews with registered nurses, Table 3-3 shows semi-structured interviews with key informants from hospitals and Table 3-4 shows semi-structured interviews with key informants from NMCM, CHAM and the Ministry of Health.

Table 3-2 Semi-Structured Interviews with Nurses

No	**Hospital and District**	**Region in Malawi**	**Interviewees' position**	**Nurses interviewed at each hospital**
1	Queen Elizabeth in Blantyre	South	Registered Nurse	3
2	Zomba Central in Zomba	South	Registered Nurse	3
3	Kamuzu Central in Lilongwe	Central	Registered Nurse	3
4	Nkhotakota District in Nkhotakota	Central	Registered Nurse	3
5	Mzuzu Central in Mzimba	North	Registered Nurse	3
6	Mzimba District in Mzimba	North	Registered Nurse	3
Total				18

Table 3-3 Semi-Structured Interviews with Key informants from Hospitals

No	**Hospital and District**	**Region in Malawi**	**Interviewee's position**	**Key informants interviewed at each hospital**
1	Queen Elizabeth in Blantyre	South	Chief Nursing Officer	1
2	Zomba Central in Zomba	South	Administrator	1
3	Kamuzu Central in Lilongwe	Central	Chief Nursing Officer	1
4	Nkhotakota District in Nkhotakota	Central	Administrator	1
5	Mzuzu Central in Mzimba	North	Chief Nursing Officer	1
6	Mzimba District in Mzimba	North	District Nursing Officer	1
Total				6

Table 3-4 Semi-Structured Interviews with Key informants from NMCM, CHAM and Ministry of Health

No	**Name of Organisation**	**Interviewee's position**	**Key informants interviewed at each organisation**
1	Nurses and Midwives Council of Malawi (NMCM)	Manager	1
2	Christian Health Association of Malawi (CHAM)	Manager	1
3	Ministry of Health	Technical/Policy Advisors	1
Total			3

Table 3-5 shows the number of focus groups, names of hospital where discussions took place and the number of participants in each focus group.

Table 3-5: Focus Group Discussions with Nurses

Focus Group	**Name of Hospital Discussions Held**	**Number of Participants in each Group**
Focus Group 1	Queen Elizabeth Central	5
Focus Group 2	Mzuzu Central	4
Focus Group 3	Kamuzu Central	6

3.6.5.1 Limitations of Purposive Sampling Technique

Purposive technique that the research used has its own limitations. According to Stake (1995), participants selected through purposive sampling are unlikely to be a strong representation of others. Black (1999) concurs that purposive samples are not easily defensible as being representative of populations due to potential subjectivity of the researcher. However, Richie et al. (2009) opine that the purposive sample is not intended to be statistically representative, the chances of selection for each element are unknown but, instead, the characteristics of the population are used as the basis of selection. In addition, George and Bennett (2005), underscores purposive selection because it can be prone to version of selection bias that concerns statistical researchers. As described by Pole and Lampard (2002), this could be the case because purposive sampling gate keepers may direct the researcher to certain interviewees while avoiding others knowingly or unknowingly.

Although limitations of purposive sampling have been highlighted, Silverman (2005) states that sampling technique is seen as central in qualitative research. Despite its obvious limitations, this does not mean that purposive or judgmental assessment should never be used in assessing the impact of different programmes (Ulin et al., 2004). According to Ghauri and Gronhaug (2002) see also Yin (2009), which methods and techniques are most suitable for which research depends on the research problem and its purpose.

3.7 Methods of Data Collection

The research process for this thesis can be described as an investigative one. It aimed to reveal determinants of brain drain in the Malawi health sector. This study used various qualitative data collection tools to be robust in adequately gathering the necessary data for analysis as follows:

3.7.1 Qualitative Methods of Data Collection

Researchers such as Hussey and Hussey (1997); Saunders et al. (2009) and Yin (2009) propose that taking a rigorous approach to data collection is one of the important attributes of a good qualitative research. Yin (2009) supports Creswell (2009) by confirming that qualitative research, using case studies; need to collect data from multiple sources to enhance validity and generalisability.

This research employed semi structured interviews and focus group discussions in order to gather data on determinants of brain drain of registered nurses in Malawi for analysis, as a single method could not shed light on the phenomenon. The use of multiple methods in this study as (Denzin, 1989) states, help facilitate deeper understanding of brain drain issues in the Malawi health sector. The use of a variety of qualitative data collection instruments was particularly pivotal for triangulation purposes.

Triangulation is a data collection process using multiple methods for the purpose of one outcome (Berg, 2009), while (Bryman and Bell, 2007) state that triangulation is when quantitative analysis is used to support qualitative research outcomes. The main aim of triangulation in this study was not just to get multiple data but also to relate them in order to have valid results**.** Due to the subjectivity that may be inherent in the use of one technique, CEMCA (2002) states that triangulation ensures there is validity, reliability and completeness of the information. In particular, Creswell (1994) highlights that triangulation process is based on the understanding that any bias inherent in a particular data source or method would be neutralised when used in conjunction with other data sources and methods. Patton (1990) states that triangulation should be considered when the researcher starts to carry out the research design because it is in data analysis that the strategy of triangulation really pays off. Triangulation addresses the issues of validation (Flick, 2006; Denzin, 2009; Ammenwerth, 2003). Multiple nature of evidence collection allows the researcher to attempt to find information convergence (Remenyi et al., 1998). Henderson (1991) indicates that by using triangulation evaluation method, this research “guarded against the accusations that the study’s findings were simply the artefact of a single method, a single data source or a single investigator’s bias. This research used one interview guide for all the three groups of participants in order to obtain multiple sources of evidence and relate them across the participants. The diverse and rich data that emanated from the experiences of these categories of respondents and the subsequent analysis, defines the ‘originality’ of this research.

3.7.1.1 Semi-Structured Interviews

Mishler (1986) defines an interview as a type of communication between the researcher and the interviewee. “Questioning and answering are ways that are grounded in and depend on culturally shared and often tacit assumptions about how to express and understand beliefs, experiences, feelings and intentions” (ibid: 7). Interviews are very common form of data collection method (Hancock and Algozzine, 2006) and done “with a purpose” (Kahn and Cannell 1957:149). They are one of the most significant data collection methods (Yin, 2003). Interviews are an essential part of case study evidence (Remenyi et al., 1998) and may be structured, semi-structured or unstructured.

Semi-structured interviews were particularly well suited for this case study research. They enabled the researcher to explore issues as they arise, whilst providing an initial framework for areas for discussion. Gorman and Clayton (2005) highlight that semi-structured interviews facilitate an immediate response to a question, allow both parties to explore the meaning of the questions and answers, resolve any ambiguities and can provide a friendly emphasis to data collection. They enable researchers to ask predetermined but flexibly worded questions, the answers to which provide tentative answers to the research questions (Hancock and Algozzine, 2006).

In this study, in-depth interviews were employed to get information from key informants about brain drain in the Malawi health sector. A key feature of in-depth interviews was their depth of focus on the individual. In this research, they provided an opportunity for detailed investigation of each person's personal perspective, for in-depth understanding of the personal context within which the research phenomenon is located, and for very detailed subject coverage (Ritchie and Lewis, 2003). An exploratory descriptive design helps understand the topic under-study from the populations involved perspective since they are able to talk about their personal feelings, opinions and experiences (Ulin et al., 2004). For the reason that this study was looking at determinants of brain drain of registered nurses in Malawi, semi-structured interview was relevant because it enabled the interviewer to ask the same questions. The advantage of this form of interview according to Bryman and Bell (2007) is flexibility, as questions can be adjusted although the interviewer follows the planned questions. The material collected during the in-depth interviews forms the basis for determining the attributes and attribute levels (Coast and Horrocks, 2007).

Interviewing is a key data collection method and very central to the study as Richards (1996) pinpoints that, it provides information not recorded elsewhere, or not yet available (if ever) for public release. According to Gubrium and Holstein (2002), interviewing is where both

interviewer and interviewee are seen as actively and unavoidably engaged in the interactional co-construction of the interviews content. Fontana and Frey (2000) state that people live in an interview society, in a society whose members seem to believe that interviews generate useful information about lived experience and its meaning. Interviewing cannot begin until decisions are made about who to interview and what questions to ask (May, 2002). While asking questions, as stated by Hancock and Algozzine (2006), interviews in this study were used in order to get an in-depth understanding of the brain drain issues in Malawi health sector. Legard et al. (2003) point out that, when probes and other interview techniques are used this way, the researcher can achieve depth of answers in terms of penetration, exploration and explanation. The researcher asked open-ended questions by avoiding yes/no questions, leading questions, or multiple-part questions. Key informant interviews in this research were conducted with respondents representing stakeholders.

Eighteen nurses three from each sampled government hospital in Malawi participated in the study. The sample also included nine key informants altogether namely six key informants from hospitals, one Christian Health Association of Malawi (CHAM) official, one Nurses and Midwives Council of Malawi (NMCM) official and one Ministry of Health Headquarters official.

An in-depth interview is preferred as Miller and Glassner (1997) argue that information about the social world is achievable through in-depth interviewing. The personal interviews in this study were administered using open-ended semi-structured interview guides. Yin (2003) suggests that when doing case study interviews, the researcher should ensure that they obtain rich information during conversation with interviewees. Hence, they should design “friendly and non-threatening questions in their open-ended interviews” (Yin, 2003:90). All the interview guides were developed in English because the participants were well conversant with the language. An interview guide is used to ensure that all the interviews are focused on the same research questions. In addition, they provides the subject area to help the interviewer deliver questions focused on a particular subject. As such, the researcher has the flexibility to create a conversation on a specific subject area based on the research assumptions (Crabtree and Miller, 1999). Interview guide was used to give enough latitude and flexibility to the respondents to explain issues under study. Aberbach and Rockman (2002:674) highlight that in semi-structured interviews, interview subjects ‘do not like being put in the straightjacket of closed ended questions [but] they prefer to articulate their views, explaining why they think what they think’. Probes to bring out narratives critical to brain drain issues followed this. The use of semi-structured interview was necessary because some issues very important to the study that could be overlooked by the researcher were captured.

For ethical reasons, all the interviewees were assured that their responses would be treated in the strictest confidence and that the researcher would not make individuals identifiable attributes. Douglas (1985) refers to this type of interviewing as creative interviewing and states that to achieve thick descriptions of data and depth, the interviewer must establish a climate for mutual disclosure. Dunbar et al. (2002) concur with Douglas by stating that in most interview situations, emphasis in research is disproportionately placed on researchers obtaining information from respondents. The interviewer must constantly engage with the narrator by listening attentively and empathetically to evoke further narration of experiences (Rosenthal, 1995). A researcher should remember that time spent talking to the interviewee would be better spent listening to the interviewee. In other words, the researcher should limit his comments as much as possible to allow more time for the interviewee to offer his perspectives (Hancock and Algozzine, 2006).

The participants' decision to participate in this research was voluntary. A digital voice recorder was used to record the interviews and notes were written on a note pad. However, before audio recording, the researcher obtained the participants permission. The advantages of audio recording are that the interviewer can re-listen to the interview, allow direct quotes to be used and allows the interviewer to concentrate on questioning and listening (Saunders et al., 2012). Each interview session took an average of one and a half hours at the interviewees' organisation premises. Transcription began within two days to ensure timely familiarisation with the data.

3.7.1.1.1 Recruitment of Respondents for Semi-structured Interviews

Semi-structured interview has a known structure with a room to adjust the questions to determine their order and presentation (Sarantakos, 2005). A researcher should identify key participants in the situation whose knowledge and opinions may provide important insights regarding research questions (Hancock and Algozzine, 2006; Silverman, 2002).

This study adapted purposive sampling technique. Purposive sampling also called Judgement sampling is a sample where individuals are selected with a specific purpose in mind, such that as their likelihood of representing best practice in a particular issue (Remenyi et al., 1998). For the actual selection of the respondents in purposive sampling, the procedure is to establish contact with a key person, or highly placed manager, [in order] to take his or her help in identifying the right persons (Ghauri and Gronhaug (2002). In this study, the selection of the nurses was done with the assistance of Chief Nursing Officers and Administrators. This was critical in order to maximise what we can learn (Stake, 1995) as it enables the selection of

information rich cases for in-depth analysis related to the central issues being studied (CEMCA, 2002).

3.7.1.2 Focus Group Discussions

Focus group discussion is a data collection method by conducting interviews with a group (Patton, 2002). It is a group systematically selected composed of people of different expertise, experience and interest in a particular area of study (Courtois and Turtle, 2008). The participants may not be familiar with each other, as they are selected based on their relevant experience and knowledge of the research objectives (Krueger, 1988). Focus groups involve group discussions around a single theme in order to create candid conversation about the issue (Morgan, 1997; Kreuger, 1988 cited in Bloomberg and Volpe, 2008). Focus group discussions are conducted at the policy implementation level of analysis with street-level bureaucrats (Lipsky, 1997).

In this research, the focus group discussions involved registered nurses only as they were better placed to speak their minds and to respond to the ideas of others on brain drain issues in the Malawi public health sector. Researchers believe that within such an atmosphere 'a more complete and revealing understanding of the issues is obtained' (Bloomberg and Volpe, 2008:84).

Focus group discussions are relatively easy to assemble, inexpensive and less time consuming. They also provide ease in data collection because they are pre-grouped according to homogeneity (Ulin et al., 2004). Focus group discussions allow huge amount of data to be collected in a short period of time (Morgan, 1997). Participants were able to bring up issues they felt were important to them and challenged each other's views unlike in semi-structured interviews. As such, the researcher was able to get a more realistic account of what the nurses thought about determinants of brain drain in the Malawi health sector.

Devine (2002:199) highlights that focus group discussions are pivotal because they have a rare characteristic of allowing participants to 'interact in a discussion on a particular topic, agree with other interviewees in some respects, disagree in others, and raise new issues and concerns'. This attribute was instrumental in bringing out pertinent issues under study.

According to Bryman and Bell (2011), the dynamics of group discussions could lead individuals to define business problems in new and innovative ways and to stimulate creative ideas for their solution. Miller and Glassner (1997) opine that sharing participants' membership group may engender a sense of trust in the researcher as participants are able to understand the researcher's questions and this may lead to answers that are more accurate. Focus group

discussions may be conducted with the same individual participants who took part in interviews, or with other members of the same population, or with people with expertise in the research subject who would be able to comment on what has, or has not, emerged (Ritchie and Lewis, 2003).

A digital voice recorder was also used just like in the semi-structured interviews to record the interviews. Notes were written on a note pad and the participants' decision to participate in the discussion was voluntary. Each focus group session took an average of two and a half hours at the interviewees' organisation premises. Transcription began within two days to ensure timely familiarisation with the data. Again, for ethical reasons, the data provided were treated in the strictest confidence, and that the researcher did not make individuals identifiable attributes.

3.7.1.2.1 Recruitment of Respondents for Focus Group Discussions

The respondents for focus group discussions were recruited using convenience non-probability sampling technique (Ghauri and Gronhaug, 2002; Pole and Lampard, 2002). The registered nurses who were available at the time the researcher visited the sites and willing to take part in the discussions were involved. This was the case because focus group discussions were carried out in a hospital environment where respondents were busy due to the nature of their work. It was difficult to make prearranged contacts. However, within this sample technique, the researcher made deliberate attempts to have representation from both male and female nurses.

In this study, three focus groups of interviewees helped to generate addition information to have an insight understanding of determinants of brain drain in the Malawi health sector. This research, the three focus group discussions one from each region of Malawi involved four registered nurses at Mzuzu Central hospital (North), six nurses at Kamuzu Central hospital (Central) and five nurses at Queen Elizabeth Central hospital (South). Initially, it was planned to have five registered nurses in each group but the focus group at Mzuzu Central hospital had four nurses only not five because of shortage of nurses in the wards. The focus group at Queen Elizabeth Central hospital had five nurses as initially planned while at Kamuzu Central hospital had six participants because one extra nurse asked before we started to join the group discussions. The group allowed her to take part in the discussions. Note should be taken that the variations of participants did not affect the group discussions.

In this research, the focus group discussions involved a combination of nurses who were interviewed and not interviewed due to their availability at the time the researcher visited the health facilities. The participants had equal opportunity to participate in the discussions.

However, key informants were not included in the focus group to ensure nurses' free participation without fear.

3.7.1.2.2 Limitations of the Focus Groups

The focus group technique has limitations. According to Punch (2005), they pertain to problems associated with group culture and dynamics, and in achieving balance in-group interaction. As such, the concern is how to deal with such dominance of individuals who influence in focus group discussions. This is the case as while some participants may dominate the discussions, others may not give their views but passively follow the group trend (Ghauri and Gronhaug, 2002; Pole and Lampard, 2002). According to Taylor and Bogdan (1998), most people cannot be expected to say the same things in a group that they might say to an interviewer in private. Group discussions run the risk of not fully capturing all participants' viewpoints (Hancock and Algozzine, 2006).

As stated by Krueger (1988), focus group interview should be carefully planned to gain views on a defined area of interest in a permissive non-threatening environment and conducted by a skilled interviewer. This discussion is comfortable and often enjoyable for participants as they share ideas and perceptions. Group members influence each other by responding to ideas and comments in the discussion (ibid). In this study, the researcher was able to direct the group discussions without losing crucial information.

3.8 Data Analysis

According to Silverman (2005), data analysis should not only happen after all data has been safely gathered. Data analysis is an ongoing process during research. It involves analysing participant information, and researchers typically employ general analysis steps as well as those steps found within a specific strategy of enquiry. Steps that are more general include organizing and preparing the data, an initial reading through the information, coding the data, developing from the codes a description and thematic analysis, using computer programs, representing the findings in tables, graphs, and figures, and interpreting the findings (Creswell, 2009). After data collection, Yin (2009) warns that extra care needs to be taken to ensure that all evidence is attended and that the analysis addresses all potential major rival interpretations.

In this study, data analysis was done simultaneously with data collection. Individual interviews were transcribed from a digital voice recorder at the end of each day, as recommended (Polit and Beck, 2004). Audiotapes were transcribed verbatim and each typed transcript was checked against the audiotape as soon as each interview took place. The written transcripts from each interview were read later during analysis and key words and significant statements

were highlighted throughout the script. The identified themes that emerged from each interview were reviewed and similar themes that emerged were grouped together and reported as results. Participants were assigned with a number, for example 1, 2, 3 etc until the last participant. Responses were directly quoted in the participants' own words. Sentences were not grammatically corrected or improved, in order to capture the participants meaning.

3.8.1 Qualitative Data Analysis

One of the major issues in qualitative research is the extent to which data should be analysed. Analysis not only help researchers to make sense of a person's story but also to move beyond description to refine understanding in more systematic and sustained ways (Merrill and West, 2009). It is often argued that there are no fixed rules to guide qualitative data analyses (Yates, 2004), and that data analysis is not 'off-the-shelf, but custom-built' (Huberman and Miles, 1994 cited in Creswell, 1998:142). Data collection and analysis occur concurrently (Baxter and Jack, 2008). The type of analysis engaged in depends on the type of case study. In qualitative research, data are given meaning through a rigorous and logical process as defined by the design; in this investigation, a case study design. The last two components of Yin's (2003) case study design are addressed by the data analysis phase. Several methods of data analysis for qualitative studies are explained in the existing literature on social science research methods. However, (Hussey and Hussey, 2007; Robson, 1993 and Yin, 2004), advocate non-quantifying methods for case studies. Examples of these non-quantifiable methods include data displays, cognitive mapping, general analytical procedure, grounded theory, content analysis and thematic analysis, ethnography, and phenomenology.

3.8.2 Content Analysis

For the purpose of this research, content analysis was adopted to analyse qualitative data. This involved transcribing and reading thoroughly all interviews before identifying themes that were more recurring than others. Vehkapera (2005) defines content analysis as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding. According to Holsti (1969), content analysis is any technique for making inferences by objectively and systematically identifying specified characteristics of messages. The reason behind this according to Stemler (2001) is that, content analysis allows the researcher to sift through large volumes of data with relative ease in a systematic fashion. As an approach to the analysis of documents and texts, content analysis seeks to quantify content in terms of predetermined categories and in a systematic and replicable way. A very flexible method can be applied to a variety of different media. The use of this method allows the researcher to identify the properties of the data (Neuendorf, 2002). Content analysis

provides an empirical basis for monitoring shifts in public opinion (Stemler, 2001). It is also a useful technique for allowing researchers to discover and describe the focus on individual, group, institutional, or social attention (Weber, 1990). In this case, the analysis predominantly involved categorizing issues according to the recurrent themes emerging from the data collection exercise. Special attention was paid to patterns, divergences, trends and themes evolving from the qualitative data collected. It was from these attributes that general conclusions were formulated.

According to Stemler (2001), at least three problems can occur when documents are being assembled for content analysis. First, when a substantial number of documents from the population are missing, the content analysis must be abandoned. Second, inappropriate records (e.g., ones that do not match the definition of the document required for analysis) should be discarded, but a record should be kept of the reasons. Finally, some documents might match the requirements for analysis but just be uncodable because they contain missing passages or ambiguous content (GAO, 1996).

3.8.3 Validity, Reliability and Generalisability

Research designs should contain strategies for ensuring validity and reliability or, in other words, trustworthiness of the study, findings, and interpretations (Glesne, 2010). From a qualitative perspective, (Denzin, 1989) argues that validity refers to improved understanding, rather than improved accuracy whilst (Hussey and Hussey, 1997) define validity as the extent to which the research findings represent what is really happening in the situation. Reliability is the consistency or constancy of a measuring instrument or the degree of consistency or dependability with which an instrument measures the attribute it is designed to measure (Long and Johnson, 2000). Generalizability may be most appropriate for qualitative research (Green and Thorogood, 2004).

In this study, the research validity and reliability were achieved through the application of several data approaches. Validity was achieved using two methods of data collection. Reliability and credibility were achieved by conducting a number of discussions with academic members of staff from the University of Malawi, Chief Nursing Officers and Administrators in the researched context. The discussions provided useful guidance in addressing key research themes. The credibility of the research findings was enhanced through continuous engagement of key informants throughout the research, triangulation and peer debriefing. The researcher came up with a brain drain framework to guide other research attempts in achieving the results on different occasions. Hussey and Hussey (1997) explain that if another researcher can repeat a research and obtain the same results, it is reliable.

3.9 Piloting Research Instruments

To enhance the validity of the data collected, interview guides for the semi-structured interviews and focus group discussions were first piloted before being administered to the research subjects in Malawi. The pilot study was used as a testing ground for both substantive and methodological issues, and it helped the researcher develop more lines of questioning (Remenyi et al., 1998). This piloting was done with fellow Postgraduate research students at the University of Bolton and two academic members of staff from the University of Malawi. The pilot case study was selected on the grounds of convenience, access and geographical proximity. The piloting is pivotal in refining 'data collection plans with respect to both the content of the data and procedures to be followed' (Yin, 2009:92). The pretesting provided feedback for further amendments or modifications to the research instruments. As Krueger and Casey (2000) point out, the interview questions are modified to eliminate vagueness and to encourage respondents to talk.

3.10 Approval and Ethical Considerations

Hussey and Hussey (1997) and Bryman (2007) contend that most research situations involve three parties; the researcher; the sponsoring client (user) and the respondent (subject). How the three parties relate requires considerations into ethical issues that may arise if the research is to be objective. Bryman and Bell (2007) state that there is a need to make sure that the research participants are completely informed with consent. The aim for gaining informed consent from chosen participants in the research is to guarantee that the participants have the chance to protect their own rights due to their contribution to the research (Greenberg and Folger, 1988).

For the purpose of this research, permission was first obtained from the Government of Malawi (Ministry of Health) to conduct the study. The research proposal was submitted to the National Health Sciences Research Committee in Lilongwe, Malawi and to all the six sampled hospitals and approval was granted to carry out the research. Note should be taken that each hospital and two stakeholders namely Nurses and Midwives Council of Malawi and Christian Health Association of Malawi individually also approved the researcher to collect data. The researcher also sought approval from the University of Bolton Research Ethics Committee.

This research did not pose major risks in terms of research ethics. There was no risk of breach of anonymity and confidentiality, and there was no problem with consent. In fact, informed consent may be viewed as a set of processes by which participants decide to get involved with the research. Such as a research study or organisational interference, after being

apprised of all issues that might rationally be expected to affect participant's decision making (Lefkowitz, 2003).

The study involved the subjects who were literate. As such, informed consent was done in English only. To ensure confidentiality of the study subjects responses, numeric identifiers were used. The researcher did not reveal study subjects' identity or their responses to anyone. The researcher kept all codes in a secure location accessible only to the researcher. In addition, all paperwork and audio recordings of interviews and focus groups discussions were stored in a secure lockable cabinet. The researcher's electronic device was protected by a password known to the researcher only. Several researchers (Davidson, 1995; Peterson and Siddle, 1995) emphasise that privacy and confidentiality play a significant role with regard to ethical issues, as without trust between researcher and participants, the research quality is affected.

Whenever a research is conducted with participants, it is important that certain ethical considerations be borne in mind (Bryman, 2004). Participation in this research was voluntary and participants individually were free to withdraw at any time. According to Green et al. (2011), the location for the interviews is left to interviewee to decide because it helps in creating conducive ambiance, a feeling of comfort, to reduce formality and with an eye to their convenience. All participants are provided with an information sheet outlining the purpose of the research (Riemann, 2003) and details of what is expected of them. For the purpose of this study, the researcher gave a consent form to all the participants to sign as an indication that they had agree to participate in the study. The researcher promised all the interviewees that their responses would be in strictest confidence. The researcher made an assurance to the respondents that the researcher would not financially gain anything apart from normal scholarly gain.

3.11 Conclusion

This chapter has presented the study's methodology. It has discussed research paradigm and design of the study. An interpretivist paradigm is chosen as more appropriate for conducting this research. The study employs case study strategy and is qualitative in nature.

The study's population and sample frame consist of nurses in government hospitals, key informants from hospitals and key informants from organisations in operation relationship with the Malawi Ministry of Health. The chapter has discussed two data collection methods for which this study has been designed. They include semi-structured interviews and focus group discussions. The chapter has also pinpointed content analysis that has been used to organise the raw material and manage the data analysis process for this study. Lastly, the chapter has

also discussed ethical considerations. Three main issues have been considered namely approval, informed consent, maintaining participants' privacy and confidentiality.

Chapter 4 : DATA PRESENTATION AND ANALYSIS

4.1 Introduction

In the previous chapters, the researcher has reviewed available literature, justified the research methodology for conducting this study. In this chapter, the research is going to present and analyse the empirical data the researcher collected from the case studies in Malawi.

The data analysis focuses on six categories namely economic factors, political factors, technological factors, social factors, education factors and globalisation factors. In addition, the chapter discusses how the determinants of brain drain could be improved as an initiative to minimize brain drain in Malawi.

4.2 Data Analysis

Six hospitals were included in the sample to make the study representative of Malawi. These were four central hospitals in Malawi namely Queen Elizabeth in Blantyre, Zomba Central in Zomba, Kamuzu Central in Lilongwe, Mzuzu Central in Mzimba, and 2 district hospitals namely Nkhotakota in Nkhotakota and Mzimba in Mzimba (See Appendix 1). The locations were purposively chosen to include both urban and rural settings.

The researcher interviewed 18 registered nurses altogether from the 6 hospitals. There were 3 registered nurses from each sampled hospital who participated in the study and represented the whole potential population. The focus group discussions were held at 3 central hospitals namely Queen Elizabeth (South of Malawi), Mzuzu Central (North of Malawi) and Kamuzu Central (Centre of Malawi). The sample also included the 6 key informants thus 1 from each sampled hospital, 1 key informant from the Nurses and Midwives Council of Malawi (NMCM), 1 key informant from Christian Health Association of Malawi (CHAM) and 1 key informant from the Ministry of Health Headquarters.

This study was looking at determinants of brain drain of registered nurses in Malawi. Semi-structured interview was relevant as it provided an opportunity for detailed investigation of each person's personal perspective, for in-depth understanding of the personal context within which the research phenomenon is located, and for very detailed subject coverage. In addition, the interview enabled the interviewer to ask the same questions using the interview guide.

The main purpose of the study was to have a clear understanding of the determinants of brain drain of nurses and develop a theoretical framework with the hope to prevent further loss of

these much-needed healthcare professionals to keep the Malawi health sector system functional. It was against this backdrop that the purpose of this study was three-fold.

- To undertake an in-depth analysis of the major six determinants (economic, political, technological, social, education and globalization) that influence brain drain among registered nurses in Malawi.
- To examine the extent to which the major determinants of brain drain can be improved as an initiative to minimize brain drain in Malawi.
- To determine strategies and measures that can be put in place to retain registered nurses in Malawi.

Data analysis is carried out under the following parent nodes and child nodes (Table 4-1). As such, the analysis and discussion are based on individual parent nodes namely economic factors, political factors, technological factors, social factors, education factors and globalisation factors.

Table 4-1 Parent nodes and Child nodes of Data Analysis

Parent nodes	**Child nodes**
Economic Factors (EF)	• Salaries (EF1) • Taxation (EF2) • Living standards (EF3) • Employment opportunities (EF4)
Political Factors (PF)	• Political violence (PF1) • Crime tribal tensions (PF2) • Non-democratic institutions (PF3)
Technological Factors (TF)	• Equipment (TF1) • Technical support (TF2) • Investment in infrastructure (TF3)
Social Factors (SF)	• Diseases (SF1) • Poverty (SF2) • Corruption (SF3) • Living conditions (SF4)
Education Factors (EF)	• Training (EF1) • Education standards (EF2) • Underutilized skills (EF3)
Globalization Factors GF	• Global labour movement (GF1) • Interdependent and interconnected societies (GF2) • Liberalized policies (GF3)

4.2.1 Exploring Economic Factors

From the literature review in this study, economic factors include salaries, taxation, living standards and employment opportunities. These are the four child nodes under the parent nodes of economic factors (See Table 4-1).

4.2.1.1 Semi-Structured Interviews with Nurses: Economic Factors

4.2.1.1.1 Salaries

Table 4-2 Interviews with Nurses: Salaries

Salaries (EF1) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"..because of the lower salaries they are just low... We can't manage to feed our families, to support our dependants because of the low income..."	• lower salaries; can't feed families	• low salaries can't feed families
		"..they should increase our salaries so that we can be happy working in our own country".	• increase salaries	• increase salary
	2	"I think the little payment they get as registered nurses... late salary payments is also a big problem in Malawi"	• little payment; • late salary payment	• little payment • salary paid late
		"..if they could increase the salaries of workers and pay us on time".	• increase salaries; • pay on time	• increase salaries • pay salaries on time
	3	"...are doing a lot of work they need to be paid more as well… there are also delays in getting higher salary when one is promoted".	• a lot of work • less pay • delays in getting higher salary	• doing more work with less pay • delays in getting higher salary after promotion
		"I need more pay".	• more pay	• more salary
2	4	"..it's just the low pay….we also get our salaries beyond our normal pay day how do they expect us to survive if we go unpaid till the next month".	• low pay • get our salaries beyond our normal pay day	• low pay • paid late
		"..people in the health system should be given adequate money.. and pay salaries on time"	• adequate salary • pay salaries on time	• pay more • adequate salary and on time
	5	"…the nurses are getting a little pay for all the work that we do".	• little pay	• low pay
		"..the government needs to come in or at least somebody else to top up, or just increase salary.."	• increase salary	• increase salary
	6	"...some businesses to back up your salary when you are working….earn more money somewhere".	• business; earn more money	• low salary
		"..if it was possible for the government to be revising the salaries as need arises".	• revise salary	• revise salary
3	7	"…things are hard in Malawi. Prices are going up every day and the little money they have they can't afford to buy things".	• prices are up • little pay	• low pay with higher prices of things
		"..people need to have more money, increasing their salaries and get paid timely".	• increase salary • get paid timely	• increase salary • pay salary on time
	8	"..low pay to meet transport getting to and from work…provide me with accommodation allowance.."	• low pay • no accommodation allowance	• little pay • lack accommodation allowance
		"…provide us with more salary, transport and accommodation allowances because some nurses live far away from hospital".	• more salary, transport and accommodation allowance;	• increase salary • provide transport and accommodation allowances

	9	"…it's the low salaries and locum allowance payments that the nurses get that influences the brain drain".	• low salary • locum payments	• low salaries • locum payments
		..they should increase the salaries… locum is working but it's not much needs revising".	• increase salaries • revise locum	• increase salaries • increase locum allowance
4	10	"… you get your salary but what you get doesn't actually take you through the whole month"."..There is nothing like a little package on transport, housing ..."	• no savings; no transport and housing allowance	• low salary
		"…the salaries; have to be raised a little bit and maybe other benefits like if we can have house allowance, sometimes even if they can do something on transportation that can also help a little bit".	• raise salaries • provide house and transport allowance	• low salary • provision of house and transport allowance
	11	""..most of our friends left the country to look for much better money".	• look for better salary	• low salary
		"..increase our salaries as cost of things is high now".	• increase salaries	• increase salary
	12	"because the salary itself is very very low as compared to others who work for other NGOs".	• very low salary	• low salary
		"the government should add up on the salary".	• add up on the salary	• increase salary
5	13	"…the income that we get is not all that the top of at times even satisfaction".	• no satisfaction with income;	• low salary
		"..they have to raise our salaries".	• raise salaries	• increase salary
	14	"main factor can be low salaries and low locum pay the economy is not in good shape that will also force people to move out of the country to look for a job outside.."	• low salaries • low locum pay	• low salaries • low locum pay
		"they should at least increase our salaries according to the qualification and increase locum pay".	• increase salaries • increase locum pay	• increase salaries • increase locum pay
	15	"..when you look for greener pastures so as to improve your lively hood as an individual…. you are taking care of siblings that still need your support".	• improve livelihood; you are taking care of siblings	• low pay
		"..increasing our salaries".	• increase salaries	• increase salaries
6	16	"instability of currency economy…salaries are the same but you find that prices of commodities are so high so that is really making a challenge".	• same salaries	• low salary
		"the government should from time to time revise salaries of health workers".	• revise salaries	• revise salaries
	17	"…the salaries for the registered nurses are very low… we don't have a better medical cover….risk allowance is so minimal that it can't cover for you when something happens. Locum allowance payments are also very low".	• low salaries • no better medical cover • minimal risk allowance • low locum allowance	• low salaries • low risk allowance • low locum allowance
		"..reviewing salaries and paying on time, reviewing locum allowance frequently…".	• review salaries and paying salaries on time • review risk and locum allowances	• review salaries and pay on time • revise risk allowance • revise locum payment

	18	"…the salary does not tally with the job we are going through… our government always delays paying us our salaries, it's very unfair".	• more work less pay • delays in paying salaries	• less pay more work • salaries paid late
		"…they can return the locum and also increase the salaries that can help".	• retain locum • increase salaries	• retain locum pay • increase salaries
Measures implemented by government to retain registered nurses: The majority of nurses mentioned salaries were increased but not enough due to high cost of living.				

Based on the data presented above, the results seem to show that the majority of nurses get low salaries so that cause them to consider leaving the job. From the low salaries that nurses get, they spend more money on transport to commute to and from work if they are not staying near the hospital facility. Generally, the salaries of nurses in Malawi are low to meet the cost of living. The data presented in Table 4-2 confirm the view that low salary is the main problem that causes brain drain (Ngoma and Ismail, 2013; Vidal, 2015; Docquier, 2006). In addition, the results seem to provide an indication that despite the low salaries, other factors expounded by nurses are late salary payments, delays in increasing salaries after promotion, low locum payment and low risk allowance.

In terms of minimising or mitigating the factors highlighted above, the majority of nurses mentioned that an increase in salaries would be a better approach. The nurses mentioned that management should pay the salaries on time and adjusting salaries of nurses after promotion. In addition, increasing locum allowance and risk allowance would also be a reliable way to minimise brain drain.

4.2.1.1.2 Taxation

Table 4-3 Interviews with Nurses: Taxation

Taxation (EF2) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"..reduce the tax at least they can be taking a little money from our salaries…"	• reduce the tax	• high tax
		"they should reduce the tax".	• reduce tax	• reduce tax
	2	"tax is also very high..they even tax our locum pay because it is added to our salary".	• high tax • locum taxed	• high tax • locum taxed
		"..consider reducing tax"	• reduce tax	• reduce tax
	3	"you are already getting low pay with more tax where do you get excess money… frustrating really".	• low pay with more tax	• low salary with tax
		"I need less tax".	• less tax	• less tax
2	4	"we are used to taxation…nothing will change I do not understand why they tax locum allowance it's should be not be taxed".	• locum allowance taxed	• locum taxed
		"they should also stop taxing locum allowance".	• stop taxing locum allowance	• stop tax on locum
	5	"..the nurses are getting a little pay and pay more tax for all the work that we do".	• getting little pay and pay more tax	• high tax
		"I find it strange taxing locum pay it should not have been the case".	• not to tax locum pay	• not to tax locum pay

	6	"..we cannot complain because anywhere we can go there is tax not only in Malawi".	• anywhere there is tax	• taxation is everywhere
		"…the economic situation is not good, not only for Malawi but also some other countries".	• economic situation not good	• bad economic situation
3	7	"our tax system is not good at all. We pay so much".	• pay so much tax	• high tax
		"..reduce the amount of tax on our salaries we can't buy anything".	• reduce tax	• reduce tax
	8	"tax is another thing that causes people to leave as their salary is reduced".	• tax reduces salary	• high tax
		"even the tax itself the government should revise it's just too much".	• revise tax	• revise tax
	9	none	• none	• none
4	10	"..you compare to our colleagues who are working within the SADC countries. Mainly, that's the challenge we just get too little coupled with too much tax… we suffer because locum payment is also taxed that reduces our pay".	• too much tax • locum payment taxed	• high tax • locum payment taxed
		"stopping taxing locum".	• stop taxing locum	• stop taxing locum
	11	"they should stop taxing locum allowance these people we end up with nothing".	• stop taxing locum allowance	• locum taxed
		"stop taxing locum".	• stop taxing locum	• stop taxing locum
	12	none	• none	• none
5	13	.."you get a bit of high taxes".	• a bit of high taxes	• high tax
		"they can also make us happy by reducing taxes".	• reduce tax	• reduce tax
	14	"…tax is way too much that will also force people to move out of the country to look for a job outside. Another worry is the locum allowance that we get it should not be taxed at all. Allowance is not supposed to be taxed."	• tax is way too much; locum allowance taxed	• high tax • locum taxed
		"they can also get rid of tax from locum pay".	• get rid of tax from locum pay	• remove tax from locum pay
	15	"..I do not think people run away from tax in Malawi. It's the little pay we get".	• people do not run away from tax	• tax not an influence
		none	• none	• none
6	16	"salary is taxed, food is taxed so we can't save from our earnings".	• salary is taxed • food is taxed	• high tax
		"..revise the taxation system".	• revise taxation system	• revise taxation system
	17	"I also think that the tax that the government takes from us is just on the higher side… I also think that the tax the government takes is just on the higher side. They should not be taxing our locum payment".	• high tax locum payment taxed	• high tax • locum taxed
		"we are concerned that locum we get is very small and why should they tax it?"	• not to tax locum	• not taxing locum
	18	"I don't think tax is a big issue here but it's the salary".	• tax is not a big issue	• tax not big issue
		none	• none	• none

As presented in Table 4-3, high tax is a major determinant of brain drain among nurses in Malawi. This is confirms the view that people who emigrate are unhappy with the level of taxation and living costs (Rasool et al., 2012). However, four participants who did not see high tax as a major problem that leads to brain drain challenge this. The results also indicate that the tax on locum payment, which is deducted from the salary of the nurses, frustrate them and consider leaving. The result provides a clear indication that high tax is a problem that leads to brain drain of nurses in Malawi.

In terms of minimising or mitigating the factors mentioned, nurses expounded that, there was need for government to consider reducing the tax so that the nurses could have a better take home pay. In addition, nurses highlighted that there was need to remove tax from locum payment. According to World Bank (2011), the economic conditions of African countries have been on the decline for decades so this has adverse effects on the living standards and quality of life of Africans.

4.2.1.1.3 Living Standards

Table 4-4 Interviews with Nurses: Living Standards

Living Standards (EF3) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"..because of the lower salaries they are just low according to the living standards".	• low salaries	• low salaries cannot match rise in living standards
		"..giving incentives to like nurses so that they can be motivated. Incentives could be inform of money".	• give incentives	• incentives such as money
	2	"the prices of commodities have gone high so life is expensive".	• high prices of commodities	• high commodities prices
		"..promotions also probably they could be one of the motivation factors".	• promotion	• promotion
	3	"..we have a lot of responsibilities.."	• responsibilities	• responsibilities
		"..up to now there haven't seen any kind of promotion…"	• promotion	• promotion
2	4	"the cost of living is very high in Malawi like accommodation and transport".	• high accommodation and transport costs	• high accommodation and transport costs
		"..put in some measures to say; the starting salary according to our economic state could be at least properly determined to say; this one is a degree holder".	• put measures on starting salary	• revised salary scale
	5	"..because of the economy we just cannot afford a lot of things".	• cannot afford a lot of things	• things expensive
		That (52% top up salary) helps, that goes a long way it helps but the question now is; is it enough?	• top up salary not	• top up salary not enough
	6	"..we live in an extended way of living in terms of maybe you have some siblings or relatives that you would like to help…"	• extended way of living	• extended families
		"salary was revised yes but not in accordance with the cost of living at that time".	• salary revised not in accordance with living cost	• revised salary not in line with cost of living
3	7	"prices are going up every day and the little money they have they can't afford to buy things".	• prices are going up	• rising prices
		"we definitely need housing allowance".	• need housing allowance	• housing allowance
	8	"the environment is costly in the sense of accommodation, in the sense of transport; getting to and from work.."	• costly accommodation • costly transport	• high accommodation costs • high transport costs
		"people need to have more money".	• more money	• more money
	9	"it's hard to survive in Malawi due to high cost of living".	• high cost of living	• high cost of living
		living standards can improve with good salary	• good salary	• good salary

4	10	".. there is nothing like a little package on transport and housing…"	• no transport allowance • no housing allowance	• no transport allowance • no housing allowance
		"they could consider introducing transport and housing allowances".	• introducing transport and housing allowances	• introduction of transport and housing allowances
	11	"..because our economy has been down for decades.."	• economy down	• economic difficulties
		none	• none	• none
	12	"if you go to shops today you will see that things are very expensive. With a small salary we can't survive".	• expensive things	• expensive things
		"we need more money to meet cost of living".	• need more money	• require more money
5	13	"…South Africa or elsewhere in UK…. they have got at least a lot of things because they can earn good salary".	• elsewhere earn good salary	• other countries offer good salary
		"..nursing profession is not actually well honoured, so there is a need to honour, they need to understand that being a nurse, that training that we undergo, it's not just simple that it should be looked down and coupled with good pay".	• honour nursing professional coupled with good pay	• recognition of nursing profession with • good pay
	14	"...it's like the living standards are not good, just because of maybe the cost of living, it's hard.	• cost of living not good	• cost of living not good
		"..to produce a lot of commodities that can be exported in the end bring forex in the country hence improving the economy".	• produce commodities for export	• exporting commodities
	15	"…salaries are the same but you find that prices of commodities are so high…"	• high price of commodities	• high commodity prices
		"we need government that is ready to assist us".	• need government ready to assist	• government support
6	16	"you find that prices of commodities are so high so that is really making a challenge".	• high prices of commodities	• high commodity prices
		"..those working night shifts are supposed to be supplied with food working at night".	• supply food to night shifts	• supplying food to night staff
	17	".. to cop up with the high standards of living they opt to go outside so that they can get enough money to survive".	• high standards of living	• high standards of living
		"..introduce medical cover. secondly they have to look into the issues of housing, staff houses have to be constructed so that nurses with the high cost of living they can stay in the hostels and within government houses".	• medical cover • construct staff houses	• medical cover • construction of staff houses
	18	"..the expensiveness of items at the market you feel that it is affecting us economically".	• expensive items	• expensive items
		"..they should work on it to improve our salaries".	• improve salary	• salary improvement

The in-depth nature of this study has revealed that nurses in Malawi consider leaving their jobs because of high prices of commodities, responsibilities due to extended families, costly transport fares, costly house rent and non-provision of meals for nurses working at night. The economic conditions of African countries have been on the decline for decades so this deteriorating state of affairs has adverse effects on the quality of life (World Bank, 2011) and standard of living (Migration and Remittances Factbook, 2011).

To minimize or mitigate brain drain as regards high prices of commodities, responsibilities due to extended families, costly transport fares and costly house rent, nurses mentioned the need to revise the salaries in order to meet the high cost of living. In addition, management should build more institutional houses to ease the accommodation problem for nurses. The data also seems to show that management could provide nurses with meals on night duty.

4.2.1.1.4 Employment Opportunities

Table 4-5 Interviews with Nurses: Employment Opportunities

Employment Opportunities (EF4) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"..to support our dependants because of the low income".	• support dependants	• support dependants
		"we may be getting extra money from the trainings".	• extra money from training	• training allowance
	2	"..there was a lot of registered nurses that used to go outside for work and green pastures".	• green pasture	• green pasture
		"..increase the salaries of workers".	• increase salaries	• salary increase
	3	"..the salary scale is not enough to keep me here any job I can go".	• salary scale not enough	• salary scale not good
		"I need more pay".	• need more pay	• more pay
2	4	"..basically it's just the low pay. There are better jobs out there".	• low pay; better jobs	• low pay • better jobs
		"..improve salaries".	• improve salaries	• improve salaries
	5	"..out of stock, it's kind of economy..".	• out of stock economy	• not good economy
		"..provision of enough resources".	• provision of enough resources	• provision of resources
	6	"..to have investments like a house.."	• investment	• investment
		"..revising the salaries".	• revising salaries	• revise salaries
3	7	"if the salary was ok in this country nobody would think of migrating for jobs abroad".	• salary not good	• not good salary
		"..increasing their salaries".	• increasing salaries	• increase salaries
	8	"..the work environment in which this person is operating from, this nurse, is not good".	• environment not good	• poor environment
	9	"..most of the young nurses would rather go for greener pastures, where they can find lighter work".	• lighter work	• look for lighter work
		"job description for nurses should be revised".	• revise job descriptions	• revise job descriptions
4	10	"..if you find an opportunity somewhere else definitely everybody would go for that greener pasture".	• opportunity somewhere	• opportunity
		"improve the working conditions".	• improve working conditions	• improving working conditions
	11	"..poverty is among the factors that maybe most of the registered nurses within the country, because if you are educated, you expect something".	• poverty • education	• poverty • education
		"we need to be recognized with our education".	• recognized with education	• recognition of nurses education
	12	"we always go where things are better, living conditions, better housing and better infrastructures".	• go where things are better	• where things are better
		"we ought to have better housing and infrastructure to make us stay".	• better housing and infrastructure	• better housing and infrastructure

5	13	"..you just move out to seek some other opportunities".	• seek opportunities	• seek other opportunities
		"raise our salaries".	• raise salaries	• salary increase
	14	"..you will find that people there are well paid, so it may force somebody to leave the country to find job there".	• well paid jobs	• go for well paid jobs in other countries
		"..make the job attractive by paying well like in other countries".	• paying well job	• go for good pay job
	15	"..we are forced to look for greener pastures for us to have the source in upgrading both professional and academic".	• professional and academic upgrading	• upgrading reason
		"..professionally we need to improve. So we need government that is ready to assist us".	• need assistance to improve professionally	• require government assistance to upgrade
6	16	"… most resources are not available so it's like a challenge when you are working".	• lack of resources	• lack of resources
		"..easy to work in hospitals where resources are available".	• availability of resources	• easier to work in an environment with resources
	17	"..to have some opportunities like maybe advancing in a professional career, currently this is not available in the government system".	• advance professional career	• advance career
		none	• none	• none
	18	"people migrate for better opportunities abroad".	• better opportunities	• better opportunities
		"..to improve our salaries".	• improve our salaries	• salary improvement

From the data analysis presented in Table 4-5, nurse participants had different views that contribute to brain drain. The data indicates that apart from the employment opportunity itself other factors also come into play. They include, low salaries, poor environment, poverty, lack of housing, poor infrastructure, non-recognition of nurses and plan to advance career through upgrading. Several studies (Dzvimbo, 2003; Dimaya et al., 2012; Ngoma and Ismail, 2013) mention that higher wages and better employment opportunities in developed countries create incentives for skilled workers from developing countries to migrate. As such, it is not only an employment opportunity itself that contributes to brain drain but also a combination of other factors that should be considered as well. Therefore, there is need for management to improve nurses' salaries, working environment, build more houses, recognising nurses in their job and supporting them to upgrade.

4.2.1.2 Semi-Structured Interviews with Key Informants from Hospital: Economic Factors

4.2.1.2.1 Salaries

Table 4-6 Interviews with Key Informants from Hospital: Salaries

	Salaries (EF1) - Interviews with Key Informants from Hospital			
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"nurses spend a lot of time working in the hospital and they do not have any other source of income apart from their salaries.. they are also not happy locum allowance is small which many nurses are not happy with".	• salary only source of income • small locum allowance	• salary only income • little locum allowance
		"..increasing the salary…. increase locum pay for nurses".	• increasing salary and locum	• increase salary and locum allowance
2	2	"…the salary is too little… to cater for their needs".	• too little salary	• higher salary
		"..increasing the salary can solve that problem".	• increasing salary	• salary increase
3	3	"..nurses were complaining to the government that the salary that they were getting was too little, but what the nurses were being told, is that they are doing charity work".	• salary not adequate	• better salary
		"yeah, revise the salaries"	• revise salaries	• revision of salaries
4	4	"…they look for better salary".	• look for better salaries	• better salary
		"..there is need to revise their salaries".	• revise salaries	• salary revision
5	5	"..the money that we receive during an overwork hour is not enough. It's two thousand five hundred per shift".	• overtime pay not enough	• little overtime pay
		"…reviewing the salaries every year, that problem can be minimized…."..they should raise locum at least 6 thousand per shift…"	• salary review and increase locum pay	• salary review and increase locum pay
		"..when you go to a meeting, they provide accommodation and all necessary requirements instead of giving us an allowance….so people don't like that".	• full board seminars/workshops	• nurses not liking full board workshops/seminars
		"on full board meeting at least they should be providing allowances".	• provide allowances	• provide allowances at workshops not full board
6	6	"…low salaries which these people are receiving as far as civil service is concerned".	• low salaries	• low salaries
		"..provide better salaries".	• better salaries	• better salaries
Measures implemented by government to retain registered nurses: The majority mentioned salaries were increased by 52 percent but it is still low considering the cost of living.				

Based on the data analysis, the results indicate that low salary is the most frequent appearing problem that makes nurses to consider leaving. Although a measure was implemented to increase the salaries by 52 percent, the salaries are still considered as low. In this regard, the low salary is consistent with what the majority of nurses also highlighted as a contributing factor to brain drain. Several studies in chapter two are consistent with this finding. Despite the low salary, the participants also revealed that low locum payment that nurses receive and full board workshops or seminars which deny nurses of getting allowances because accommodation and meals are paid for by those organising workshops/seminars are also factors that contribute to brain drain of nurses.

Based on the data presented in Table 4-6, it shows that nurses receive low salaries and low locum so they would like to have both of them increased. The majority of nurses also highlight the issue of increasing salaries and locum pay. In addition, the data shows that the provision of full board workshops frustrates many nurses because they are not paid allowances. Therefore, they would like the government or donors in operation relationship with the government to stop the full board workshops arrangement and pay allowances straight to participants to look for their own type of accommodation and meals.

4.2.1.2.2 Taxation

Table 4-7 Interviews with Key Informants from Hospital: Taxation

Taxation (EF2) - Interviews with Key Informants from Hospital				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"..they pay too much tax for low salaries…the locum is also taxed reducing our salary more".	• pay too much tax • locum taxed	• high tax • locum pay taxed
		"reduce tax on locum".	• reduce tax on locum	• reduce tax on locum
2	2	"..the first thing because of the multiple, so many responsibilities and then the salary is too little to cater for that with high taxation".	• high taxation	• high tax
		"they should reduce tax".	• reduce tax	• reduce tax
3	3	"tax also reduces their already low salaries… nurses are not happy the government taxes our locum allowance".	• tax reduces low salaries • locum allowance taxed	• tax reduces low salaries • locum pay taxed
		"…removing tax deduction from locum pay".	• removing tax from locum pay	• stop deducting locum pay
4	4	"nurses worry about paying a lot of tax to government so that reduces their income".	• paying a lot of tax	• high tax
		"..revising taxation system".	• revising taxation system	• revision of tax system
5	5	"..the money that we receive during an overwork hour is not enough and taxed heavily".	• overtime heavily taxed	• heavy tax

		"pay like locum should not be added to salary because they tax it".	• locum not to be added to salary	• stop locum from being added to salary
6	6	"..taxation on the very low salaries they get".	• taxation very low salaries	• low salaries taxed
		"…reduce tax as cost of living is very high".	• reduce tax	• tax reduction

The data in Table 4-7 illustrate that nurses pay a lot of tax from their salaries to government so it reduces their already low salaries further. According to Rasool et al. (2012), people who emigrate are unhappy with the level of taxation. As shown in Table 4-7 it is also revealed that apart from the heavy taxes on salaries, locum payments in respect of overtime worked for are added to nurses' salaries but the government taxes the locum payment together with the salary, which frustrate the nurses so they consider leaving.

From the analysis of the data, there is need for reducing tax that nurses pay to the government. In addition, the management could stop deducting tax from locum payment because heavy taxation reduces nurses' already low salaries. The reduction of tax and stopping of locum payment from being taxed has also been mentioned by the majority of nurses as a way to minimise brain drain.

4.2.1.2.3 Living Standards

Table 4-8 Interviews with Key Informants from Hospital: Living Standards

Living Standards (EF3) - Interviews with Key Informants from Hospital				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"limited opportunity to make extra coins is also a problem".	• limited opportunity to make coins	• limited opportunity for extra income
		"…providing opportunities for business in terms of capital, other avenues of income generation".	• providing opportunities for business	• provision of business opportunities
2	2	"..responsibilities which people have compared to the salaries which they get, they think that maybe it's not enough to cater for their needs, for their daily needs".	• responsibility with low salary	• low salary but more family responsibilities
		"…with family responsibilities some nurses have, they certainly need better pay".	• need better pay	• better pay
3	3	"..nurses have been complaining that they cannot manage to pay the transport because their salaries are very low".	• cannot manage to pay for transport	• high transport cost
		"provision of transport especially evening time….there is nothing provided for them like for tea, sugar and milk".	• provision of evening transport; provision of tea, sugar and milk	• provision of transport • provision of tea, sugar and milk
4	4	"..the transport cost have gone up, so somebody will still be looking for more money so that life can be easier".	• transport costs gone up	• high transport costs
		"…provision of buses and maybe people should be collected at an agreed point, to work…."	• provision of buses	• provide nurses with transport

5	5	"some nurses have dependants and send them to private school for better education but how many people would afford that with this high cost of living".	• high cost of living	• high cost of living
		"increasing pay would be ideal".	• increasing pay	• pay increase
6	6	"the price of basic items have gone up, things like sugar, bread among others so nurses struggle financially to buy them and salaries have not increased".	• basic items gone up	• basic items gone up
		"…improving the conditions of service of nurses like salary increase".	• increasing salaries	• increasing salaries

The data shows that nurses have limited opportunities to make extra money apart from their salaries. Nurses have dependants and struggle to support them due to high cost of living because they get low salaries. The data also indicate that high transport costs and high prices of basic items were mentioned repeatedly as factors that contribute to brain drain in the Malawi health sector. These factors were consistent with what the majority of nurses also highlighted as factors that influence brain drain. According to Beine et al. (2008); Docquier, (2006), the harsh economic realities partly account for the migration of skilled human capital to the developed countries

There is need for providing nurses with loans to set up small-scale businesses. The government could provide a bus to pick nurses up at central locations to their place of work especially in the evening. If we compare what nurses and key informants said on transport, some nurses highlighted the need to pay nurses transport allowance in addition to their salaries. The data also indicate that it would be beneficial if the nurses were provided with ingredients such as tea, sugar and milk to use at their workstation as a way of motivating them.

4.2.1.2.4 Employment Opportunities

Table 4-9 Interviews with Key Informants from Hospital: Employment Opportunities

Employment Opportunities (EF4) - Interviews with Key Informants from Hospital				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"places like UK, they have plenty of jobs for nurses so given a chance I will go and get better income".	• plenty of jobs for nurses	• availability of jobs
		"a nurse can leave for any better job opportunity. We cannot stop them".	• better job opportunity	• job opportunity
2	2	"the brain drain is may be there from Malawi to outside but also maybe within the country".	• brain drain outside and within	• brain drain outside and within Malawi
		"..moving from Malawi going to UK to look for that greener pastures".	• greener pastures	• greener pastures
3	3	"there were some nurses who have worked for a long time but could not get any promotions".	• some nurses no promotion	• some nurses not promoted
		"..consider promoting hard working nurses".	• promoting hard working nurses	• nurse promotions
4	4	"the economy in Malawi is not good"	• economy in Malawi not good	• not good economy in Malawi

		"..hospitals should provide transport…"	• provide transport	• provision of transport
5	5	"nurses were free to apply in the UK that one could also contribute to brain drain because if they are not restricting you to apply for abroad so why not and you see there is greener pasture…"	• no restriction	• nurses not restricted
		none	• none	• none
6	6	"…there is high vacancy rate and low number of staff…"	• high vacancy rate • low number of staff	• availability of vacancies • low number of staff
		"..the government should also employ more nurses and provide incentives".	• employ more nurses • provide incentives	• employment of more nurses and provision of incentives

Based on the analysis of this data it could indicate that nurses consider leaving their jobs because of the availability of nursing jobs in other countries. For example, there is a high demand for nurses in the UK where Malawian nurses usually emigrate. The data also indicate that the lack of opportunities for promotion and bad economy cause brain drain among nurses. One of the key informants pinpointed that brain drain takes place internally and externally. According to Alam et al. (2015), UK, USA and Canada have had in market terms, a higher demand for healthcare workers that has not been satisfied domestically and have imported such labour.

As presented in Table 4-9, nurses could be considered for promotion based on merit to mitigate brain drain although there could be employment opportunities elsewhere. The government should employ more nurses and provide them with incentives to minimize brain drain.

4.2.1.3 Semi-Structured Interviews with Key Informants from NMCM, CHAM and MOH: Economic Factors

4.2.1.3.1 Salaries

Table 4-10 Interviews with Key Informants from NMCM, CHAM and MOH: Salaries

Salaries (EF1) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organization	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"Malawi is one of the countries that the salaries are very low…there is also a problem with late salary payments which demotivates nurses to leave".	• low salary • late salary payment	• low salaries • salary paid late
		"…increase salaries and pay them on time".	• increase salaries • pay on time	• salary increase • paying salaries on time

CHAM	2	"sure we know how much our registered nurses get, they get very little…there are delays in increasing salaries of nurses after promotion so that frustrates them".	• get very little • delays in increasing salaries	• little pay • delays in increasing salaries after promotion
		"they should not delay adjusting salaries when an employee has been promoted".	• no delays adjusting salaries	• timely adjustment of salaries
MOH	3	"failure by government to adhere its own policies on incentives for HRH including registered nurses".	• failure by government to adhere its own policies on incentives	• government failure to policies on incentives
		"..through development of policy implementation, monitoring and evaluation plans".	• development of policy implementation, monitoring and evaluation plans	• policy implementation monitor and evaluate plans
Measures implemented by government to retain registered nurses: The majority mentioned salaries were increased by 52 percent				

As shown in Table 4-10, it indicates that nurses get low salaries. This is consistent with what the majority of nurses and key informants from hospitals also highlighted. However, the in-depth nature of this study has revealed that not only the low salary in Malawi is a significant factor causing intention to leave among nurses but also late salary payments and delays in increasing salaries after promotion. Brain drain would continue because of growing wage differentials between developed and developing countries (Docquier, 2006). The data also indicate that, the government of Malawi has failed to adhere to its own policies on incentives of human resource for health.

From the data presented, it shows that there is need for increasing salaries for nurses and paying them on time. It would be beneficial to adjust the salaries of nurses once they receive a promotion. The nurse participants had also the same sentiments. The majority of key informants from hospital also highlighted increasing salary as an important factor. The data also indicate that the government should be able to develop policy implementation, monitor and evaluate plans to strengthen the health system.

4.2.1.3.2 Taxation

Table 4-11 Interviews with Key Informants from NMCM, CHAM and MOH: Taxation

Taxation (EF2) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organization	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"nurses also complain about high tax".	• high tax	• high tax
		"they could cut down on tax".	• cut down on tax	• reduction of tax
CHAM	2	"..tax is on the higher side, heavily". taxed".	• heavily taxed	• heavy tax
		"revise taxation system".	• revise taxation system	• tax revision

MOH	3	"..high taxation system".	• high taxation	• high tax
		"..address challenges encountered in policy implementation based on evidence".	• address challenges encountered in policy implementation	• addressing challenges

The data analysis illustrate that nurses pay high tax from the low salaries that they get. In this view, the high tax on already low salary is a factor that contributes to brain drain among nurses. This is consistent with what the majority of nurses and key informants from hospital also revealed. From the data analysis, tax is an important factor to brain drain.

The data illustrates that government should revise the taxation system because the tax is high. The majority of nurses and key informants from hospital had also the same sentiments regarding the high tax. As such, there is need to address challenges that are encountered in policy implementation based on evidence.

4.2.1.3.3 Living Standards

Table 4-12 Interviews with Key Informants from NMCM, CHAM and MOH: Living Standards

Living Standards (EF3) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organization	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"living standards are also high especially if we consider transport and accommodation costs".	• high transport and accommodation costs	• high transport and accommodation costs
		"the government should build more houses for nurses".	• build more houses	• build more houses for nurses
CHAM	2	"nurses find it hard to meet high cost of living".	• high cost of living	• high cost of living
		"..adjusting salaries.."	• adjusting salaries	• salary adjustment
MOH	3	"the HSSP (2011-2016) has articulated various forms of incentives but very little worth pointing at has been done".	• little incentives done	• little incentives
		"government should provide more incentives to nurses like better pay, training etc".	• provide more incentives	• provide more incentives

The data presented in the above table shows that the living standards are high in terms of transport costs to and from work and accommodation costs mostly to the nurses who are staying far away from the health facility. This is consistent with what the majority of nurses also articulated on high transport and accommodation costs, while the key informants from the hospital frequently mentioned high transport costs. The data also shows that, the Malawi Health Sector Strategic Plan (HSSP) has articulated various forms of incentives but very little have been achieved.

There is need for government to build more houses to accommodate more nurses in institutional houses near the health facility. In addition, there is also need for providing more incentives to nurses like better pay and training. However, in comparison with an interview with nurses, the majority of participants highlighted that they could meet the high cost of living such as commodities, accommodation and transport, if their salaries were increased. As indicated in Table 4-12 the key informants also mentioned that there was need to increase the salaries to improve the living standards of nurses.

4.2.1.3.4 Employment Opportunities

Table 4-13 Interviews with Key Informants from NMCM, CHAM and MOH: Employment Opportunities

Employment Opportunities (EF4) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organization	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"..they are low salaries as compared to other nurses who are working in the SADC region".	• low salaries	• low salaries
		"salaries are not competitive so need to be adjusted…	• adjust salaries	• adjusting salaries
CHAM	2	"..if they become frustrated they decide to leave the country".	• frustration	• frustration
		"..providing them with resources which will make them work efficiently and effectively".	• provide resources	• provision of resources
MOH	3	"nurses become frustrated and decide to leave when they work under unfavourable environment".	• unfavourable environment	• unfavourable environment
		"government should provide more resources towards procurement of tools to be used by nurses".	• provide more resources	• provision of more resources

Although literature has mentioned that job opportunities abroad motivate nurses to leave, the data in the table above illustrates that, despite the employment opportunity itself, frustration due to low salaries and unfavourable environment are other significant factors that contribute to brain drain among nurses in Malawi. The evidence available explain that the global free movement of labour and competition for human resources enables developed countries to fill their shortages of health workers from less developed countries (Kuehn, 2007).

From the data analysis, it seems that the salaries of nurses are low so there is need for adjusting their salaries to retain the nurses. The government should also take the responsibility to provide resources to nurses to make the environment favourable to mitigate brain drain.

4.2.1.4 Focus Group Discussion One with Nurses: Economic Factors

Table 4-14 Focus Group Discussion One: Economic Factors

Focus Group Discussion One with Nurses from QECH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"I am living here with this fewer amount of money and I am not saving, and tax is high".	• fewer money; not saving; tax is high	• little salary • high tax
	"..consistent review of salaries, like considering maybe the devaluation of the kwacha".	• consistent review of salaries	• review salaries
Participant 2	"salaries that people are getting are still minimal, they are still on low salaries…they also tax our locum allowance is not right".	• low salaries; tax on locum allowance	• low salaries • tax on locum allowance
	"..they just have to increase our salary to retain us".	• increase our salaries	• increase salaries
Participant 3	"for somebody to have basic needs like housing and other basic needs and looking at the salaries it's not sustainable, so people would rather maybe go somewhere to get more so that they can be comfortable".	• salaries not sustainable;	• salaries not sustainable
	"..also need to pay our salaries on time".	• pay salaries on time	• payment salaries on time
Participant 4	"It's unfair they deduct tax from 52% top up allowance".	• unfair deducting top up allowance	• unfair deducting top up allowance
	"..stop taxing the 52% top up salary because it takes a lot of our money".	• stop taxing the 52% top up salary	• non taxing of 52% top up salary
Participant 5	"locum takes time to be paid".	• late payment of locum	• late payment of locum
	"..government should be consistent with locum payments".	• consistent with locum payments	• locum payments consistency
Measures implemented by government to retain registered nurses: The majority mentioned salaries top-up was introduced. However, the salary is still considered low due to devaluation of Malawi Kwacha (local currency).			

The data presented in Table 4-14 illustrates that nurses' salaries are low, tax is high and house rentals are expensive. The literature initiatives provide supporting evidence on salaries and tax regarding brain drain. In addition, the in-depth nature of this study has also revealed that accommodation costs and tax on locum allowance are other significant factors that cause brain drain.

The fundamental idea is to review the salaries of the nurses especially whenever there is devaluation of Malawi Kwacha. The nurse participants and key informants had the same sentiments during the interviews. The data in the table above also illustrates that the government sometimes delays in paying salaries to civil servants including nurses so they wish if the government could pay salaries in time. The data also indicates that, the 52% top up salary that nurses receive should be tax-free. There is also inconsistence in locum allowance payments so the participants in the focus group want the government to pay locum allowance in time.

4.2.1.5 Focus Group Discussion Two with Nurses: Economic Factors

Table 4-15 Focus Group Discussion Two: Economic Factors

Focus Group Discussion Two with Nurses from MZCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"what the health care providers and the registered nurses get after their work, is just too little to sustain themselves and even their family".	• too little to sustain themselves and family	• little pay
	"government should revise I can say wage criteria".	• revise wage criteria	• revise wage criteria
Participant 2	"what we get, we cannot pay the accommodation, we cannot pay the transport to work, and we cannot even pay for our children fees, we buy everything on our own, even the uniforms that we are using, its all of them, mostly it's our money".	• can't pay transport and accommodation costs; children fees; buy own uniform	• low salary cannot meet transport and accommodation costs
	"…provide us with transport if we are starting evening shift to those staying miles away from hospital. They should also be buying us nurse uniform not using our own money".	• provide us with transport; • buying us nurse uniform	• provision of transport • provision of nurse uniform
Participant 3	"the work we do and the amount of money that we receive is also very little… tax is just very high".	• more work less pay; high tax	• low pay • high tax
	"..our tax is so high we can't breathe need to be reduced".	• reduce tax	• tax reduction
Participant 4	"the depreciation of kwacha against major foreign currencies; the government doesn't put back like a cushion so that you will not feel that pain but you will see maybe for two or three years you are still on that salary; when you look at the depreciation of kwacha or the prices of goods on the market, it's like they can rise maybe three times but you still get the same amount; in Malawi we even fail to meet our basic needs".	• depreciation of Kwacha; same salary; prices of goods high	• low salary
	"..get access to loans..."	• access to loans	• access to loans
Measures implemented by government to retain registered nurses: The majority said the government has not done anything cited locum was only introduced to cover shortages of nurses not as a measure to mitigate brain drain.			

As shown in Table 4-15 nurses cannot not afford to pay their own transport to work, pay their children fees or to buy their own set of nurse uniform because of low salaries. The prices of goods have gone up which make the life of nurses miserable. In addition, the data indicates that, nurses work more for less pay so this contributes to brain drain. Nurses feel frustrated because they use their already low salary to buy their own set of nurse uniform because the government does not provide them with uniform. Although, the government introduced locum payments, it seems the government has not done anything to mitigate brain drain because the locum payment was introduced to cover the nurse shortages not to minimise brain drain. According to Kirigia et al. (2006), most developing countries continue to experience the loss of an increasing number of highly skilled health professionals such as nurses by migrating to developed countries.

The analysis of data shows that government should revise salaries, provide transport to nurses on night shift. In addition to the two factors that were highlighted frequently by focus group discussion one, there is also need for government to provide a set of uniform to each nurse. The data also indicate that the tax be reduced because it is too high. The government could also provide nurses with loan opportunities in order to mitigate brain drain.

4.2.1.6 Focus Group Discussion Three with Nurses: Economic Factors

Table 4-16 Focus Group Discussion Three: Economic Factors

Focus Group Discussion Three with Nurses from KCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"salaries are very low, salary that we get, it's hard to get a decent house, transportation is expensive, salaries are very low food itself, hard to make ends meet coupled with high tax on low salary".	salaries very low	low salaries
	"..low interest rate for loans".	low interest rate for loans	low interest loans
Participant 2	"apart from the salaries, we also have problems on rentals. If you are staying out of the institution, then you have to find a house somewhere in the communities and they charge high".	rentals high	high house rentals
	"pay better salaries, introduce loan scheme and build more houses. You will agree with me nurses would be happy to work in this country".	pay better salaries, introduce loan scheme build more houses	better salaries, loans construction of houses
Participant 3	"salaries are too low, and there is no motivation to members of staff working in Malawi hospitals, there are no incentives to make these people want to work in the country, that person is not attached to any social factors in terms of family and other issues, that person is free to go and get a job somewhere for greener pastures".	salaries too low	low salaries
	"..increasing salaries, increasing locum allowance".	increase salaries increase locum allowance	increase salary and locum allowances
Participant 4	"salaries are low".	low salaries	low salaries
	"they should put up our salaries".	put up salaries	salary increase
Participant 5	"not have incentives when they are at work, you need a loan aside from your salary. But here in Malawi it's very hard to get a loan from the banks, and if you get them it's very high interest rates and it makes even life unbearable".	hard to get a loan high interest rate	hard to access loans high interest rate
	"..there is need for provision of loans to nurses and other healthcare professionals".	provision of loans	provision of loans
Participant 6	"they have no incentives to make this person stay".	no incentives	non availability of incentives
	"..adjusting the salaries".	adjusting the salaries	salary adjustment
Measures implemented by government to retain registered nurses: The participants mentioned that 52 percent top-up salary was made but the only drawback it is taxed.			

Initially, the data seems to show that the salaries of nurses are the most frequent appeared problem because they are low. Hence, nurses find it hard to pay rental fees for their accommodation especially those not living in institutional houses close to healthy facility. This

is consistent with what the nurses and key informants also highlighted during interviews. Despite the low salaries, the nurses also revealed problems with accessing bank loans and high interest rates. Gibson and McKenzie (2011) indicate that economic incentives for migration or income gains play a weaker role in determining highly skilled migration as compared to career opportunities and enabling environment. However, it is not the case in Malawi because salary is generally an important factor.

The data illustrates that nurses consider their salaries low in Malawi so there is need for increasing salaries and locum allowance to meet the high cost of living. The nurse participants and key informants made the same sentiments during the interviews to mitigate brain drain. Despite increasing the salaries, the government could also introduce loans with low interest rates. The focus group discussion two also revealed this. The data also indicate that the government should build more institutional houses for nurses in order to minimize brain drain.

4.2.2 Exploring Political Factors

From the literature review in this study, political factors include political violence, crime tribal tensions and non-democratic institutions. These three child nodes have developed under the parent nodes of political factors (See Table 4-1).

4.2.2.1 Semi-Structured Interviews with Nurses: Political Factors

4.2.2.1.1 Political Violence

Table 4-17 Interviews with Nurses: Political Violence

Political Violence (PF1) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	“most of the time we live peacefully”.	• we live peacefully	• peaceful country
		“Malawi is a peaceful country we don’t fight”.	• Malawi peaceful country	• peaceful country
	2	“probably change of leadership..”	• change of leadership	• change of leadership
		“overall, political violence does not make nurses leave our country”.	• political violence does not make nurses leave	• not an influence
	3	none	• none	• none
2	4	none	• none	• none
	5	none	• none	• none
	6	none	• none	• none
3	7	none	• none	• none
	8	none	• none	• none
	9	none	• none	• none
4	10	none	• none	• none
	11	“the speeches by our leaders violate our rights. If you are in the podium and you speak to the public by saying; you can go anywhere you want, where you feel you can get a lot of money”.	• leaders violate rights	• speeches seen as violation of rights.

		"political leaders also need to mind their language as it can incite violence".	• political leaders to mind language	• political leaders language
	12	none	• none	• none
5	13	none	• none	• none
	14	"there are none".	• none	• none
	15	none	• none	• none
6	16	none	• none	• none
	17	"I don't think there is such impact on the issue of brain drain".	• none	• none
	18	none	• none	• none
Measures implemented by government to retain registered nurses: The majority of participants said that they were not aware of any political measures put in place".				

The data analysis clearly indicates that political violence is not a contributing factor to brain among nurses in Malawi. This is contrary to Rasool et al. (2012) who observe that many African countries experience ongoing violence and crime. However, one participant mentioned that the change of leadership and another one narrated that speeches by political leaders are significant factors that cause the brain drain of nurses. As regards speeches by political leaders, participants suggested that the leaders should mind their language.

There were no significant measures to minimise or mitigate the problem that were suggested because the majority of participants did not see political violence as a factor that contributes to brain drain of nurses in Malawi.

4.2.2.1.2 Crime Tribal Tensions

Table 4-18 Interviews with Nurses: Crime Tribal Tensions

Crime Tribal Tensions (PF2) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	none	• none	• none
	2	none	• none	• none
	3	none	• none	• none
2	4	none	• none	• none
	5	none	• none	• none
	6	none	• none	• none
3	7	none	• none	• none
	8	none	• none	• none
	9	none	• none	• none
4	10	none	• none	• none
	11	none	• none	• none
	12	none	• none	• none
5	13	none	• none	• none
	14	none	• none	• none
	15	none	• none	• none
6	16	none	• none	• none
	17	none	• none	• none
	18	none	• none	• none

Although the literature mention that frequent tribal tensions and consequent inter-tribal wars create a situation of abject poverty, ill health, and a destabilized continent (Rasool et al., 2012),

this data analysis shows that crime tribal tensions are not factors that contribute to brain drain of nurses in Malawi.

There were no measures to minimise or mitigate the problem that were put forward to because the participants did not see crime tribal tensions as the factors that contribute to the brain drain of nurses in Malawi.

4.2.2.1.3 Non-Democratic Institutions

Table 4-19 Interviews with Nurses: Non-Democratic Institutions

Non-Democratic Institutions (PF3) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"change of government sometimes we see that there is another president they say that I'm going to increase the salaries of civil servants so sometimes it happens that they have promised that but later on they don't do that…"	• change of government	• change of government
		"they (politicians) have to fulfil what they have promised".	• fulfil promise	• fulfil promise
	2	"..change of leadership one may not value the nurses while the other one may value who the nurse is".	• change of leadership	• change of leadership
		"..what a nurse is supposed to get then it will be uniform regardless of change of leadership".	• uniformity	• uniformity
	3	"but you may be in a situation where whatever you suggest does not make sense to your supervisor so you become frustrated".	• frustration	• frustration due to poor leadership
		"..a boss should have a listening ear".	• listening ear	• listening ear
2	4	"mostly things are always politicized, decisions are not made based on facts, and it's more ".	• decisions are not made based on facts	• political decisions without facts
		"politicians should not interfere with our work".	• politicians not to interfere	• political interference
	5	"..most of the posts in terms of at a central hospital are politically motivated".	• posts politically motivated	• politically motivated posts
		"politicians should not be dictating who to take up what position because that's what they do so it frustrates us".	• politicians not to dictate	• politicians not to dictate
	6	"..no political will to recognize the registered nurses with the role that they are playing because its them that are on the ground, its them that are in contact with the patients.."	• no political will	• no political will
		"..advocate for the increase in the salaries and to bargain for better conditions of service for the registered nurses".	• salary increase • better conditions of service	• salary increase • better service condition
3	7	"..bosses in the hospitals posts are mainly political so all things are run by the government through these people. And most times they don't listen".	• political posts • bosses do not listen	• political posts • not listening managers
		"if these posts were not politically attached, they would work out really good".	• non-political posts	• non-political posts
	8	"..regionalism has contributed a lot to brain drain in Malawi. Regionalism, nepotism and tribalism…"	• regionalism, nepotism and tribalism	• regionalism, nepotism and tribalism
		"people should be promoted on merit".	• promote on merit	• promotion on merit

	9	"…politicians are also the deciding factors of the salaries".	• politicians decide on salaries	• politicians decision on salaries
		"politicians should refrain from interfering with nurses jobs they are not experts in the nursing field".	• refrain from interfering with nurses job	• no interference
4	10	"..no political will from the people who are in authority".	• no political will	• no political will
		"…putting health sector as a priority, ensuring that the equipment that we need is readily available".	• priority health sector	• prioritize health sector
	11	"..most politicians do not recognize the importance of nursing what they do in the hospitals".	• not recognizing importance of nursing	• no recognition of importance of nursing
		"nurses should be treated well by providing them with enough resources such as defibrillators, suction machines".	• treat nurses well • providing them with enough resources	• treat nurses well • provision of resources
	12	"…most of the positions are politically motivated, for example, you are with someone in school and your friend is well connected politically, it means he will rise maybe after two years you will find your colleague is on grade H but you are still on that grade".	• positions are politically motivated	• politically motivated positions
		"the government should treat each equally without favouring anyone when it comes to promotions or training".	• treat each equally	• equal treatment
5	13	"..your locums are not getting paid in good time or whatever you don't have adequate funding".	• locums not paid in time • inadequate funding	• late locum payment • in adequate funding
		"…give us a chance to voice out our grievances, if we have got problems we need to say if we are not getting paid on time we should be able to voice out".	• give chance to voice out	• chance to voice out
	14	none	• none	• none
	15	"you know there were some health personnel who were withdrawn from service just after been recruited".	• health personnel withdrawn	• withdrawal of health personnel from work
		"..they (politicians) never showed any interest in these trained nurses".	• politicians never show interest	• politicians never show interest in nurses
6	16	..one who are running the country at that time they will have their own priority".	• own priority	• own priority
		"..could be some sort of bills written in health to say even if this party comes or goes this should be the priority".	• bills written	• priorities
	17	none	• none	• none
	18	"..politicians are the ones that influence much and they always put pressure on us when it comes to our delivery of services they want us to work under pressure just because they think the hospital is theirs".	• work under pressure	• work under pressure
		"these politicians should not be interfering with our work as nurses, it simply demotivates us…"	• not to interfere with nurses work	• no interference with nurses work

The data illustrates that change of government, change of leadership, politically motivated positions, lack of political will, regionalism, nepotism and tribalism, late locum payments are the factors that contribute to the brain drain of nurses in Malawi.

The data provides a clear indication from the majority of nurses that there is a political interference when they are performing their duties. However, the participants are challenging the politicians to let nurses perform their duties professionally without any political interference. The data also indicate that nurses are demanding for equal opportunities so that their positions should be on merit not on political grounds. There is also need for political will to recognise the nurses, allow them to voice out their concerns and provide them with enough resources to perform their clinical duties.

4.2.2.2 Semi-Structured Interviews with Key Informants Hospital: Political Factors

4.2.2.2.1 Political Violence

Table 4-20 Interviews with Key Informants from Hospitals: Political Violence

Political Violence (PF1) - Interviews with Key Informants from Hospital				
Hospital	**Key Informants Number from Hospital**	**Data**	**Key Words**	**Comments**
1	1	none	• none	• none
2	2	none	• none	• none
	3	"..we had two nurses who were working here, the other one was working in children's ward and the other one was working at casualty and they were threatened. Some of them were threatened to be killed by these political people because of their positions, so as a result of that, those nurses left, they went to the UK".	• threats	• threats
		"politicians should avoid issuing threats to nurses".	• avoid issuing threats	• avoid issuing threats
3	4	"..I don't have experiences on political violence issues".	• no experience on political violence	• no experience on political violence
			•	•
4	5	none	• none	• none
5	6	none	• none	• none

As shown in Table 4-20, the majority of key informants from hospitals have not mentioned political violence as a contributing factor to the brain drain of nurses. This conforms to what the majority of nurses also explained. However, one key informant has mentioned threats that some nurses receive, as a significant factor that causes brain drain. To this end, there is need for politicians to avoid issuing threats to nurses in order to make the work place conducive. There were no measures that were suggested by the majority of participants to minimise or mitigate the problem because they did not see political violence as the factor that contribute to the brain drain of nurses in Malawi.

4.2.2.2.2 Crime Tribal Tensions

Table 4-21 Interviews with Key Informants from Hospitals; Crime Tribal Tensions

Crime Tribal Tensions (PF2) - Interviews with Key Informants from Hospital				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	none	• none	• none
2	2	none	• none	• none
3	3	none	• none	• none
4	4	"I haven't come across any issues concerning tribes".	• not come across tribes issues	• tribe
5	5	none	• none	• none
6	6	"..if a community member can come and see that is not being attended to in time, they think may be nurses are sabotaging them and if they report that to political gurus, they just come and reduce that nurse to zero without finding out what happened for her not to assist the sick in time".	• reduce nurse to zero	• lack of respect for nurses
		"…engage the political gurus, be it the MPs the Counsellors sensitize them give them the status quo how they feel the services will be compromised. Tell them we have a high vacancy rate, we don't have necessary drugs, we don't have cleaning materials".	• engage political gurus	• engage political gurus

As shown in Table 4-21 the crime tribal tensions are not a contributing factor to the brain drain of nurses in Malawi. Although, Docquier and Rapoport (2007) mention crime tribal tension as an important factor, it is not the case in Malawi. However, one key informant expounded that political leaders do not respect nurses especially mostly when there are reports that a nurse delayed in supporting a patient so nurses become frustrated and eventually leave.

There are no measures that five participants suggested to minimise or mitigate the problem because the participants did not see crime tribal tensions as the factor that contribute to the brain drain of nurses in Malawi. However, one participant stated that politicians should respect nurses.

4.2.2.2.3 Non-Democratic Institutions

Table 4-22 Interviews with Key Informants from Hospitals: Non-Democratic Institutions

	Non-Democratic Institutions (PF3) - Interviews with Key Informants from Hospital			
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	none	• none	• none
2	2	"..when they are allocating at parliament, the budget for the health sector, they don't allocate according to what the hospitals have budgeted for. So like that is making the hospital not to have necessary resources".	• allocation of budget	• allocation of budget
		"they need to make sure the hospital have enough funding for resources".	• enough funding	• enough funding
3	3	none	• none	• none
4	4	"..some other institutions really don't recognize experience and somebody's qualification. So, that's the politics within those hospitals".	• don't recognize experience and qualification	• no recognition of experience and qualification
		"nurses should be recognized and we should carry out exit interviews with nurses to identify specific factors that prompted them to leave so that we come up with immediate interventions to minimize the problems".	• nurses be recognized; carry out exit interviews	• recognize nurses • conduct exit interview
5	5	"..we are not adequately funded, so this leads to a lot of problems like; shortage of resources".	• not adequately funded; shortage of resources	• underfunding
		"there is need for ongoing effort to mobilize resources required to fill gaps in basic equipment and medication with good funding".	• mobilize resources	• mobilization of resources
6	6	"..political personnel don't have information enough as regards to the operations at the hospital ie the nurses so there is always that conflict".	• political personnel don't have information enough	• lack of information by politicians
		"we should be having regular meeting with people in villages around the hospital and sensitize them on our operations. Sometimes these people do not understand the problems that nurses face".	• regular meeting	• regular meetings with villagers
Measures implemented by government to retain registered nurses: The majority of participants said that there was none				

Referring to Table 4-22, under funding, non-recognition of experience and non-recognition of qualification of nurses, conflict between nurses and political personnel are contributing factors to the brain drain of nurses in Malawi.

From the analysis of the data, it would be beneficial to provide enough funding to the hospitals to enable them mobilise required resources such as equipment and medication. The data also

indicate that there is need to conduct exit interviews with nurses to identify specific factors that make them to consider leaving. In addition, managers should work in a friendly manner without intimidating anyone. There is also need for hospital staff to have regular meetings with villagers to let them know the challenges the hospitals are facing.

4.2.2.3 Semi-Structured Interviews with Key Informants from NMCM, CHAM and MOH: Political Factors

4.2.2.3.1 Political Violence

Table 4-23 Interviews with Key Informants from NMCM, CHAM and Ministry of Health: Political Violence

Political Violence (PF1) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants Number**	**Data**	**Key Words**	**Comments**
NMCM	1	none	• none	• none
CHAM	2	none	• none	• none
MOH	3	none	• none	• none

According to key informants from NMCM, CHAM and MOH, political violence is not a contributing factor to the brain drain of nurses. This conforms to what the majority of nurses and key informants from hospitals also revealed. Overall, it would imply that political violence is not a significant factor that causes brain drain of nurses in Malawi.

4.2.2.3.2 Crime Tribal Tensions

Table 4-24 Interviews with Key Informants from NMCM, CHAM and MOH: Crime and Tribal Tensions

Crime and Tribal Tensions (PF2) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
1	NMCM	none	• none	• none
2	CHAM	none	• none	• none
3	MOH	none	• none	• none

According to key informants from NMCM, CHAM and MOH as shown in Table 4-24, crime and tribal tension is not a contributing factor to the brain drain of nurses in Malawi. This data conforms to nurse participants and key informants from the hospitals. However, this is contrary to the literature (Rasool et al., 2012).

4.2.2.3.3 Non-Democratic Institutions

Table 4-25 Interviews with Key Informants from NMCM, CHAM and MOH; Non-Democratic Institutions

Non-Democratic Institutions (PF3) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
1	NMCM	"political interference in hospital management even the issue of promotions some of them have been politically motivated not on merit".	• political interference; promotions not on merit	• political interference, promotions not on merit
		"the politicians should show interest in investing in the nurses and even in the hospital…"	• politicians should show interest	• politicians to show interest in nurses
2	CHAM	"politically government supports nurses in Malawi because the nurses are the only cadres who get the 52%".	• government supports nurses	• government support
3	MOH	"…decision-making positions not done on merit but through political influence".	• decision making positions not done on merit	• political influence
		"podium assurance on improving working conditions of nurses while nothing is done on the ground".	• podium assurance	• false promises
		"politicians protecting and interfering with disciplinary decisions made by the relevant regulatory body on some nurses involved in professional inefficiencies".	• politicians protecting and interfering with disciplinary decisions	• political interference
		"promote nurses based on merit, desist from politicizing nursing services, allow Nurses and Midwives Council of Malawi to take its leading role in regulating nurses including disciplinary issues".	• promote on merit; allow Nursing and Midwives Council of Malawi (NMCM) to take leading role	• promotion on merit; allowing NMCM to take leading role
Measures implemented by government to retain registered nurses: Setting up of the Nurses and Midwives Council of Malawi, Health Services Commission and National Organisation for Nurses and Midwives but drawback is political interference.				

The data analysis seems that there is political interference because promotions of nurses are not on merit. In addition, political leaders give false promises to the nurses that their working conditions would improve but in reality, nothing is happening. The political leaders also interfere with disciplinary decisions made by regulatory body like the NMCM. The setting up of NMCM, Health Services Commission (HSC) and National Organisation for Nurses and Midwives (NONM) was good but the drawback is political interference.

One key informant argued that the government supports nurses. For example, the introduction of 52% top up allowance with the help of donors that nurses get on monthly basis on top of their salaries. A comparison of interviews with nurse participants, key informants from hospital with participants in Table 4-25 show that, political interference is an important factor that causes the brain drain of nurses in Malawi. The data indicates that politicians should stop politicising the nursing services and promote nurses on merit. In addition, the NMCM should be allowed to take the leading role in regulating nurses including disciplinary procedures.

4.2.2.4 Focus Group Discussion One with Nurses: Political Factors

Table 4-26 Focus Group Discussion One: Political Factors

Focus Group Discussion One with Nurses from QECH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"sometimes there is that political influence on government decisions, political in terms of party issues that influence the pure running of the government issues".	• political influence	• political influence
	"politicians should leave nurses alone. They always want to dictate things to us and it's not their profession".	• politicians not to dictate nurses	• politicians not to dictate nurses
Participant 2	"too much political interference in the running of like the Ministry of Health".	• too much political interference	• political interference
	"we need independency somehow I don't know if it is possible. Because they don't want to lose control of the hospital".	• nurses independency	• nurses independency
Participant 3	"you work for 15 hours and get K3, 600. And nurses have been complaining, nurses have been fighting, nurses have written the Ministry of Health but nothing has happened. So it's so frustrating".	• low overtime pay	• low overtime pay (locum)
	"we work long hours they need, and locum we get is nothing they should increase it may double what we get now".	• increase locum	• increase locum
Participant 4	"there is a difference with the Central hospitals; you don't have much to do around the Central hospitals than in the district hospitals. Because there are projects around, so people can get at least a large sum of money maybe after a trip somewhere".	• not much to do around Central hospitals	• not much to do around Central hospitals
	"when it comes to projects they should also involve nurses from Central Hospitals not only in District hospitals".	• involve nurses in projects in Central hospitals	• involve nurses in projects in Central hospitals
Participant 5	"we are short of resources and every time it's improvising every time improvising. I am saying there is too much political influence".	• short of resources improvising every time • too much political influence	• short of resources • political influence
	"we are supposed to be given all the resources to enable us do our work properly. We are tired of improvising all the time…"	• provide all resources	• provision of resources
Measures implemented by government to retain registered nurses: The participants said that there was none.			

As shown in Table 4-26, political interference, low over time pay (locum) and hospitals running short of protective equipment due to lack of political will are contributing factors to the brain drain of nurses. This is also consistent with what nurse participants and key informants also

mentioned during interviews. Nurses at QECH mentioned that they are not involved in research projects so they get frustrated in the end and decide to leave.

To minimise or mitigate brain drain the nurses would like to perform their duties freely without any political interference. The data also indicate that nurses work long hours mostly on a night shift, so the locum that they get when covering a shift is considered low. They would like to have the locum pay increased. The data also shows that nurses in central hospitals, wants to be involved in projects not only nurses in district hospitals. Nurses also complain about improvising resources when performing their duties due to lack of supplies so they would like the government to make them available in hospitals.

4.2.2.5 Focus Group Discussion Two with Nurses: Political Factors

Table 4-27 Focus Group Discussion Two: Political Factors

Focus Group Discussion Two with Nurses from MZCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"..maintaining people who have their time expired but because they have a relation". ".. there are many factors which they, look into for someone to be promoted. For example; your tribe, maybe your religion, how are you connected with those in positions because it makes other nurses to lose morale".	• maintaining retired people because of relationship • promotion on tribe and religion	• maintaining retired people due to relationship • promotion on tribe and religion
	"we need to have a system in place to automatically promote nurses upon getting a higher qualification".	• automatic promotion after higher qualification	• automatic promotion of nurses when higher qualification is achieved
Participant 2	"they just increase your salary and you are saying; at least things are better off now, but after elections it means three years, no salary increment".	• salary increase towards elections	• salary increase towards elections
	"the government should take care of nurses making sure they are getting good pay".	• good pay	• good pay
Participant 3	"..having may be a Minister who is a nurse or a doctor, it's of late that we have seen someone from the medical background, but it has affected us much because in the past, we have experienced things like appointing someone who is having a background of education, or maybe having a background of business". "…locum at least boosted the attitude of other nurses, but we are hearing reports that people swindled the money and they are failing to liquidate. That's why we are now suffering, locum has been removed".	• appointments • locum removed	• appointments • locum removed
	"a Minister of Health should be someone with medical background. Now we have someone who has medical background… we are not getting locum these days they claim there is no money. Do they expect us to do voluntary work".	• medical background • locum payment	• medical background • locum payment
Participant 4	"..people are actually having positions just because may be they are linked in one way or the other with the top most officials. So it becomes a challenge otherwise there is no appointment based on merit".	• no appointment on merit	• no appointment on merit

	"appointments should also be based on merit not through favours because they come from the same region".	• appointments be based on merit	• appointments be on merit
Measures implemented by government to retain registered nurses: Nurses to report to headquarters if they want to travel abroad.			

As shown in Table 4-27, maintaining retired nurses because of relationships, promoting nurses based on tribe and religion, and increasing salary towards political elections contribute to the brain drain of nurses in Malawi. Another emerging issue includes the removal of locum, which nurses get after working overtime. In a memorandum dated 14th October 2015 from a Hospital Director at KCH, members of staff were informed that management had not received any official communication that locum was phased out until then the locum was still on. Staff were asked to continue booking and taking part in the locum. It was further highlighted that management were facing cash flow challenges resulting in August locum not being paid.

Political interference has been mentioned by focus group discussion one, nurse participants and key informants as causing brain drain among nurses.

The data shows that there is need to have nurses a straight promotion after getting a higher qualification because they are given extra responsibilities when they return to their work place. However, it is not written in the policy and procedures that anyone attending a higher qualification shall get an automatic promotion. Nurses want locum to be reinstated because they stopped it at Mzuzu Central hospital due to financial constraints. The data also shows that nurses should be promoted on merit to motivate them. On the other hand, the government has been commended because the health sector has now a Minister of Health with a medical background. There was a trend in the past that a Minister of Health without a medical background was appointed to head the Ministry.

4.2.2.6 Focus Group Discussion Three with Nurses: Political Factors

Table 4-28 Focus Group Discussion Three: Political Factors

Focus Group Discussion Three with Nurses from KCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"we have selfish politicians who go to parliament for their own selfish gains, to accumulate wealth for themselves, for their families".	• selfish politicians	• selfish politicians
	"politicians who recognise that nurses and other care professionals are doing a great work for the nation so we deserve better things like good salary, more training".	• deserve better things	• better things like salary and more training
Participant 2	"we don't have politicians, credible politicians who can lead this country".	• no credible politicians	• lack of credible politicians
	"sometimes we become demotivated when leader tell us to resign if we are asking for higher wages. We have right to express our opinions".	• right to express opinion	• right of expression

Participant 3	"some nurses are not promoted on merit but based on where you come from which frustrates most of us so we end up leaving".	• some nurses not promoted on merit	• promotion not based on merit
	"…it is better that we are promoted based on our performance not simply because you are related to a Cabinet Minister or President".	• promotion based on merit	• promotion based on merit
Participant 4	"there is also a problem with political interference when nurses are doing their job. Sometimes we have no medication and we tell patients to go and buy them. Politicians think we are doing this because we are against the government".	• political interference	• political interference
	"hospital management should be arranging meetings with the local communities and inform them the challenges being faced by their hospital".	• arrange meetings with local communities	• meetings with local communities
Participant 5	"..there is lack of political will to implement policies that will see our hospitals move forward".	• lack of political will	• lack of political will
	"…let the hospitals be run by professionals and may be set up Trusts to be governing the hospitals…."	• hospitals be run by professionals	• hospitals be run by professionals
Participant 6	"there is no political will from those in authority. For example, most of the time we run out of protective equipment".	• no political will	• lack of political will
	"it is the government's responsibility to make sure hospitals are running smoothly with available supplies".	• make supplies available	• make supplies available
Measures implemented by government to retain registered nurses: The participants mentioned that there was none.			

The data illustrates that there is political interference as some promotions are not on merit. The politicians lack the political will and perceived as selfish because nurses sometimes work without personal protective equipment. This is because politicians do not implement policies to make the hospitals move forward. As such, nurses become frustrated and leave. The literature in this study mentions that oppressive political climate, lack of funding and limited career structures are factors that causes brain drain (Hardill and Macdonald, 2000).

From the data analysis, it shows that nurses would like to have the freedom to express their opinions and get promotion on merit. Both of the factors have also been frequently mentioned in the previous interviews. Some nurses get promotion because they are related to influential politicians so this frustrates other nurses. The data also show, that there is need for hospital management to be arranging meetings with the local community to apprise them of some operation challenges the hospital faces. The government should also make sure that supplies are available in the hospitals for nurses to use.

4.2.3 Exploring Technological Factors

From the literature review in this study, Technological factors include equipment, technical support and investment in infrastructure. These are the three child nodes under the parent nodes of Technological factors (See Table 4-1).

4.2.3.1 Semi-Structured Interviews with Nurses: Technological Factors

4.2.3.1.1 Equipment

Table 4-29 Interviews with Nurses: Equipment

Equipment (TF1) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"..thermometers they are not enough, oxygen concentrators they are not enough so you see patient dying instead of assisting that patient you don't have drugs you don't have like oxygen machine to help that patient who is having may be problems with breathing so you see that patient dying and we can't be happy to see that patient dying because we don't have adequate equipment so that also effects brain drain".	• not enough thermometers • oxygen concentrators • don't have drugs	• equipment • drugs
		"..government should provide adequate equipment in the hospitals…"	• provide adequate equipment	• provide adequate equipment
	2	"..we do it's more of improvising so usually lack of resources".	• improvising due to lack of resources	• improvising due to lack resources
		"…government could put aside money for equipment".	• put money aside	• budget for equipment
	3	"we manually record everything so this makes our life tough. There was a time we received digital blood pressure machines but we were told there was no one to supply batteries so we have gone back to blood pressure machine that we use manually".	• manual recording	• manual recording
		"government should provide the necessary equipment….repair equipment that is not working in hospitals".	• provide equipment • repair equipment	• provide and repair equipment
2	4	"there is a problem with the patient information, it's not installed properly, things are not documented properly, and you can't even try to extract information from the previous visit of the patient because the paper is torn".	• patient information not stored properly	• patient information not stored properly
		"…implement at least a very good system to install patients' information".	• patients information system	• installation of information system
	5	"..we have oxygen concentrators but we have three or four working ones against patient count of eighty and out of eighty may be six, seven, eight will require oxygen therapy". "..we have one suctioning machine for the whole ward".	• few working oxygen concentrators • few sanction machines	• not enough oxygen concentrators • not enough sanctioning machine
		"If we could have more machines, if medication was available on time, if all the sundries that we needed, aprons, syringes were available…"	• more machine • medication	• availability of machines and medication
	6	"..we don't have enough equipment (blood pressure machine), so most of the things that we do, we just improvise just to make sure that we assist the patient…."	• shortage of equipment	• equipment
		"..if the government could procure at least equipment that will assist the registered nurses to monitor their patients".	• procure equipment	• government to procure equipment

3	7	"most of our equipment are worn out we improvise most of these. For example, we don't have things like infusion pumps. Infusions, limes, so we use things that we think can work, but they are the things that are not supposed to be used".	• worn out and shortage of equipment	• worn out and shortage of equipment
		"they should be buying enough supplies like suction machines, ECG machines, infusion pumps, patient monitors just to mention a few".	• buy enough supplies	• buy enough supplies
	8	"..we don't have enough equipment".	• no enough equipment	• equipment
		"..making available material resources…. you need to have beds which you can rotate, so that you turn these patients so that they don't develop these bed sores".	• make resources available	• make resources available
	9	"..there are no computers".	• no computers	• no computers
		"maybe they can find donors…"	• find donors	• find donors
4	10	"sometimes even just the basic equipment to check vital signs, blood pressure; you don't have the equipment, so that's really affecting us". "we don't have a CD (Computer Demography) scan".	• no equipment	• no equipment
		"..the government maybe can purchase that equipment…"	• purchase equipment	• purchase equipment
	11	"most of the equipment we don't have, like the oxygen cylinders, concentrators, sometimes even thermometers we don't have, suction machines".	• no equipment	• no equipment
		"lack of equipment can be there, they should be budgeted for".	• budget for equipment	• budget for equipment
	12	"we also lack equipment in the wards".	• lack of equipment	• lack equipment
		"…provide oxygen cylinders, masks, portable, suction machines delivery packs, curtain for privacy and thermometer which we lack them here".	• provide equipment	• provision of equipment
6	13	"..lack of medication, drugs. Drugs are so scarce you know even; paracetamol; panadol you cannot even get here as of now I think over a month now or two for any pains that the patients are experiencing. So we tell them to buy…"	• lack of medication	• lack of medication
		"…more funding on the procurement of the medications".	• funding on medication	• funding on medication
	14	"…during the training, we learnt on how to use those equipment but they are not available at the work place. So this may also cause somebody to move to another country where he or she can find those equipment".	• equipment not available	• no equipment
		"…allocate more funds on procurement of medical equipment". for example, dialysis machine, nebulizer and oxygen concentrators not available".	• allocate more funding	• allocate more funding
	15	"…sometimes they may resolve in saying am going outside Malawi where I can use equipment".	• equipment	• equipment
		".. move as our friends, you will see that what I may need in UK is even found in Malawi and I will be compelled to stay".	• availability	• availability
6	16	"we have limited computers".	• limited computers	• limited computers
		"..you talk of availability of computers if we could have at least more of them.."	• availability of computers	• availability of computers
	17	"…most of the healthy facilities don't have enough equipment that help in assisting patients so sometimes it becomes hectic…."	• not enough equipment	• not equipment

		"..government needs to procure some equipment because most of the equipment are old and some are out of function…"	• procure equipment • equipment old and out of function	• procure equipment • equipment old and out of function
	18	"..most of the government hospitals you find that we lack equipment which are very helpful to patient care most of the cases we don't have the oxygen machines, the BP Machines and other equipment which are very helpful in terms of helping taking care of patients so this makes a lot of nurses to move out of the government…"	• lack of equipment	• lack of equipment
		"…the government should provide the best equipment that can help in patient care…"	• provide best equipment	• provision of equipment
Measures implemented by government to retain registered nurses: Digitalised BP machines though not enough, provision of internet but few computers with poor signal, engaging stakeholders to provide equipment.				

As shown in the table above, the lack of equipment in Malawi hospitals is a contributing factor to the loss of nurses and conforms to the literature. Some of the equipment that are always in short supply include aprons, syringes, suction machines, electro cardiograph machines, infusion pumps, patients' monitors, thermometers, nebulizers, curtain for privacy, delivery packs and computers. The lack of medication is also an issue that frustrates nurses to leave. The literature has also highlighted this. Shortage of resources indicates that nurses cannot provide quality care thereby leading to brain drain because of frustration and demoralization. Several studies have also shown that inadequate supplies are one of the challenges in developing countries. The government of Malawi is in operation relationship with donors/stakeholders to provide equipment. However, there is need for government to make more resources available in hospitals because a general lack of these affects nurses to perform their clinical duties. As a result, nurses get frustrated and eventually leave.

4.2.3.1.2 Technical Support

Table 4-30 Interviews with Nurses: Technical Support

Technical Support (TF2) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"we are happy working in an environment whereby we have everything and we see that in other places like UK, they have everything".	• happy in an environment with everything	• happy in an environment with everything
		"I don't think we get support because they don't give us resources that we need".	• don't get support	• don't get support
	2	"..you still have to carry out the procedure in absence of the equipment.."	• absence of equipment	• absence equipment
		"when we have equipment they need to train us how to use the equipment safely rarely we get such training".	• training to use equipment	• training to use equipment

	3	"…we don't even know where the laptop is because it wasn't installed in this ward but people come to ask us where we installed the desktop. It shows we receive things but we don't know where they go but they keep giving us registers to record information manually".	• laptop not installed	• laptop not installed equipment disappear
		"government should be able to repair equipment that is not working in hospitals".	• repairing of equipment	• repairing of equipment
2	4	"..the systems which are in place it's still the old system".	• old system	• old system
		"they should also be carrying out monthly supervisions to see how we are doing our work".	• monthly supervision	• monthly supervision
	5	"one moment you have the suction machine, in the next it's broken and it's very hard to get a new one".	• broken equipment	• broken equipment
		"they need to repair all broken equipment".	• repair broken equipment	• repair equipment
	6	"they also take time to repair equipment when they break down".	• take time to repair equipment	• take time to repair equipment
		"lobby some of the donors who can afford to buy such equipment".	• lobby equipment	• lobby equipment
3	7	"most of our equipment are worn out or not available we improvise most of these like catheterization".	• improvising equipment	• improvising equipment
		"we don't look after equipment well they do not last. It could be training we get is not adequate".	• in adequate training	• require more training
	8	"we are supposed to have an in-service training".	• in-service training	• in-service training
		"..need to carry out periodic inventory record of equipment in each ward so that they have stock of what is available and working and provision of training in using equipment".	• periodic inventory record of equipment; provision of training in using equipment	• periodic inventory record of equipment; provision of training in using equipment
	9	"technologically, there are no computers".	• no computers	• no computers
		"we need internet in all offices we can check information to do with our work online".	• need internet in all offices	• require internet in offices
4	10	"…some of the equipment that we use are so old, and it's not in line with the modern technology".	• old equipment	• old equipment
		"sometimes you do have equipment which breaks down so easily because people are not well oriented on how to use, people are not well trained…"	• orientation on how to use equipment	• orientation on how to use equipment
	11	"we are not supported by our top people our bosses".	• no support from the top	• no support from the top
		"…when we report to our seniors that a machine is broken they shout at you as if you have done that deliberately. Seniors should learn to listen to staff and deal with the problem instead of shouting for reporting a broken machine".	• senior to listen to staff	• communication
	12	"we also lack equipment in the wards".	• lack of equipment	• lack of equipment
		"they should involve us when deciding what equipment we need in the wards".	• deciding what equipment to buy	• participation in decision making
5	13	"we do not get support, as drugs are so scarce".	• no support	• no support
		"if I tell a patient we don't have medication and BP machine, it's like I do not know what am doing and looks like I want the patient to die. We need	• no medication and equipment available	• no medication and equipment available

		support by having medication and equipment available".		
	14	"in our training, we had an opportunity to visit the dialysis machine, we don't have, and they are only found in central hospitals. So it's like we only wasted our time".	• lack of equipment	• lack of equipment
		"..routine maintenance of the available equipment".	• routine maintenance of equipment	• maintenance of equipment
	15	"we don't get support in terms of getting us equipment to use".	• no support in getting equipment	• no support in getting equipment
		"some nurses do not know how to use internet so the government could provide like internet room in all hospitals where nurses can use and develop their skills".	• provision of internet room	• provision of internet room
6	16	"we don't have the skills and knowledge how to use that gadget so that is really bringing up brain drain".	• lack of skills and knowledge	• lack of skills and knowledge
		"..having in service training on technological issues or knowledge how to use a computer".	• have in service training	• in service training
	17	"supervision is not adequate enough most of the times it's quarterly or maybe by annually so we need at least some technical support frequently".	• supervision not adequate	• supervision
		"on the issue of technical support we need supervision…"	• need supervision	• supervision
	18	"..lack of equipment in the hospitals".	• lack of equipment	• lack of equipment
		"when we have some machines which are very new to us we need some trainings on how to use them".	• need training to use machines	• training to use machines

The analysis of this data shows that nurses do not get support to carry out their work because in most cases they improvise due to unavailability of equipment. Equipment such as laptops also disappears from offices. It also happens that when equipment is broken, management take time either to repair it or replace it completely. The data further shows that nurses do not have the technical knowledge of equipment so this frustrates the nurses because it means that they cannot provide quality care to patients. Technical support is generally not available in developing countries (Dodani and Laporte, 2005).

The data indicates that nurses need support from management to get resources to perform their work. They need training on how to use equipment safely. The government should ensure that any broken equipment is repaired or replaced immediately and carry out periodic inventory of equipment. The data also shows that some staff are not good at using computer so the government should come up with internet in all offices or create a room where nurses could meet and learn at their own free time how to use a computer and internet. Nurses should also have periodic supervision to assess their performance and see how they are using the equipment.

4.2.3.1.3 Investment in Infrastructure

Table 4-31 Interviews with Nurses: Investment in Infrastructure

	Investment in Infrastructure (TF3) - Interviews with Nurses			
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"they need to build more wards to accommodate patients".	• build more wards	• few wards
		"the government should build more hospital wards to reduce congestion".	• build more hospital wards	• construction of more wards
	2	"..equipment that should make you perform as a better nurse then you find that it is not there…"	• equipment not there	• equipment
		"some institution houses are in dilapidated condition for example rusty corrugated iron sheets and worn out poles and we have a problem when it's raining leaking houses".	• institution houses in dilapidated condition	• repair institution houses
	3	"even in labs some tests are not being done because they tell us they do not have equipment to carry out the tests so we lack patient care".	• lack of equipment	• equipment
		"…lab should be well equipped with equipment".	• equipment in lab	• equipment in lab
2	4	"the wards are congested with patients".	• congested wards	• congestion
		"more wards are required in our hospitals it is not fair to see some patients sleeping on the floor".	• more wards required	• more wards
	5	"we have forty-five patients. But if you came three days ago it could have been 80. It's a very bad situation and we have one suctioning machine for the whole ward".	• bad situation	• ward capacity is small
		"..expansion of our hospitals would be a good idea as some of them are too old fashioned".	• expansion of hospitals	• expansion of hospitals
	6	"they also take time to repair equipment when they break down".	• take time to repair equipment	• equipment repairs
		"…increase the capacity of the wards as population has grown big so there are more patients than years ago".	• increase the capacity wards	• capacity increase for wards
3	7	"..our infrastructures are really bad. Like it's not safe, it's not a safe environment to work. The things that we are using were put there in the first place when the hospital was being opened like may be chairs. Even some of the treatment rooms are still the same as they were back then, so it's not really conducive environment to work in".	• bad infrastructures; not safe environment	• unsafe environment
		"they should install air conditioners it's terrible in hot weather".	• install air conditioners	• installation of air conditioners
	8	"the wards are small and patients sleep on the floor which is really pathetic".	• small wards	• small wards
		"some of the wards have not been maintained for a long time you can actually see dirty walls and dilapidated doors".	• wards not maintained for a long time	• maintenance of wards
	9	"…you need good houses".	• need good houses	• need houses
		"…some donors to come up with technological assistance like; putting up houses and also electricity, water".	• putting up houses and also electricity, water	• provision of houses, electricity and water

4	10	"some of the equipment and buildings that we use are so old, and it's not in line with the modern technology".	• old equipment: old buildings	• old equipment :old buildings
		"we need modern equipment and spacious wards. Sometimes you do have equipment".	• need modern equipment and spacious wards.	• modern equipment • spacious wards
	11	"you have a lot of patients where you would want to have them accommodated as you wish but maybe you pile them because there is inadequate infrastructure. You have to put them on the bed, others on the floor, may be 4 children on the bed, some share the beds. A bed of one person is shared by four people".	• inadequate infrastructure	• infrastructure
		"government should build more houses for the nurses in all departments in health sector".	• build more houses	• construction of more houses
	12	"may be lack of investment infrastructure".	• lack of investment infrastructure	• infrastructure
		"…ensuring that there is availability of the materials".	• availability of materials	• availability of materials
5	13	none	• none	• none
	14	none	• none	• none
	15	none	• none	• none
6	16	none	• none	• none
	17	"we don't have decent chairs and desks to use".	• no decent chairs and desks to use	• furniture
		"..government should buy new chairs and tables as the ones in use are old and worn out".	• buy new chairs and tables	• buy chairs and tables
	18	"poor structures that's the hospital structures there are some hospitals there are too old".	• poor and old hospital structures	• hospital structures
		"expansion of hospitals is required to ease congestion of patients and staff".	• hospitals expansion required	• hospitals expansion

The data analysis seems that hospital wards are small and congested with patients that make the work environment not conducive. Some of the hospital structures are old and nurses use dilapidated chairs and desks in the wards. The data further illustrates that some nurses live in institutional houses that are in a bad condition. Winters (2002) observes that, some countries have made significant investments in infrastructure. However, it seems that Malawi has not made a significant investment in infrastructure to retain nurses.

The analysis shows that there is need for government to build more hospital wards and institutional houses as most of them are in dilapidated condition. Some of the houses need maintenance to keep them in good condition. There is also need to install air conditioners in the hospital wards and offices. The government should also buy furniture such as chairs and tables for offices to replace damaged ones.

4.2.3.2 Semi-Structured Interviews with Key Informants from Hospital: Technological Factors

4.2.3.2.1 Equipment

Table 4-32 Interviews with Key Informants from Hospitals: Equipment

Equipment (TF1) - Interviews with Key Informants from Hospital				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"we lack a lot of equipment in the system which makes the work of nurses very difficult".	• lack of equipment	• lack of equipment
		"some nurses were complaining that the vital signs are not the real ones because the machines that we use tend to be out of order during the time that they were being used…"	• machine out of order	• require machine in good working order
2	2	"..a lot of things we just improvise…."	• improvise things	• improvise things
		"the government to procure such kind of equipment (BP machine) but with the economic challenge it's still difficult".	• procure equipment	• procure equipment
3	3	"…we don't have the equipment in the departments….. And I have written a proposal to the Director, if they could source some equipment for us, but the Director said; it is impossible for the hospital to buy that equipment for the hospital. For example, we need blood pressure machines, we need thermometers, we need ECG machines (Electrocardiography), we need defibrillator, we need suction machines, we need oxygen monitors".	• no equipment in departments	• no equipment
		"if the hospital can buy that equipment, so that all the departments have got adequate equipment in order to manage the patients effectively".	• buy equipment	• buy equipment
4	4	"…we lack some of the ideal equipment and sometimes you would find that a nurse will be compelled to improvise. So, the improvised equipment doesn't work as the ideal one, so it really puts someone off and sometimes there is nothing to improvise, so you can see that it affects the quality of care that a nurse is supposed to offer to his or her patients".	• lack of equipment	• lack of equipment
		"there is need for provision of equipment and supplies".	• provision of equipment and supplies	• provision of equipment and supplies
5	5	"we don't have that access because we are not provided with necessary requirements like; computers, the internet".	• no computers; no access to internet	• no computers and • internet
		"if the Ministry of Health would consider like buying us the necessary equipment and other partners we only have two oxygen concentrators which are working. We have many of them but they are not working".	• buy necessary equipment	• buy equipment

6	6	"..we need to have some equipment may be attached to because these nurses they fail may be to have some necessary tools because they don't have equipment".	• no equipment	• no equipment
		"if we can lobby from several stakeholders I think we can be assisted although as I have said we have Performance Based Initiative (PBI) they have assisted us like Dwambadzi Health Centre I think they have bought them a set of computer…"	• lobby several stakeholders	• lobby stakeholders
Measures implemented by government to retain registered nurses: Government is in operation relationship with donors to provide equipment				

As shown in the table above, it seems there is lack of equipment in the hospital wards so nurses improvise to help patients. The in-depth nature of this study revealed that nurses do not have equipment such as blood pressure machines, thermometers, electrocardiography, defibrillators, suction machines and oxygen monitors. In addition, they have no computers and access to the internet. Maluwa et al. (2012) point out that the lack of basic equipment is a challenge in developing countries.

In order to mitigate or minimise brain drain among nurses, there is need for government to buy enough equipment in hospitals for nurses to use to improve the service delivery. This also concurs with what the majority of nurses highlighted.

4.2.3.2.2 Technical Support

Table 4-33 Interviews with Key Informants from Hospitals: Technical Support

	Technical Support (TF2) - Interviews with Key Informants from Hospital			
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"if you go to developed countries most of the medical decisions are scientifically proven while here we are still using the clinical judgment of nurses or doctors of what might be going on in the patients' body".	• clinical judgment of nurses	• clinical judgment of nurses
		"we don't have technical know-how of keeping the machines in a better functional form".	• technical know-how	• technical know-how
2	2	"we need to support our nurses by ensuring that they have enough equipment to carry out their work effectively".	• support with equipment	• support with equipment
		"…can have a monitor which can monitor the BP, the pulse, the temperature, the heart and all those things while us we can use manual things one by one to do such things".	• monitor for BP, the pulse, the temperature, the heart	• modern equipment for tests
3	3	"we need to train nurses more how to use equipment".	• train nurses to use equipment	• train nurses to use equipment
		"we also need to provide training to nurses how to use equipment".	• provide training	• provision of training

4	4	"..I understand out there, they have computers and its connected, the network is over there whatever you enter here, that one in that other office will be able to see and like the time you were coming in".	• computer network	• computer network
		"…there is need for procurement of computers at each and every point of care provision".	• procurement of computers	• procurement of computers
5	5	"I think as nurses we are very far away from technology, so it could be the factor also, like access of information on the internet to assist your work and also looking for scholarships".	• access to internet	• access to internet
		"we need reliable internet which we can use for getting information regarding our job".	• need reliable internet	• reliable internet
6	6	".. technical support that we have operation support is also a problem. We can have one or two machines but to them to operate they just look at it because may be they don't know how to operate that particular machine so that, knowledge gap also a problem".	• knowledge gap	• knowledge gap
		"..conduct some training to impart the necessary knowledge, the operation knowledge of the equipment".	• conduct training to operate equipment	• provision of training to operate equipment

From the data presented in the table above, it illustrates that nurses do not get training on how to use equipment in the wards. This also concurs with what some nurses mentioned during the interviews. Sometimes nurses use clinical judgement to diagnose patients so this compromises quality of care. The nurses do not have computer network installed within the hospital setting which would be important for patient information sharing and ease nurses' work. As a result, nurses become frustrated and consider leaving.

The key informants from the hospitals proposed training on how to use equipment to help nurses to carry out their work competently and keep the machine in good working order. The data also shows that nurses wish to have computers connected to reliable internet so that they should be able to gain knowledge on internet in line of duty. The issue of computer also concurs with nurses' interviews that they need a room where nurses could meet up and learn at their own free time how to use a computer and internet.

4.2.3.2.3 Investment in Infrastructure

Table 4-34 Interviews with Key Informants from Hospitals: Investment in Infrastructure

	Investment in Infrastructure (TF3) - Interviews with Key Informants from Hospital			
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"we do not invest in infrastructure".	• no investment in infrastructure	• no investment in infrastructure
		"some wards need expansion as more patients are admitted to hospital".	• wards need expansion	• expansion of wards
2	2	"we also need to build more wards as wards are so congested".	• congested wards	• congested wards
		"patients number is increasing day by day and we have the same buildings that were built many years ago so the capacity is small".	• capacity is small	• more wards
3	3	"they don't have the funds".	• don't have funds	• no funds
		"the government should source enough money to build more wards".	• build more wards	• build more wards
4	4	"…in Malawi we are doing much of paper work, and paper work is tiresome; writing patients' files, you are supposed to like record drugs, apart from recording what you have done for the patients, drugs, each and everything is manually and that is tiresome".	• manual paperwork	• manual paperwork
		"..we need to move with time, the technology is well advanced".	• need to move with time	• adapting to change
5	5	"…we have internet problems it was cut sometime back".	• internet cut back	• internet disconnected
		"internet was disconnected here so staff are complaining a lot".	• staff complaining	• staff complaining about internet disconnection. require it back
6	6	"….this hospital they don't have those machines in their respective wards that they can may be print the Health Passports, have the graph cards because we don't have those equipment".	• no machine to print health passports and graph cards	• no printing machine
		"..we don't have equipment to print health passport for patients so it's really a difficult situation".	• no printing machine	• require printing machine

The data illustrates that, there is lack of investment in infrastructure as the wards are congested with patients. Nurses find it tiring to carry out their work manually as they are not provided with computers. Internet was disconnected in some hospitals and that made nurses unable to look for scholarship opportunities on internet. Another setback for nurses at one hospital was that that they did not have a machine working to print health passport books and graph cards so nurses become frustrated. Although some authors (Wosyanju et al., 2012) mention that some countries have made significant investments in infrastructure but it seems that Malawi has not made significant investment in infrastructure to retain nurses.

The data indicates that, there is need to build more hospital wards because there are more patients admitted to the hospitals. This concurs with what the nurses also mentioned during interviews. The government also takes time to repair machines. As mentioned by sixth key informant in the table above, there was no machine to print Health Passports for patients because it broke down.

4.2.3.3 Semi-Structured Interviews with Key Informants from NMCM, CHAM and MOH: Equipment

4.2.3.3.1 Equipment

Table 4-35 Interviews with Key Informants from NMCM, CHAM and MOH: Equipment

Equipment (TF1) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"…they are broken but they are not repaired. May be they are there but they have been stolen so all those issues that affect nurses".	• broken not repaired; stolen equipment	• broken not repaired; stolen equipment
		"they should make sure any broken equipment is repaired or replaced".	• repair broken equipment or replace	• get equipment repaired or replaced
CHAM	2	"there is not even a desktop or a laptop to work on it".	• un availability of desktop or laptop	• no desktop or laptop to use
		"for sure we need to provide enough equipment".	• provide enough equipment	• provision of enough equipment
MOH	3	"use of old and out-of-date technology such as manual BP machines, thermometers instead of digital types is demotivating".	• use of old and out-of-date technology	• use of old and out-of-date technology
		"phase out manual technology and provide adequate resources for procurement of digitalized technology".	• procure digitalized technology	• procure digitalized technology

The data reveals that when equipment break down, management do not repair them timely or they disappear completely. In addition, there is unavailability of either desktops or laptops. One key informant highlighted that nurses use old and out-of-date technology such as blood pressure (BP) machines and thermometers. The lack of equipment was also mentioned in interviews with nurses, key informants from hospitals and the focus groups. The shortage of the equipment would imply frustration among nurses so they eventually decide to leave. However, the government of Malawi set up Central Medical Stores so this has led to the proliferation of digitalised healthcare technology in some of the health facilities.

The data indicates that there is need for government to repair or replace broken equipment. As nurses use manual system, there is need to provide funding to procure digitalised

technology as this would enable nurses to perform their clinical duties better by reducing pressure on workload. The issue of equipment concurs with what nurses, key informants from hospital and focus group discussions also highlighted.

4.2.3.3.2 Technical Support

Table 4-36 Interviews with Key Informants from NMCM, CHAM and MOH: Technical Support

Technical Support (TF2) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"… nurses would want to use easy machines but they do not have them".	• nurses do not have easy machines	• nurses do not have easy machines
		"…have meetings with management and nurses to identify any challenges they are facing".	• have meetings	• have meetings
CHAM	2	"…we are behind technology. Indeed, this is one of the challenges the registered nurses have".	• behind technology	• behind technology
		"…access to internet and access to information so that we should be provided with the best practice".	• access to internet	• access to internet
MOH	3	"health care technology remains very weak in Malawi including most of the peripheral health facilities".	• health care technology remains very weak	• weak health care technology
		"…when they provide computers they only provide in the administration. But not in the departments and we are talking of access to the internet".	• provision of computers in Administration	• provision of computers in Administration

Details in the table above illustrates that nurses do not have equipment making it difficult to perform their clinical duties well. The nurses have not moved forward with technological changes so the health care technology remains weak in Malawi. There is need for the government to support the nurses by getting them modern equipment required to perform their job.

This data illustrates that there is need to have regular meetings between nurses and management. This would help the two parties identify any challenges nurses face. Nurses could also be provided with computers connected to internet to help them access to information. Computers could be installed in all the departments of the hospital not just selected few. This issue of internet concurs with what nurses and key informants from hospital also highlighted.

4.2.3.3.3 Investment in Infrastructure

Table 4-37 Interviews with Key Informants from NMCM, CHAM and MOH: Investment in Infrastructure

Investment in Infrastructure (TF3) - Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"the wards are small to accommodate too many patients. It is not good at all".	• wards are small	• wards are small
		"…government should build more wards, and staff houses near health facility to ease nurses' mobility".	• build more wards, and staff houses	• build more wards and staff houses
CHAM	2	"nurses also need some rooms to rest in and provide them with things like microwave and fridge to warm and keep their food in respectively".	• no rooms to rest • no provision of microwave and fridge	• no rooms to rest • no provision of microwave and fridge
		"..need to provide places within the hospital premises so that healthcare professionals could sit down and share ideas informally".	• provide a place for nurses to relax	• provision of a place for nurses to relax
MOH	3	"most of the digitalized tools are either given to the health facilities as a donation".	• donation of digitalized tools	• donation of digitalized tools
		"..setting up of Central Medical Stores Trust which had led the government wean itself from direct involvement in the procurement of medical technology has led to the proliferation of digitalized healthcare technology in some of the health facilities".	• digitalized healthcare technology	• digitalized healthcare technology
Measures implemented by government to retain registered nurses: The setting up of Central Medical Stores has led to the proliferation of digitalised healthcare technology in some of the health facilities.				

The data shows that the hospital wards are small to accommodate many patients. This verifies what nurses, key informants from hospitals and focus group discussions also articulated. In this regard, it shows that investment in infrastructure is an important factor to brain drain. The literature states that outdated hospital infrastructure provides work conditions that are not conducive to delivery of quality patient care. The data resonates with the same arguments from researchers (Maluwa et al., 2012). The data in the table above also presents that nurses do not have facilities such as rest rooms, microwave and fridge so that during their break time they could use them.

The data illustrates that the government could build more hospital wards as concurred by nurses, key informants from hospital and focus group discussions to ease congestion. The government could also build more staff houses because most of the nurses leave far away and not in institutional houses. The key informant also proposed that a canteen could be built

at each hospital where nurses could relax and share ideas. The data also revealed that the government has started digitalising healthcare in some health facilities like Kamuzu Central Hospital but they need to extend it to all health facilities.

4.2.3.4 Focus Group Discussion One with Nurses: Technological Factors

Table 4-38 Focus Group Discussion One: Technological Factors

Focus Group Discussion One with Nurses from QECH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"we struggle with equipment such as thermometers, blood pressure machines. It's not on".	• struggle with equipment	• struggle with equipment
	"..need to provide us with equipment not improvising".	• provide us with equipment	• provision of equipment
Participant 2	"you even look at people and say; if these equipment were available, I would have done ABCD. But you look at somebody and say; this one really is going to die just because when you thought that something is there it's not there".	• equipment not available	• equipment not available
	"..the government could provide us with supplies like resuscitation bags, defibrillators, ECG machines and many more we will be motivated".	• provide resuscitation bags, defibrillators, ECG machines	• provide resuscitation bags, defibrillators, ECG machines
Participant 3	"we lack things like suction machines and defibrillators".	• lack of suction machines and defibrillators	• lack of suction machines and defibrillators
	"management should ensure we have these suction machines, catheters, infusion pumps".	• provide suction machine, catheters, infusion pumps	• provision of suction machine, catheters and infusion pumps
Participant 4	"so every day you have to wake up and then improvising and improvising doing all those. I think those are things that also don't retain people to work because by improvising you are trying to get something similar to something else".	• improvising	• improvising
	".. need to invest in equipment for hospitals to be well equipped. In addition it is better if they could build more institution houses because there are many nurses living far away".	• Invest in equipment; build more institutional houses	• investment in equipment and more houses
Participant 5	"there is a challenge with availability of medication in the hospitals".	• challenge with availability of medication	• challenge with availability of medication
	"…government should make sure that all government hospitals are well stocked with medication. This needs political will though".	• ensure hospitals have medications	• ensure hospitals have medications
Measures implemented by government to retain registered nurses: The participants corroborated that there was none			

This analysis of data reveals that there is lack of equipment such as thermometers, blood pressure machines, suction machines and defibrillators in hospitals. In addition, there is lack of medication in hospitals so some nurses decide to go abroad where they can provide quality service care some nurses leave the profession altogether. This analysis would indicate that demotivating factors exist that cause nurses to consider leaving their jobs. This concurs with researchers (Rasool et al., 2012) and by the majority of nurses, key informants, focus group discussions as a factor that influences the brain drain of nurses.

The data shows that there is need for the government to provide equipment in hospitals. Some of these include resuscitation bags, defibrillators, electro cardiograph machines, suction machines, catheters and infusion pumps. The data also shows that there is need if the government could build more institutional houses and make the medication available in the hospitals.

4.2.3.5 Focus Group Discussion Two with Nurses: Technological Factors

Table 4-39 Focus Group Discussion Two: Technological Factors

Focus Group Discussion Two with Nurses from MZCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"….we have the library which is not functioning you can't even go there to use it as a reference room. So accessibility to the internet is really challenging due to poor signal".	• library not functioning • internet a challenge	• library not functioning; • access to internet a challenge
	"a hospital like this one needs to have a library which is functional all the time so that people can easily access information when there is need".	• needs a functional library	• functional library
Participant 2	"…use of outdated machines, the machines that we use now like for checking blood pressure, our friends have forgotten it a long time ago, but we are still using the manual ones and that may be they are too old. You get frustrated, you have a queue; for example 100 patients are attending antenatal clinic, you want to check blood pressure for all of them and you are using one; terrible".	• outdated machines	• outdated machines
	"management should make equipment we need available such as patient monitors, blood pressure machines, glucometers, rubberized water proof sheet".	• need patient monitors, blood pressure machines, glucometers, rubberized water proof sheet	• need equipment
Participant 3	",,we depend on data, so nowadays you will find us we are still writing in the hard covers for data, piling heaps and heaps of books but we need the technology that it can may be motivate us to stay".	• writing in hard cover books	• writing in hard cover books
	"…we need computers to reduce our paper work and also considering privacy and confidentiality of patients' information".	• need computers	• need computer
Participant 4	"…just in a few hospitals where you can find some modern equipment, otherwise most of the hospitals are still using the very old equipment".	• very old equipment	• old equipment
	"if the government could provide us with modern equipment like catheters, defibrillators, patient monitors will make our life easy".	• provide catheters, defibrillators, patient monitors	• provision of equipment
Measures implemented by government to retain registered nurses: Provision of digitalised equipment but this is mostly provided in Central hospitals.			

The analysis reveals that nurses do not have a functional library and face challenges with accessing the internet due to poor signal. The nurses use outdated machines such as manual

blood pressure machines. The findings resonate with the same from researchers (Slote, 2011; Pillay, 2009). They also use manual system to record patients' details because they do not have computers. The nurses cannot provide quality care thereby encouraging brain drain.

From the data presented in the table, there is need to have functional libraries in health facilities and provision of equipment such as blood pressure machines, glucometers, rubberised waterproof sheet, catheters, defibrillators. The data also illustrates the need to have computers in health facilities with good reliable internet signal.

4.2.3.6 Focus Group Discussion Three with Nurses: Technological Factors

Table 4-40 Focus Group Discussion Three: Technological Factors

Focus Group Discussion Three with Nurses from KCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"look at a nurse in the UK, when they want to lift patients they use lifting machines, they lift a patient from here to there, while here you have to move the patients from upstairs it's too much".	• no lifting machines	• no lifting machines
	"provision of enough bed/trolley is required and must be serviceable and suitable to carry out the transfer. Beds or trolleys that will not move or are difficult to move must not be used. They must be labelled and reported as faulty the ones not working so that the person in charge is notified and can ensure appropriate action is taken".	• provision of enough bed/trolley	• provision of bed/trolley
Participant 2	"we have been doing that, but strictly speaking, for one to work wholeheartedly, and with zeal to provide quality care, you need to have all the material resources that you need for all that particular procedure, not improvising".	• improvising	• improvising
	"we want our government to provide us with enough gloves, pulse oximeter, curtains for privacy, masks among others all the time".	• provide gloves, pulse oximeter, curtains for privacy, masks	• provide gloves, pulse oximeter, curtains for privacy, masks
Participant 3	"..we do not have equipment and medication here".	• no equipment and medication	• no equipment and • medication
	"the government must make a point that drugs are available in hospital they need to fund the health sector enough because we deal with people's life".	• fund the health sector enough	• need enough funding
Participant 4	"..we do not have enough equipment like BP machines".	• not enough equipment	• not enough equipment
	"the government should build more wards and houses for nurse and other staff members and make drugs available".	• build more wards and houses; make drugs available	• more wards, houses and availability of drugs
Participant 5	"we lack equipment in the wards such as thermometers, catheters".	• lack of equipment like thermometers	• lack of equipment
	"we expect provision of thermometers, catheters. They also need to build us more houses as the ones that are available are not enough".	• provision of thermometers, catheters; build more houses	• equipment
Participant 6	"we don't have enough bed/trolleys to move patients who cannot move on their own".	• not enough beds/trolleys	• not enough bed/trolleys
	"government can take a further step to fund enough beds/trolleys to move patients between wards".	• fund enough beds/trolleys	• fund enough beds and trolleys
Measures implemented by government to retain registered nurses: The participants corroborated that there was none			

As revealed by the table above, it shows that nurses do not have lifting aids for patients so they manually lift them. The focus groups one and two also highlighted that the nurses lack equipment such as thermometers and sometimes they found there was nothing that they could do since essential medications were out of stock.

To mitigate or minimise brain drain, the focus group three proposed additional beds/trolleys in wards and service from time to time. The managers should provide gloves, pulse oximeter, curtains for privacy, masks, thermometers, catheters and drugs in health facilities. They could also build more hospital wards and staff houses to minimise brain drain.

4.2.4 Exploring Social Factors

From the literature review in this study, Social factors include diseases, poverty, corruption and living conditions. These are the four child nodes under the parent nodes of social factors (See Table 4-1).

4.2.4.1 Semi-Structured Interviews with Nurses: Social Factors

4.2.4.1.1 Diseases

Table 4-41 Interviews with Nurses: Diseases

Diseases (SF1) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"Malawi as one of the African countries, you see that there are so many diseases as compared to other countries like Europe…..we don't feel comfortable taking care of patience so this can also force us to go to other countries".	• many diseases	• fear diseases
		"…ongoing cleaning day and night to reduce infection".	• ongoing cleaning	• ongoing cleaning
	2	"nurses work in overcrowded wards so they catch diseases".	• overcrowded wards, nurses catch diseases	• nurses get diseases due overcrowded
		"…providing us with protective equipment we would not worry much about diseases".	• provide protective equipment	• provide protective equipment
	3	"…our job is so stressful. Seeing so many people that are suffering I think it's the problem of the nation in terms of our health as a nation. 90% of the people we see are not ok".	• stressful job	• stressful job
		"improve conditions in hospitals.."	• improve conditions in hospitals	• improve conditions
2	4	"…there is fatigue, basically there is fatigue and people working in the hospital now, you don't even have a time of your own, like time to rest".	• fatigue	• fatigue
		"there should be adequate staffing, people in authority should always cross check…"	• adequate staffing	• adequate staffing
	5	"we have had several cases in fact, in the male medical ward; there were about two	• two male nurses had TB	• two male nurses suffered from TB

		male nurses who had TB because of working in this environment".		
		"..lack of masks and lack of protective wear.."	• lack of protective wear	• lack of protective wear
	6	"…nurses are not protected from diseases as sometimes they do not have equipment like gloves".	• diseases; lack of equipment	• lack of personal protective equipment
		"…there is need to have well trained cleaners".	• have trained cleaners	• have trained cleaners
3	7	"…people go to the places where they think the disease burden is lesser than where we are right now".	• places with lesser diseases	• places with lesser diseases
		"we should have the right equipment may be to detect those diseases…"	• right equipment	• right equipment
	8	"we were afraid of getting diseases in the hospitals all the time. Sometimes we work without masks".	• afraid of diseases; work without masks	• afraid of diseases, work without masks
		"we need enough gloves at all times and durable ones".	• need enough gloves	• provision of gloves
	9	"..the institution also should be on the fore front to give trainings on prevention of diseases like HIV/AIDS, Ebola before they get them".	• training on prevention of diseases	• training
		"..providing trainings on prevention of diseases".	• training on disease prevention	• provision of training
4	10	"we get frustrated because we are not provided with medical cover in case we get work related diseases".	• not provided with medical cover	• no provision of medical cover
		"shortage of gloves and other supplies hamper adherence to precautions".	• shortage of gloves	• availability of gloves
	11	"some patients suffer from TB and nurses can easily catch the disease and there is no medical insurance cover".	• nurses catch TB disease	• nurses catch TB disease
		"..government should also take care of us nurses by putting us on medical scheme".	• provide medical scheme	• provide medical scheme
	12	"the government does not provide enough resources like protective equipment like gloves so nurses are not protected from some work related diseases".	• no provision of protective equipment nurses not protected	• protective equipment
		"..install alcohol-based hand sanitizer dispensers throughout a hospital unit as an indirect approach to maximize compliance with hand hygiene practices…"	• install alcohol-based hand sanitizer	• installation of hand sanitizers
5	13	"the disease prevention measures that we have. Maybe it slows life expectancy in Malawi".	• disease prevention measures	• disease prevention measures
		"…room ventilation, well lit wards, cleaning and decontamination, protective clothing.."	• room ventilation, well lit wards, cleaning; decontamination, protective clothing	• conducive environment
	14	"…we have poor living conditions and diseases".	• poor living conditions and diseases	• poor living conditions and diseases
		"high-quality cleaning and disinfection of all patient-care areas is important, especially surfaces close to the patient such as bedrails, bedside tables, doorknobs and equipment".	• high-quality cleaning and disinfection	• high quality cleaning and disinfection
	15	"diseases are there it's very easy to catch HIV/AIDS if one is not careful".	• HIV/AIDS	• personal protective equipment
		"we should not be wearing the same pair of gloves for the care of more than one patient".	• not wearing same gloves	• disposable gloves
6	16	none	• none	• none
	17	none	• none	• none

	18	"…HIV infection which has affected a lot of nurses and even whenever we are working we are infected right away from work which is not all that good".	• HIV infection	• personal protective equipment
		"…provided with enough protective materials like gloves so that they don't get this infection…"	• provision of protective materials	• provision of protective materials

Details in the table above illustrates that nurses are afraid of contracting diseases such as Tuberculosis and HIV/AIDS because sometimes they work without personal protective equipment such as gloves and masks. The nurses are not provided with medical insurance cover in case they become ill in line of duty. This collaborates researchers' observations Novel 2011; Vidal, 2015; Tawfik and Kinoti (2003) that, diseases render the health workplace a dangerous place in sub-Saharan Africa. As such, the fear of contracting HIV/AIDS through work related injuries is a push factor related to the functioning of the health systems. The data has also shown that the lack of medical cover is another issue that contributes to brain drain.

The nurses proposed an ongoing cleaning schedule in the hospitals and provision of personal protective equipment, well-ventilated and well-lit rooms. Cleaners should be trained in infection control first before they are given any cleaning tasks. The government should install alcohol based hand sanitizer throughout the hospital units.

4.2.4.1.2 Poverty

Table 4-42 Interviews with Nurses: Poverty

Poverty (SF2) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"…the poverty is very high. I think it will cost me to go to other country so that I can be earning more so that I can be supporting my parents, my relatives and other people".	• high poverty	• high poverty not able to support relatives
		"we just need better salaries to meet the cost of commodities in shop".	• need better salaries	• need better salaries
	2	"…because of the small salaries they get. It's hand and mouth…"	• small salaries	• salary is small
		"if they could increase salaries for registered nurses then obviously they would have managed life".	• increase salaries	• salary increase
	3	"…salary that we are getting is little I need to pay house rental fee, electricity and water bills. In addition, I need to feed my family the whole month and when the children are going to school they need snacks".	• little salary	• salary not enough
		"need to revise our salaries to meet our social needs".	• revise salaries	• revise salaries
2	4	"there is too much poverty in this country for example, the cost of things in shops and markets is very high and salaries still low".	• cost of things high; • low salaries	• low salaries but high cost of living
		"the government could do better by increasing our salaries to reduce our poverty".	• increase salaries	• salary increase

	5	"..because you always have to find a house somewhere and then transport and that's from your salary, so it affects how you come to work and where you live and what mood you are in".	• accommodation and transport costs	• accommodation • costs transport costs
		"provide a house".	• provide a house	• provision of a house
	6	"..you have a lot of responsibility in your family, then you would go somewhere where you feel there are greener pastures so that you are able to get enough money for yourself and for your relations".	• lot of responsibility	• responsibility
		"…if that was implemented and at least enough houses and even flats were built, I think they could really assist".	• build houses and flats	• build houses and flats
3	7	"we are struck by poverty and at the same time we don't have resources to overcome that poverty".	• no resources	• lack of resources
		"we should be able to access loans to start small scale business".	• access loans	• provision of loans
	8	"…it also zeros on the same issue of poverty in terms of money".	• poverty in terms of money	• money a problem
		"increase the salaries…"	• increase salaries	• salary increase
	9	"..I don't think that's a very big problem because provision of housing, those protective resources depends on the institution".	• housing and resources not a big problem	• housing and resources not a big problem
		"..increase number of staff houses to make sure nurses come on shift in good time".	• increase staff houses	• build more staff houses
4	10	"…have got extended families, it's just too little to support your family and your relatives, it's not enough."	• extended families; too little to support family	• little pay
		"..make our salaries better to support our family".	• make salaries better	• better salaries
	11	"food and clothes are too expensive to buy with low income that we get every month".	• food and clothes too expensive; low income	• low income can't afford food and clothes
		"we need the government to increase our salaries…"	• increase salaries	• salary increase
	12	"…we depend on extended families, so the salary itself cannot withstand the economic hardship. So most registered nurses we are poor and we try to fetch for greener pasture, where there is greener pasture, just jump into that boat".	• extended families; salary cannot withstand the economic hardship	• low salary can't meet economic hardship
		"…struggle to pay school fees for our children in good school because the salaries are not good enough".	• salaries not good enough	• low salaries
5	13	"nurses cannot improve their life style if salaries remain low like this".	• if salaries remain low nurses cannot improve life style	• low salaries
		"we live on limited incomes so we deserve something better than what we are getting now".	• deserve better salaries	• better salaries
	14	"..here are no required social services that are supposed to be available. So when a nurse looks at this, they think of going into another country which has those services".	• no social services	• no social services
		"..making sure the government puts in place policies that may lead to development of our poor nation".	• puts in place policies	• put in place policies
	15	"I am married to a nurse who has migrated to Australia, because I am married, I still have to follow this man for the sake of my marriage. So that aspect, as nurses council, as government they don't have no control over it.."	• no control over marriage	• no control over marriage
		"like for the marriage I don't think you can control".	• no control on marriage	• no control on marriage

6	16	"we are having monetary constraints right now so you will find that socially the person is not able to provide for the family because of that and they are having less money from the government they would opt to go somewhere".	• monetary constraints; less money from government	• financial constraints
		"they could also increase locum payment.."	• increase locum payment	• increase locum payment
	17	"..our salaries are very low so looking at the higher cost of living nowadays it's hard for you to sustain so you opt to go outside where you get enough money so that you can manage to sustain yourself".	• low salaries; high cost of living	• low salaries but high cost of living
		"it's about to do with revision of the salaries for healthy workers and if possible all civil servants".	• revise salaries	• salary revision
	18	"..most of us nurses come from poor families… we receive a little pay we always look for greener pasture…"	• receive little pay	• little pay
		"if the government can add the salary, give nurses a better salary that we can proudly say we are working".	• better salary	• provide better salary

Based on the data, it seems that poverty is a concern because nurses cannot adequately support their families and extended families due to low salaries. The cost of living for basic things such as accommodation, transport, clothes and food is high in Malawi and nurses still use part of their already low salaries to meet these needs. As such, it becomes very difficult for nurses to improve their life style. The literature by (Dodoo et al., 2006) share a common view that, the brain drain of health care professionals hit sub-Saharan Africa hard, where the increasing level of poverty, diseases and corruption is greater than the level of producing healthcare professionals to face the burden of the region's health issues.

From the data presented in the Table 4-42 above, the nurses propose that the government should revise their salaries and offer them loans so that they can set up small-scale businesses to support their families. In addition, the nurses would like to have locum payment increased because of heavy workload and increased risk of infection.

4.2.4.1.3 Corruption

Table 4-43 Interviews with Nurses: Corruption

Corruption (SF3) - Interviews with Nurses				
Hospitals	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"…corruption in Malawi is high and that would make me leave".	• corruption high	• high corruption
		"the government should put strict measures that medication should not be missing in hospitals for example do not steal me labels".	• put strict measures; labels on medication	• strict measures
	2	none	• none	• none
	3	"..self-enrichment by politicians when we are suffering".	• self-enrichment	• self-enrichment
		"..we need to work professionally not taking short cuts to get more money. It kills the health sector".	• work professionally	• work professionally

2	4	none	• none	• none
	5	I don't think corruption alone will make me leave unless if I include that with low salaries that we get".	• corruption and low	• corruption and low salary
		"there is corruption in this country but I would not be moved by that".	• not moved by corruption	• not moved by corruption
	6	none	• none	• none
3	7	"..where we think that even though they have the diseases but they have the medicine with no corruption.	• medicine with no corruption.	• other countries have medicine no corruption
	8	none	• none	• none
	9	none	• none	• none
4	10	"..our politician, they seem not to care, they don't care at all, you voice out your concerns but it seems you know there is that lack of tolerance, they don't care as long as everything is ok with them".	• lack of tolerance	• lack of tolerance
		"…drug theft is on the increase so as government they need to do something about it by coming up with strict measures".	• strict measures	• strict measures
	11	"corruption is there but not necessarily causing brain drain".	• corruption not necessarily causing brain drain	• corruption not causing brain drain
		"…need for government to investigate and take actions to those involved in malpractices".	• to investigate and take actions	• investigation and act
	12	"…medications miss in hospitals so some nurses would decide to go may be abroad because they do not want to be associated with that. But it is not common that people leave because of corruption".	• medication miss in hospitals	• medication keep missing
		"..government should also be conducting workshops on corruption so that staff should know the consequences". "There is need to put control measures to control fraud and corruption".	• conducting workshops on corruption • put control measures	• conducting workshops on corruption • put control measures
5	13	none	• none	• none
	14	"…corruption is taking place in higher levels, you will find that maybe the person may not work hard just because maybe disappointed with the corruption activities…"	• corruption at higher levels	• corruption at higher levels
		"…corruption should be put to an end in order to make sure that the resources that are channelled to health sector are all used fully".	• end corruption	• end corruption
	15	none	• none	• none
6	16	none	• none	• none
	17	"corruption is taking place like missing tablets so it frustrates those who have hard working spirit".	• missing tablets	• tablets keep missing hence frustrating
		"..government to curb corruption".	• curb corruption	• curb corruption
	18	"corruption is there but that would not make me just leave unless next job pays good salary".	• corruption	• acknowledge existence of corruption but not significant to leave job
		"...corruption can be stopped starting from management itself. They need to discipline themselves as well".	• discipline management	• discipline management

From the analysis of data, it seems there are mixed reactions regarding corruption. Four nurse participants acknowledge the existence of corruption but they elucidate that, corruption itself does not cause brain drain among nurses in Malawi. Five nurse participants admit that

corruption exists and makes nurses consider leaving. Some nurse participants (eight) decided not to comment on this question thinking it was a sensitive matter.

The data illustrates that significant quantities of medication supplied to hospitals end up being stolen so there was need to put up 'Do Not Steal Me' labels in full on all medication in order to curb the diversion of medication mostly those involved in malpractices. Management should put control measures to control fraud and corruption. They should be conducting workshops regarding corruption for nurses and other healthcare professionals who encounter medication in line of duty.

4.2.4.1.4 Living Conditions

Table 4-44 Interviews with Nurses: Living Conditions

Living Conditions (SF4) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"they do not provide us with food. They are supposed to be giving us breakfast or when you are on night duty they are supposed to give us food but with the current situation they don't give so this is also another factor that can force me to leave".	• not provided with food	• no provision of food
		"…providing us with meals especially night shifts…"	• provide meals to night staff	• provide meals to night staff
	2	"nurses work in overcrowded…"	• overcrowded wards	• overcrowded wards
		"..we feel burnt out so management should be ensuring that staffing levels is adequate".	• feel burnt out	• burnt out ensure adequate staff
	3	"…there is a lot of work".	• a lot of work	• a lot of work
		"hospitals should stick to patient capacity for each ward to avoid overworking nurses".	• stick to ward capacity	• stick to ward capacity
2	4	"..you don't even have a time of your own, like time to rest, it's always like you are supposed to go back to work but there is no pay for that".	• no time to rest	• no time to rest
		"there should be adequate staffing…."	• adequate staffing	• adequate staffing
	5	"working in the same environment such as this female medical ward for so long, I think also will impact….the rotations that people do; let's say for instance you work in a female medical ward for one year two years and then you change".	• working in the same environment	• working in the same environment
		"nurses should be rotated to different departments not just being in one department for years and years".	• rotate nurses	• rotation of nurses
	6	"there are very few institutional houses…"	• few institutional houses	• few institution al houses
		"some of the houses have not been maintained for a long time so the government should do everything it can to make them habitable".	• houses not maintained	• houses not maintained
3	7	"…the living condition is not good as we are no longer provided with uniform. We buy from our salary".	• not provided with uniform; • buy uniform from salary	• no provision of uniform buy from own salary

		"we should be provided with nurse uniform not buy it ourselves from our own money".	• provide uniform	• provide nurses with uniform
	8	"there is also heavy workload due to understaffing levels. We have no time to rest".	• heavy workload; • no time to rest	• workload and time to rest
		"..provide transport for people…."	• provide transport	• provide transport
	9	"..some resources are provided in the hospitals. Those who really don't want to work in some kind of environment, they have left".	• resources are provided	• there is provision of resources
4	10	"some institutional houses are dilapidated but they don't renovate them. They don't even refund you when you renovate it yourself".	• dilapidated institutional houses	• dilapidated institutional houses
		"..government must repair institutional houses in dilapidated state not us repairing them from our own pocket because they don't even refund us".	• repair institutional houses	• repair institutional houses
	11	"we are not provided with uniform and transport. We use our money".	• no provision of uniform and transport	• no provision of uniform and transport
		"…providing them with uniform and pairs of shoes".	• provide uniform, pairs of shoes,	• provide uniform and pairs of shoes
	12	"we work long hours especially night shift so we get exhausted".	• work long hours; • get exhausted	• long working hours
		"…provision of transport for nurses as it used to be way back and allocate more houses to nurses".	• provide transport and houses	• provision of transport and housing
5	13	"institutional houses that the government provides to nurses are not in a good condition. They need to be repaired but they don't because of low funding".	• institutional houses not in good condition	• institutional houses not in good condition
		"government should build more institutional houses because the ones we have are not enough".	• build more houses	• build more houses
	14	"..we have poor living conditions in some areas, working in specific areas such as low-cost wards, theatre departments and labour wards…"	• poor living conditions in wards	• poor living conditions in wards
		"…ensure hospitals are very clean to reduce infection".	• ensure hospitals very clean	• ensure hospitals very clean
	15	"..you still find because of that social relationship others have migrated following their friends".	• social relationship	• friends influence
		" difficult to stop nurses from migrating".	• difficult to stop nurses	• difficult to stop nurses
6	16	"if the nurse is meeting a challenge then she goes to the manager or may be assistant and then the manager doesn't show interest, that's when they opt to go somewhere where they would get support".	• manager doesn't show interest	• lack of interest by manager
		"worker-manager relationship should really be good because a frustrated nurse doesn't provide good care, the manager should really be understanding".	• worker-manager relationship should be good	• worker-manager relationship should be good
	17	"nowadays it's hard for you to sustain so you opt to go outside where you get enough money so that you can manage to sustain yourself".	• hard to sustain	• hard to sustain
		"…revision of the salaries for health workers and if possible all civil servants".	• revision of salaries	• revision of salaries
	18	"…the government needs to build more houses for nurses so that we should	• build more houses	• construction of more houses

		not be living far away from the health facility".		
		"if the government can build more staff houses".	• build more staff houses	• build more houses
Measures implemented by government to retain registered nurses: provision of institutional houses although they are just few available.				

The data seems that living conditions problem contribute to brain drain among nurses in Malawi. The Nurses use their own money to buy a set of nurse uniform and there is no provision of meals at work. In addition, they get frustrated to work in overcrowded wards coupled with heavy workload and long working hours. Most of the nurses do not live in institutional houses because the houses are not enough. The nurses, who are privileged to stay in an institutional house, are concerned about the bad condition of the houses, which are not repaired by the government. Although not all nurses mentioned a hazardous working environment, some working in specific areas such as low-cost wards, theatre departments and labour wards perceived that they were exposed to a higher risk of infection. Low-cost wards generally have unhygienic conditions and there is higher exposure to HIV in labour wards due to frequent needle-stick injuries and a lack of protective measures. Although the supply of gloves sometimes seems adequate, basic protective equipment such as goggles, gowns and shoes are not provided.

The data indicates that nurses mostly on night shift should be provided with meals. The nurses should also be provided with a set of uniform, a pair of shoes and transport to get to work and back home after work. In addition, the government should repair institutional houses that are in dilapidated conditions and build more houses. The data also indicate that there is need to improve employee-manager relationship when performing their duties.

4.2.4.2 Semi-Structured Interviews with Key Informants from Hospital: Social Factors

4.2.4.2.1 Diseases

Table 4-45 Interviews with Key Informants from Hospitals: Diseases

Diseases (SF1) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"nurses also leave because they face people with all sorts of diseases like cholera, TB and HIV".	• cholera, TB and HIV	• cholera, TB and HIV
		"..provide enough supplies like gloves and aprons and emphasize hand washing before and after touching patients".	• provide enough supplies	• provision of supplies

2	2	"…the hospital environment it's an infectious environment whereby one you have to be careful and conscious".	• infectious environment	• infectious environment
		"..infection prevention program…"	• infection prevention program	• infection prevention program
3	3	"…because this HIV/AIDS, a lot of nurses have contracted this disease".	• contract HIV/AIDS	• contract HIV/AIDS
		"…provide adequate wear, and other resources like face masks, gloves, and gumboots".	• provide adequate wear	• provide personal protective equipment
4	4	"some nurses leave because they are always afraid of catching diseases in the wards they work".	• afraid of catching disease	• afraid of catching disease
		"….TB ward, when you are working there whether nurses, clinicians, Doctors even the support staff, we are supposed to put on special attire like a special mask, but sometimes you would find that those are not available".	• provide special masks	• provide special masks
5	5	"…some nurses do die because of contracting some diseases from the hospital but they are not even compensated …we had one nurse who died due to hepatitis B".	• contract disease and die	• contract disease and die
		"nurses should be having regular medical checkups so that diseases can be diagnosed at an early stage".	• regular medical checkups	• regular medical checkups
6	6	"nurses decide to leave the job because they are scared of contracting diseases more especially if they are not provided with enough resources like aprons and gloves".	• scared of contracting diseases	• scared of contracting diseases
		"healthcare professionals including nurses should be provided with adequate equipment at all times because the absence of these frustrate them".	• provide adequate equipment	• provide adequate equipment

The data seems to show that nurses work in an infectious environment where they would easily contract diseases such as TB, HIV/AIDS and Cholera. This also collaborates the observation by (Brady, 2014; Buchan, 2006). Increased contact with HIV/AIDS and tuberculosis patients creates more exposure to infection and consequently increases stress thereby nurses considering leaving their job. In general, diseases are mainly attributed to the lack of personal protective equipment. In addition, it was disclosed that, there was no compensation, which is given to beneficiaries apart from pension contributions when a nurses dies to work related diseases.

Disease patterns in Malawi have changed since the mid-1980s. The arrival of HIV/AIDS, Tuberculosis and Cholera has had a substantial impact on nurses' work environments. For example, increasing the workload, risk of infection and demands from their extended family; and possible death due to HIV/ AIDS and Tuberculosis. Greater numbers of patients increase nurses' workloads and patients tend to stay longer in the hospital or return after being discharged.

To mitigate or minimise brain drain from the analysis, the key informants from the hospital elucidate that there is need for government to provide enough supplies such as gloves, aprons, masks to nurses. The nurse participants have also highlighted this. It is also important that nurses undergo infection control training from time to time. In addition, the nurses proposed that they should be going for medical check-ups regularly to ensure that they are in good health.

4.2.4.2.2 Poverty

Table 4-46 Interviews with Key Informants from Hospitals: Poverty

Poverty (SF2) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"poverty because our salaries are very low and our nurses cannot make earns meet".	• very low salaries	• low salaries
		"nurses salaries could be adjusted upwards to enable nurses meet their daily needs".	• adjust salaries	• adjust salary
2	2	"…looking at the responsibilities and then hearing that maybe your friends are getting something better, you want to go that side and also see what's there to reduce ones poverty".	• responsibilities, friends doing better	• better pay
		"….increasing salaries based on the cost of living at the time."	• increase salaries	• salary increase
3	3	"…poverty is one of them, because as I explained already that our salaries are not adequate, and yet we all go into the same shops and we know how expensive the commodities are, so that, really puts nurses to zero".	• salaries not adequate	• salaries not adequate
		same issue of salaries if they could increase them".	• increase salaries	• salary increase
4	4	"..the salaries are low, it means even the social needs are not met somehow".	• low salaries	• low salaries
		"I think it comes back to good packages, salary package, so that the nurses can be able to meet their social needs".	• good salary package	• good salary package
5	5	"..most of the nurses are poor. I see it when people are retiring. Some were retiring while they didn't even have a house".	• retiring without a house	• retiring without a house
		"before nurses retire they should be offered loans to build a reasonable house or buy a house. It is not good to see someone retiring without a house".	• offer loans	• offer loans
6	6	"we have extended families and with the small salaries we are getting I tell you it is hard to buy enough food for the family".	• extended families but small salary	• extended families but small salary
		"housing allowances for nurses was stopped way back all civil servants don't get housing allowance that policy is gone. I think it was in 2004 when they were restructuring salaries merging the housing allowances and basic pay to become one".	• housing allowance stopped	• housing allowance stopped

The data seems to show that the low salaries that nurses receive make them unable to meet the daily basic needs because of extended families. This also concurs with what nurse participants highlighted about poverty. The key informants from the hospitals also disclosed that nurses retire without owning a house so they prefer to go elsewhere so that they would be able to build or buy a house of their own before they reach retirement age.

To mitigate or minimise brain drain from the data presented, the key informants proposed revising the salaries of nurses. This concurs with what nurse participants also mentioned during interviews. The key informants also highlighted the need for government to be facilitating loans for nurses to build their own houses and consider paying them housing allowances.

4.2.4.2.3 Corruption

Table 4-47 Interviews with Key Informants from Hospitals: Corruption

Corruption (SF3) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"…most of the civil services are grounded because of cash gate issue that happened a couple of years ago so because of that, it's been bad for everybody else including nurses".	• cash gate	• cash gate
		"..it is better for government to put in place strict controls and those involved must be brought to book".	• put strict controls	• put strict controls
2	2	"corruption that is taking in some government departments is making nurses get frustrated because nurses work very hard".	• corruption frustrates nurses	• corruption frustrates nurses
		"…the government should instil discipline in all government employees that include nurses, doctors among others".	• instil discipline	• instilling discipline
3	3	none	• none	• none
4	4	"if nurses hear that some government departments staff are getting easy money through corruption it demotivates hard working nurses especially that sometimes we run out of medication".	• corruption demotivates	• corruption demotivates
		if the government could conduct workshops on drug theft awareness on regular basis".	• conduct workshops	• conduct workshops
5	5	"as regards corruption, I don't think that contributes to brain drain of nurses. I have not experienced it".	• corruption not contributing to brain drain	• corruption not contributing factor to brain drain
6	6	"in terms of corruption I don't think it is a factor that causes nurses to leave their jobs".	• corruption not causing nurses to leave	• corruption not causing brain drain

This data illustrates that the corruption that seems to be taking place in some government departments is frustrating nurses. A reference is made to a revelation of the public resources at Capital Hill referred as 'cash gate'. It was established that about Malawi Kwacha 24 billion was siphoned from public coffers through dubious payments, inflated invoices, goods, and services never rendered. However, two key informants argue that corruption does not cause brain drain among nurses. The literature by (Dodoo et al., 2006) points out that, the brain drain of health care professionals hit sub-Saharan Africa hard due to the increasing level of poverty.

However, the key informants from the hospitals proposed that the government should put control measures to control theft of medication in health facilities. They should also launch educational campaigns to curb drug theft and related crimes in health facilities. This concurs with what nurse participants also expounded.

4.2.4.2.4 Living Conditions

Table 4-48 Interviews with Key Informants from Hospitals: Living Conditions

Living Conditions (SF4) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"…we used to have adequate funding for amenities for our nurses like protective wear, we could buy uniforms, we could buy shoes as part of uniform…We don't have resources so that emanated from the corruption that is going on in the system".	• no resources	• no resources
		"..because of the cash gate there is a big impact but still the government should prioritise the health sector in terms of budgeting".	• prioritise health sector	• prioritise health sector
2	2	"…there are some other people who are not interested let's say like to do bed side nursing because of dirty things".	• not interested in bed side nursing	• not interested in bedside nursing
		"beds and wards should have high quality of cleanliness and inspection be done regularly".	• cleanliness and inspection	• cleanliness and inspection
3	3	"in the past they used to provide personal protective equipment but these days they don't".	• no provision of personal protective equipment	• no provision of protective equipment
		"it would be good if they provide enough supplies so that nurses are able to perform their tasks well".	• provide enough supplies	• provide enough supplies
4	4	"..we have an organization NONM (National Organisation for Nurses and Midwives), but down in the specific hospitals it's not all that strong. You know that organization it's there so that nurses should support each other, but in some hospitals because it's not strong, it means the supporting is also not that good".	• NONM not strong	• NONM not strong
		"umbrella organisation of NONM should motivate the other small NONM organisations within the hospitals, so	• NONM to support nurses	• NONM to support nurses

		that nurses should be able to support each other socially".		
5	5	"we bring food to work but we are not provided with fridges and microwave".	• no provision of fridges and microwave	• no fridges and microwaves
		"nurses bring their own food to work so they should be provided with a microwave and fridge instead of eating cold food".	• provide microwave and fridge	• microwave and fridge
6	6	"…we don't have enough houses to accommodate the nurses within the premises and we don't maintain them the ones available due to funding issues".	• not enough houses and not maintained	• not enough houses and not maintained
		"we had no funding to maintain the houses so they were told if they want to continue living in the houses they should maintain them on their own, if they fail you should go out and rent out".	• maintain houses	• maintenance of houses
Measures implemented by government to retain registered nurses: provision of institutional houses but they are not many				

Based on the data analysis, it seems that the lack of resources like personal protective equipment, nurses not being interested in bedside nursing, inadequate institutional houses contribute to the brain drain of nurses. Some nurses rent private houses far away from the health facility due to insufficient institutional houses. Salaries have fallen in real terms and rents in the private sector have increased sharply so financially it becomes a challenge to the nurses.

The nurses do not have a fridge and microwave at work place to keep and warm up their food in respectively so they get frustrated. It was also disclosed that a Union called the National Organization for Nurses and Midwives is not strong enough to negotiate better demands for nurses.

The key informants proposed that additional beds should be supplied to the hospitals. Management should also ensure that the health facilities are kept clean at all times by carrying inspection out regularly. In addition, the data indicates that there is need for providing nurses with a microwave and fridge at work place. Management should also be able to repair all institutional houses that are in bad condition.

4.2.4.3 Semi-Structured Interviews with Key Informants from NMCM, CHAM and MOH: Social Factors

4.2.4.3.1 Diseases

Table 4-49 Interviews with Key Informants from NMCM, CHAM and MOH: Diseases

Diseases (SF1) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"some nurses like in one of the districts she could not handle a patient with cholera because there are no resources and opted to leave".	• no resources	• no resources
		"although the government is trying its best to make supplies like gloves available in hospitals they need to ensure that they are providing enough of them".	• provide enough supplies	• provide enough supplies
CHAM	2	"nurses do not feel very comfortable to work with very ill patients especially if they do not have adequate resources".	• inadequate resources	• inadequate resources
		"..ensure that there is no shortage of medical supplies and equipment…"	• provision of medical supplies and equipment	• provision of supplies and equipment
MOH	3	"nurses do not willingly do their job as they are afraid of contracting diseases".	• afraid of contracting diseases	• afraid of contracting diseases
		"provide adequate financial resources to make the working environment friendly".	• adequate financial resources	• adequate financial resources

The table above illustrates that the nurses are unwillingly doing their job due to inadequate protective resources. They are scared of contracting diseases because they treat more chronically ill patients. This collaborates Tambulasi and Chasukwa's (2015) observation that poor working conditions such as poor health worker safety and lack of equipment lead to moral distress. The majority of nurses and key informants from hospitals also highlighted this.

The data indicates that there should be enough supplies to health facilities to enable nurses perform their clinical duties to avoid contracting diseases. In this respect, there is need for government to fund the Ministry of Health more for proper allocation of resources and making the hospital environment clean. The provision of resources concurs with what nurses and key informants from hospitals also proposed.

4.2.4.3.2 Poverty

Table 4-50 Interviews with Key Informants from NMCM, CHAM and MOH: Poverty

Poverty (SF2) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"..being a poor country most of the nurses would come from poor families. They have gone to school to support their families but when they look at the salary they cannot even fend for their own social families".	• salary not enough	• salary not enough
		"increasing salaries would come in but nurses here still compare their salaries with nurses' salaries in other countries".	• increase salaries	• increase salaries
CHAM	2	"nurses find themselves in hardships because their pay is not adequate if we compare with the cost of living".	• pay not enough	• pay not enough
		"…raise salaries for healthcare professionals including nurses to curb brain drain…"	• raise salaries	• raise salaries
MOH	3	"the custom of caring for an extended family, combined with higher financial pressure for nurses with children in school, may be one of the reasons why nurses are leaving".	• financial pressure	• financial pressure
		"there is need to revise salaries considering the cost of living".	• revise salaries	• revise salaries

The data illustrates that some nurses come from poor families and have responsibilities to support their families. The nurses find it very difficult to support their extended families due to low salaries that they get. This concurs with what the majority of nurses and key informants from hospitals also mentioned during interviews. Fulfilling extended family demands such as paying for food or school fees for children was mentioned as influential factors for brain drain to reduce poverty in the family.

From the data presented in the table, it illustrates that there is need for revising the salary of nurses. However, there is a tendency by nurses to compare salaries in Malawi with those in other countries. In general, the majority of nurses and key informants from the hospitals have also proposed the same revision of salaries.

4.2.4.3.3 Corruption

Table 4-51 Interviews with Key Informants from NMCM, CHAM and MOH: Corruption

Corruption (SF3) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"there is corruption in Malawi to some extent but am not really sure if it really leads to brain drain".	• corruption	• corruption
		"I don't think corruption causes brain drain among nurses".	• corruption	• brain drain not causing corruption
CHAM	2	"corruption is rampant in Malawi and that is slowing down functions of various Ministries including the Ministry of Health".	• rampant corruption	• rampant corruption
		"strict measures should be put in place to curb corruption in government departments".	• put strict measures	• put strict measures
MOH	3	none	• none	• none

The data shows that there is corruption taking place in Malawi and slowing down the functions of various government departments including the Ministry of Health. Although it seems there is corruption, it does not necessarily cause brain drain. However, to minimise or mitigate brain drain, there is still need for government to put strict measures in place to curb corruption in various government departments.

4.2.4.3.4 Living Conditions

Table 4-52 Interviews with Key Informants from NMCM, CHAM and MOH: Living Conditions

Living Conditions (SF4) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"we had nurses' cases whereby a nurse working in three different institutions on full pay. She's been on pay roll in government but would also be on full pay at one of the clinics and would absent herself in the government because she is not followed up but she works in another clinic. She gives all sorts of excuses to the government. She is sick while she is working somewhere".	• working in three different institutions on full pay	• working in three different institutions on full pay
		"..nurses should be provided with institutional houses to motivate them".	• provide institutional houses	• provide institutional houses
CHAM	2	"…they do not have adequate resources".	• inadequate resources	• inadequate resources

		"basic equipment like thermometers for checking body temperature should be made available".	• make basic equipment available	• make basic equipment available
MOH	3	"the workload and the numbers of nurses are incompatible, i.e. there are fewer nurses to undertake the heavy overwork and this result in the public blaming nurses for the poor services. The working environment is unfriendly most times with broken chairs, window glasses, inadequate ventilation and in some cases old working tools".	• heavy workload; • broken chairs, window glasses, inadequate ventilation; old working tools	• heavy workload; • broken chairs, window glasses, inadequate ventilation; old working tools
		"…routine maintenance can go a long way to incentivising the registered nurses. Provide amenities for nurses such as canteens and common rooms where they can converge relax and exchange ideas when they have some free time".	• routine maintenance • provide amenities	• routine maintenance • provision of amenities
Measures implemented by government to retain registered nurses: Introduction of infection presentation shields which are given to the health facilities that have met the minimum set of rules depicting the cleanliness of the health facility.				

The data analysis seems to show that the nurses have greater workloads, which lead to declining and weakening of the health care system. This also concurs with researcher (Vidal, 2015). The key informants also disclosed that nurses work in unfriendly environment as most of the time they work with broken chairs, broken window glasses, old working tools and inadequate ventilation in the wards so nurses consider leaving the job.

From the data analysis, the key informants proposed that there is need for providing nurses with institutional houses. This concurs with what nurse participants also revealed as one of the issues to mitigate brain drain. Basic equipment should be made available and ensure routine maintenance of all the equipment. The key informants also indicate that there should be a provision of amenities such as canteens and common rooms where nurses could meet and exchange ideas whenever they are free. This concurs with a key informant from hospital who stated that there is need to provide nurses with a microwave and fridge at work place. It is interesting to note that government of Malawi introduced the infection presentation shields. They are to the health facilities that have met the minimum set of rules depicting the cleanliness of the health facility.

4.2.4.4 Focus Group Discussion One with Nurses: Social Factors

Table 4-53 Focus Group Discussion One: Social Factors

Focus Group Discussion One with Nurses from QECH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"…transport costs, then every day you are spending, then I have to have my lunch here. So it's just working from hand to mouth. So definitely the conditions are not good".	• transport and lunch costs	• transport and lunch costs
	"I think they should be providing us with transport and accommodation those not staying near the place of work".	• provide transport and accommodation	• provide transport and accommodation
Participant 2	"..a lot of responsibilities with our extended families. So for somebody to come here, rent a house, have transport money, have food with that number of people, I think it's very difficult. So some people would rather go somewhere, where you can get some more money so that they can be able to support the other people".	• responsibilities; extended families	• responsibilities • extended families
	"the government can rent the houses for doctors but for the nurses they don't".	• government paying house rent for medical doctors	• government paying house rent for medical doctors
	"they should consider offering us houses as well not just doctors".	• offer houses	• houses for nurses
Participant 3	"they have to find out; what's the current accommodation, the basic accommodation that somebody can have, and how much of your salary goes to accommodation…"	• accommodation expenses	• accommodation expenses
	"the government should increase our salaries so that we can afford private rentals because they are so high".	• increase salaries	• increase salaries
Participant 4	"..we are all same graduates but government would propose to say we will rent a house and pay for it for a medical officer. Then a registered nurse who has that same bachelor's degree as well, they are not".	• renting a house for medical officer not nurse	• renting a house for medical officer not nurse
	"It is the government responsibility to ensure that nurses are in institutional houses and that they houses are well maintained".	• provide nurses with institutional houses	• provide nurses with institutional houses
Participant 5	"..if maybe there were institutional houses for everyone where maybe yea it can help and many people can get retained".	• more institutional houses	• more institutional houses
	"It is very important to us if the government could build more houses for us and other care professionals and that way we would not think of leaving".	• build more houses	• build more houses
Measures implemented by government to retain registered nurses: The participants corroborated there was none			

The data illustrates that nurses spend a lot of money on transport to and from work mostly if they are not staying in an institutional house near the health facility. Some doctors and medical officers are offered a priority to occupy institutional houses leaving the nurses out, as the houses are in short supply so this inequality frustrates the nurses. The data also shows that nurses spend more money on lunch as meals are not provided for nurses and other health care professionals. Some nurses have extended families so with the little salary that they get, cannot afford to support their families.

To minimise or mitigate brain drain, there is need for provision of transport and accommodation to nurses who are not living near the hospital facility. The data also indicates that the government should build more institutional houses for nurses as private rented houses are expensive.

4.2.4.5 Focus Group Discussion Two with Nurses: Social Factors

Table 4-54 Focus Group Discussion Two: Social Factors

Focus Group Discussion Two with Nurses from MZCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"..we knock off burn out because of a lot of work. We need something that can may be motivate us to say; I relaxed, we need relaxation equipment like may be gym somewhere, allow us to have a social club; netball, football, but that unless you join other communities".	• knock off burn out; a lot of work	• knock off burn out due to heavy workload
	"if it was possible to have leisure facilities or call it a social club".	• leisure facility	• provide leisure facility
Participant 2	"..we don't find time to exercise, time to do some social activities. I think that is also impacting negatively to our health".	• no time for social activities	• no time for social activities
	"we could have that facility here may be like a gym, a football club, a netball club".	• gym, football and netball clubs	• provide gym, football and netball clubs
Participant 3	"…here in Malawi most hospitals have inadequate housing for staff".	• inadequate staff houses	• inadequate staff houses
	"..I think if they can build more houses in the hospitals, it can cover up".	• build more houses	• build more houses
Participant 4	"…because of the workload, we miss the opportunities to meet with our friends. We find that there is a lot of work to do and there is nobody to do that work".	• work overload	• work overload
	"the government should be training more nurses to reduce the shortfall".	• train more nurses	• train more nurses
Measures implemented by government to retain registered nurses: Houses built under Umoyo house project in rural areas.			

Based on the data, it reveals that, work overload, the lack of social activities and inadequate institutional houses are factors that cause nurses to contemplate leaving their jobs. The shortage of institutional houses frustrates nurses as they spend more money on transport so increasing transport fares matter to nurses, especially in the context of oil price increases. To minimise brain drain, the government was building houses in rural areas for nurses under Umoyo house project to reduce the housing problem. However, the houses were not enough considering the population of nurses who desperately need them.

The data shows that there is need for government to come up with leisure centres with gym equipment for nurses and other healthcare professionals to use. In addition, the government should train more nurses and build more houses for them.

4.2.4.6 Focus Group Discussion Three with Nurses: Social Factors

Table 4-55 Focus Group Discussion Three: Social Factors

Focus Group Discussion Three with Nurses from KCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"..comes from college and he is there with all those responsibilities".	• responsibilities	• responsibilities
	"we need better salaries than what we are getting now as things have gone up too".	• better salaries	• better salaries
Participant 2	"corruption is just too much in most Ministries. As such, our Ministry of Health is suffering. We are not able to get our required monthly allocation because the government does not have enough money. As a result hospitals are suffering in terms of resources".	• corruption; government does not have enough money	• corruption and government does not have enough money
	"the best the government could do is to arrest those people involved in corruption because our Ministry among others is suffering yet we deal with people's health".	• arrest involved in corruption	• government action
Participant 3	"Malawi is a poor country so we nurses it is better to go to UK and make money there and build houses here back home. It's hard to build a house with our current salaries".	• Malawi poor country; hard to build a house with current salaries	• Malawi poor country; hard to build a house with current salaries
	"we could be given soft loans to build our own house it doesn't matter the size of it but you know it's yours. That would make us satisfied".	• soft loans	• soft loans
Participant 4	"..you have to deal with a ward which has may be 80 patients and you are just by yourself, but you really want to help each and every person there but all yourself you can't. Eventually you end up emotionally traumatized..."	• work pressure	• work pressure
	"recruiting enough nurses to reduce workload would be a better strategy than killing ourselves with work".	• recruiting more nurses	• more nurses recruitment
Participant 5	"…a senior nurse like me. If you ask me how many accessories I have in terms of housing, business, whatever. Yet I have worked for many years but I don't have because, I was busy making sure that I educate my children and I should also care for other dependants. So it's quite a shame that at this point of time, I should be building a house now, I should have built that house 15 or 20 years ago".	• do not have a house or business	• do not have a house or business
	"…accessibility to house loans.."	• access to house loans	• house loans
Participant 6	"I have never heard that now we are starting with surgical department, each and every employee working for surgical department should go for chest x-ray, thorough medical examination and what have you".	• no medical examination	• medical examination not provided
	"they should go for chest x-rays…"	• chest x-rays	• chest x-rays
Measures implemented by government to retain registered nurses: The participants corroborated there was none.			

The table above reveals that the nurses have responsibilities that originate from extended families so the salaries that they get are not enough to build a house. The government seems does not have enough money due to corruption in some government Ministries. The nurse

participants and key informants have also frequently mentioned this. The nurses have no mandatory medical check-up in the line of duty so this also frustrates them and consider leaving the public sector. This collaborates Bradby's (2014) observation that there is the high prevalence of AIDS in developing countries.

The data illustrates that there is need to increase salaries for nurses in order to minimise or mitigate brain drain. The focus group three also proposed that nurses should be offered loans to enable them to build a standard house before they retire. In addition, there should be chest x-ray routine check-ups for nurses to make sure they are in good health.

4.2.5 Exploring Education Factors

From the literature review, Education factors include training, education standards and underutilized skills. These are the three child nodes under the parent nodes of education factors (See Table 4-1).

4.2.5.1 Semi-Structured Interviews with Nurses: Education Factors

4.2.5.1.1 Training

Table 4-56 Interviews with Nurses: Training

Training (EF1) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"there must be at least some refresher courses so that we can manage the patients well but lack of training is also one of the factors that affect brain drain with the registered nurses…. they say you have to choose one either school or job so it becomes a dilemma and you see that most the people running away because of that".	• refresher courses; lack of training	• refresher courses; lack of training
		"…send more registered for further training like Master's Programme at Kamuzu College of Nursing or abroad. Refresher course is also one way that could be taken into consideration".	• further training; refresher courses	• training and refresher courses
	2	"..some registered nurses may upgrade themselves but thinking of the salaries that they get it's peanuts…"	• upgrade but low salary	• upgrade but low salary
		"They should adjust salaries after achieving a higher qualification".	• adjust salaries	• adjust salaries
	3	"where I work I have never seen any training taking place. I have been there since 2012 but no training to date. In my case, I moved from labour ward to Paediatric Ward I did not go for any training".	• lack of training	• lack of training
		"they should be sending more nurses to pursue Masters programmes anywhere".	• send more nurses on Masters programmes	• send more nurses on Masters programmes
2	4	"basically some of them have been withdrawn from that institution (Kamuzu College of Nursing). They are claiming to say that there is no fees".	• nurses withdrawn from KCN	• nurses withdrawn from KCN

		"when somebody is applying for education, there should be a written document placed to say; we agree that this person is really eligible to go for advancement".	• written document	• written document
	5	"..sometimes dealing with too many people, too many students with you having a lack of control will just stress you out".	• dealing with too many people and students	• too many students to supervise
		"..nursing schools should also bring the ideal numbers because you don't want to just bring in all those students and then at the end of the day they are not learning anything".	• training small group of student nurses	• training small group of student nurses
	6	"…we are told that the training section of the Ministry I think due to the financial problems that the country is going through, maybe there are few scholarships that are there for nurses to further their education. So it means the nurse who would like to go to school will be hindered.."	• financial problems; few scholarships	• financial problems and few scholarships
		"..source for funds for training of the nurses".	• need to source funds	• need to source funds
2	7	"people get frustrated because the government says they don't have money for that like to train us for postgraduate studies".	• government has no money	• government has no money
		"government should still pay for those ones who have found their own means for further studies".	• government to pay for further studies	• government to pay for further studies
	8	"nurses take time to go on refresher courses".	• take time to attend refresher courses	• take time to refresher courses
		"nurses should not take a long time before they go for refresher course".	• refresher courses	• refresher courses
	9	"..when one goes to the university, you expect when you come out you get good money or you work under good conditions, but you find our environment leaves you with a lot to be desired".	• expect good money	• expect good pay
		"..when we upgrade they should adjust our salaries".	• adjust salary after upgrading	• salary adjustment after upgrading
4	10	"..you get a scholarship you go for further studies, they will actually scrap you from the payroll. So they will move you from the pay roll… people would want actually, they would rather prefer to join an NGO or go somewhere else, raise some funds so that they can pay fees for themselves".	• removed from pay roll	• removed from pay roll
		"..stop removing us from pay roll if we go for further training using our own money or sourced scholarship on our own".	• stop removing from pay roll	• not to remove from pay roll
	11	"…you come to work and no refresher courses, there are no any other training that can boost your career".	• no refresher courses	• no refresher courses
		"there should be improvement in training of nurses, need refresher courses".	• refresher courses	• refresher courses
	12	"lack of training opportunities".	• lack of training opportunities	• lack of training opportunities
		"there is need for government to give more training opportunities to nurses to develop skills and knowledge".	• more training opportunities	• more training opportunities
5	13	"..lack of training for the nurses".	• lack of training	• training
		"..adequate funds for trainings, it could help us. You know even if you have got more frequent training…"	• funding for training; frequent training	• funding and frequent training
	14	"lack of training, you will find that the person has worked for many years but without doing further training. But also it takes, of course the government provides training opportunities but it takes many years for one to be recognized to go for further education".	• years without further training	• further training

		"the government should also at least put in place or remove those restrictions on scholarships that are personally obtained".	• remove restrictions	• removal restrictions
	15	"nurses need to grow, they need to develop professionally".	• nurse development	• nurse development
		"..government has to consider scaling up the sponsorship".	• scaling up sponsorship	• scaling up sponsorship
6	16	"..when you are in government, you are not given a guarantee. You are given a chance to go to school but you are not given a guarantee for school fees. And the issue when you find your own money, taking you off the pay roll it's adding to why really why you want to go".	• removed from pay roll	• removed from pay roll
		"..it does not motivate nurses if they are stopped from getting salary because they sourced their own funding to undertake further training".	• not stopping salary	• not stopping salary
	17	"the majority of the people are being removed from pay roll for example as a nurse I have decided to go and do Masters in Public Health am supporting myself then automatically I have to get out of the payroll system so you can see how hard it is".	• removed from pay roll	• removed from pay roll
		"..government should be looking for scholarships so they can be offering to the registered nurses".	• offer scholarships	• offer scholarships
	18	"lack of training in terms of like nowadays if we want to upgrade they say we are going to be removed from pay role…. there is also favouritism when choosing nurses to attend training because they choose some who have already attended other training yet others have not attended even a single one".	• removed from pay roll • favouritism	• removed from pay roll • favouritism
		".. giving scholarships to nurses who want to go and further their studies… should not be any favouritism when choosing nurses to go and attend further training".	• give scholarships; no favouritism	• provide scholarships without favouritism
Measures implemented by government to retain registered nurses: Sometimes the government sends nurses for higher education but the number is small; The government is in operation relationship with other governments offering scholarships but they are just few nurses who benefit.				

Based on the data analysis shown in the table above, it seems that nurses consider leaving because refresher courses are not available, lack of training opportunities, and availability of few scholarships provided by Malawi government. Although the government is in operation relationship with other governments like China offering scholarships to nurses but there are few nurses who benefit from the scholarships. The lack of training finding concurs with researchers (Rasool et al., 2012). The data also illustrates that the nurses are removed from pay roll mostly if they find a scholarship on their own. However, some participants indicate that the opportunities for in service training were available but there was favouritism in the choice of nurses to attend training as it was the same nurses who were chosen to go for in service training.

The data illustrates that there is need for nurses to have regular refresher courses. In addition, there should not be any favouritism because they were the same nurses who attend in-service training. The government should secure funding to enable more nurses to upgrade their qualifications. The nurse participants proposed that management should revise the training

policy to avoid removing the nurses from pay roll when they secure a scholarship independently.

4.2.5.1.2 Education Standards

Table 4-57 Interviews with Nurses: Education Standards

Education Standards (EF2) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"…lack of access to research. It is very important that they involve us registered nurses in research so that we can at least gain more knowledge. There is also misallocation of nurses".	• lack of access to research • misallocation of nurses	• lack of access to research • misallocation of nurses
		"we should also be actively involved in research to develop our knowledge and skills".	• involve nurses in research	• involve nurses in research
	2	none	• none	• none
	3	"you start organizing training for them they tell you we don't have money".	• no money for training	• no money for training nurses
		"..government responsibility to ensure that there is enough funding for nurses to go for training".	• ensure funding is available	• ensure funding is available
2	4	none	• none	• none
	5	"I am also expected to look after 35, 30 students and those students in their heads have been told in their schools that the nurse in charge knows everything. So they will always come to you asking questions".	• supervising many students	• supervising many students
		"..they should make sure they put them in various hospitals, we don't want all their students".	• put student nurses in various hospitals	• put student nurses in various hospitals
	6	"..the registered nurses undergo in Malawi, I think it's accepted in almost every corner of the world. So it means if the nurses are educated in Malawi, she or he will be marketable elsewhere".	• Malawian nurses acceptable	• Malawian nurses acceptable
		"..they are moving out of the profession going for another profession because there is no opening here where they can go for a nursing course".	• provide opening for upgrading	• provide opening for upgrading
3	7	none	• none	• none
	8	"..they have introduced this adult nursing and education that's all. The other areas are not explored. Whereas you know in medicine, the field is just vast from head to toe, you can be neurological nurse, ear nose throat nurse, dialysis nurse, orthopaedic nurse, dermatology nurse…"	• other nursing areas not explored	• other nursing areas not explored
		"they have done Masters in Business Studies or something like that because they just want to get away from the hospital or health".	• want to get away from health	• want to get away from health
	9	none	• none	• none
4	10	none	• none	• none
	11	"..lack of access to research; it seems there is no funding for research".	• lack of research	• lack of research
		"there should be enough funding in research and get nurses take part".	• provide enough funding	• provide enough funding
	12	"..we only have one school which all registered nurses go for upgrading, which is only the KCN. and at KCN there are few programs…"	• only KCN for upgrading	• only KCN for upgrading

		"there should be money special for conducting research in the hospital".	• provide money for conducting research	• provide money for conducting research
5	13	none	• none	• none
	14	none	• none	• none
	15	"..one will be forced to look for type of job that will accommodate her in terms of upgrading…"	• upgrading	• upgrading
		"they need to increase specialization programmes for nurses".	• increase specialization programmes	• increase specialization programmes
6	16	"the availability of institutions, we really have limited institutions one would want to go may be to study because what we know is KCN which is doing PhD as of now".	• limited institutions	• limited institutions
		"the Ministry should consider building more nursing schools in Malawi".	• build more nursing schools	• build more nursing schools
	17	none	• none	• none
	18	".. these trainings most of them sometimes we do them right here in the hospitals so if you are not picked on that you will find that even your skills and knowledge are not up to the standard".	• skills and knowledge not up to-date	• skills and knowledge not up to-date
		"…increase the number of institutions which could help with higher education".	• increase institutions	• increase institutions

The analysis of data shows that nurses consider leaving because most of the time nurses are not involved in carrying out research, hence they do not develop their research skills and knowledge. In addition, there is only one nursing institution thus Kamuzu College of Nursing in Malawi where nurses can pursue postgraduate studies and the areas of specialisation are few. Due to shortage of staff, nurses despite their areas of specialisation work in any ward or any part of the hospital. This also frustrates nurses and leads to loss of them.

The data shows that nurses should be more involved in research whether funded by Malawi government or donors to develop their skills and knowledge. There is also need for government to build more nursing institutions and introduce more specialisation programmes. This could also be another way of mitigating brain drain among nurses.

4.2.5.1.3 Underutilised Skills

Table 4-58 Interviews with Nurses: Underutilised Skills

Underutilised Skills (EF3) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"there is also misallocation of nurses in most wards".	• misallocation of nurses	• misallocation of nurses
		"nurses should also be allocated to wards in line with their areas of specialization".	• allocated nurses to their specialization	• allocated nurses to their specialization
	2	"..you are not recognized at all to say this one is highly educated".	• no recognition	• no recognition
		"if the ones that have upgraded themselves if they would be recognised…"	• recognition of nurses	• recognition of nurses

	3	"sometimes it happens that one has been moved from one department to the other anyhow".	• moved between departments	• moved between departments
		"if there is any job rotation, it should be done based nurse's expertise".	• job rotation on expertise	• job rotation on expertise
2	4	"..a number of them have come back because there is no fees".	• no fees	• no fees
		"if you are going for advancement, they should be honest, and they should honour what they have said".	• advancement • honest	• advancement • honest
	5	none	• none	• none
	6	"..if you are going for another course in another field, maybe same health but another field you might be asked to resign".	• asked to resign course in another field	• asked to resign course in another field
		"…when we go for upgrading and we return we remain in the same grade so we are not fully utilized".	• not fully utilised after upgrading	• not fully utilised after upgrading
3	7	none	• none	• none
	8	none	• none	• none
	9	"there is a problem with lack of resources when it comes to education standards as we are required to use resources during our training in wards like curtains for privacy and suction machines".	• lack of resources	• lack of resources
		"nurses should also be placed in wards that they have experience in not for the sake of posting someone and equipment must be available to use".	• experience	• experience
4	10	"..you can't maximize the skills and knowledge that you have because there is no equipment".	• no equipment	• no equipment
		"..ensure that, that particular person comes back and put that knowledge and skills into practice by ensuring that he or she works at an institution where there is equipment.."	• ensure institution with right equipment	• ensure institution with right equipment
	11	"..there are no any other training that can boost your career".	• no training to boost career	• no training to boost career
		"…recognising all nurses and send us to attend training in line with training plan".	• recognizing nurses	• recognize nurses
	12	"…there is much shortage there, so sometimes the misallocation may frustrate someone. You may be frustrated and say; well this is not what I did. Instead you try to think like; let me move to where I think I can work according to what I got trained in".	• misallocation	• misallocation
		"…nurses have different expertise so they should work in those wards according to their expertise…"	• work in wards according to expertise	• work in wards according to expertise
5	13	none	• none	• none
	14	"we do not have equipment so we cannot fully utilize our skills".	• no equipment to fully utilize skills	• skills not fully utilized due lack of equipment
		"our skills are not being put to good use because we lack equipment to use".	• lack equipment	• lack of equipment
	15	"nurses do not have equipment to use after studies so their skills are not fully utilized".	• no equipment	• equipment
		"regardless of whether one has upgraded or not, we all remain in the same grade and responsibilities are more or less the same, so we are being underutilized".	• same responsibilities after upgrading	• same responsibilities after upgrading
6	16	"nurses skills not fully utilized due to inadequate resources".	• inadequate resources	• inadequate resources

		"..when we acquire new qualifications like Masters and when you return you discover that what one was doing in the past few years has not been put to good because there is no equipment".	• no equipment	• no equipment
	17	"..the government is not supporting anyone who is going for further studies".	• government not supportive	• government not supportive
		"..review salaries because if you get If you are well paid you are able to manage to do some savings so that you can support yourself in future for further studies".	• review salaries	• review salaries
	18	"some of us have experience in specific areas but they send you to work in award which you are not an expert simply because we are understaffed".	• no expertise considered	• no expertise considered
		"despite the shortage of nurses, allocation of nurses in wards should go with their skills and knowledge in a particular area".	• allocate nurses according to skills and knowledge	• allocate nurses according to skills and knowledge

As the above table illustrates it seems there is misplacement of nurses in different wards. The experience of nurses for hospital wards is different but due to the shortage, the nurses are told to work in any ward. In addition, it seems the nurses are not fully utilising their skills due to inadequate resources.

The nurses proposed that management should be allocating nurses according to their expertise. It was also proposed that when nurses achieve a higher qualification they should be considered for a promotion and ensure that the equipment is available.

4.2.5.2 Semi-Structured Interviews with Key Informants from Hospital: Education Factors

4.2.5.2.1 Training

Table 4-59 Interviews with Key Informants from Hospitals: Training

Training (EF1) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"..there are a lot of opportunities for nurses further education as compared to a lot of other cadres".	• a lot of opportunities for further education	• a lot of opportunities for further education
		"..government introduced PhD programmes for nurses which is a good thing and standards are good".	• PhD programmes introduced	• PhD programmes introduced
2	2	"…previously it was the issue of scholarships….now when our opportunities have come in, and then people see that there is no need for them to go out because the opportunities are now available".	• scholarship opportunities available	• scholarship opportunities available
		"..nurses are able to upgrade".	• able to upgrade	• able to upgrade

3	3	"..the trainings were very scanty, but now at least they have improved, nurses do attend training".	• nurses attend training	• nurses attend training
		"nurses are able to achieve higher qualifications".	• achieve higher qualifications	• achieve higher qualifications
4	4	"…upgrading is being done and even the Ministry has supported in conjunction with other partners like; USAID; they have provided scholarships, NAC and many others. When you go to the Ministry they will say; we don't have scholarships. And this person has made initiatives, so why should she be removed from the pay roll? I think somehow the government is losing out."	• USAID provide scholarships • no government scholarships • nurses removed from pay roll	• USAID provide scholarships • no government scholarships • nurses removed from pay roll
		"..people should be upgraded at the younger age so that they should be productive".	• upgrade at younger age	• upgrade at younger age
5	5	"lack of government scholarships, and being cut from the pay roll when you go to school".	• lack of government scholarships • being cut from pay roll	• government scholarships • removal from pay roll
		"they should not be removed from the pay roll in case you find your own scholarship".	• not remove from pay roll	• not remove from pay roll
6	6	"I think training policy that we have because some of the people are not allowed due to policy that we have now".	• training policy	• training policy
		"…they should be encouraged to go and their salaries should not be stopped because they will still return to same government".	• not stopping salaries	• not stopping salaries
Measures implemented by government to retain registered nurses: The majority mentioned that the government provides scholarships. However, they are few scholarships because of the economic challenges the country is facing.				

The data in the above table illustrates that nurses have opportunities to upgrade because they are able to get scholarships from international organisations such as United States for International Development (USAID) and National Aids Commission (NAC). The government of Malawi provides scholarships to nurses but they are few because of financial difficulties the country is facing. Findings from existing research on push factors Rasool et al. (2012) state that, the education standards in some developing countries have declined. The data also seems to show that the government removes nurses from pay roll when they secure a scholarship on their own so this frustrates nurses.

From the data presented in the above table, the majority of key informants eluded that nurses in Malawi are able to upgrade to achieve higher qualification. For example, the government of Malawi introduced a PhD program, so this could indicate a commitment of the government for nurses to upgrade themselves. According to the key informants from the hospital, training is not a determining factor of brain drain. However, this is contrary to the views of the majority of nurses. However, the key informants proposed that the nurses should be maintained on the pay roll even if they secure a scholarship independently. This concern is also consistent with what the majority of nurses articulated. One key informant expounded that when the

government sends nurses for further studies, they should ensure that the nurses are at a young age.

4.2.5.2.2 Education Standards

Table 4-60 Interviews with Key Informants from Hospitals: Education Standards

Education Standards (EF2) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"..to some extent the nursing career is one of the well planned up careers in the country because I think they have even introduced PhD and a lot of nurses are going for further studies".	• introduced PhD	• introduction of a PhD programme
		"…we have a PhD programme being offered it means things are going in the right direction. They just need more competent lecturers to deliver".	• more competent lecturers needed	• more competent lecturers needed
2	2	"..people would rather go outside by their own to go there work and then maybe if possible they upgrade themselves".	• work and upgrade	• work and upgrade
		"some nurses go to UK to work and study at the same time but it could be difficult to do that on your own".	• work and study	• work and study
3	3	"nurses get support in terms of education standards we have experienced lecturers in nursing".	• experienced lecturers	• experienced lecturers
		"..we have lecturers here who are competent to teach at masters level".	• competent lecturers	• competent lecturers
4	4	"if you go to KCN in masters class, you will find that there are very very young women in their late twenties, early thirties taking their masters unlike in the past".	• masters class young women	• masters class young women
		"..they can be maintained on the bond it's up to them but let people go for further studies".	• maintained on bond	• maintained on bond
5	5	"..the Ministry would pay for you, but nowadays you have to pay. As of now masters is funded by partners and not from the Ministry. So things have become worst, very worst".	• masters funded by partners not government	• masters funded by partners not government
		"..nurses should be funded by the Ministry whenever you want to go for upgrading whenever you want to go for upgrading".	• Ministry to fund nurses	• Ministry to fund nurses
6	6	"the government should come up with a number of specialisation courses for nurses to have a wider choice because this makes them leave".	• lack of specialisation courses	• lack of specialization courses
		"…if they could introduce many specialisation courses in our institutions".	• introduce specialisation courses	• introduce specialisation courses

The data shows that the government introduced PhD programmes so nurses are able to upgrade themselves. The government has experienced lecturers who are capable of teaching at both Masters and PhD levels. However, the drawback is that there are few areas of specialisation for nurses so this does not give them a wider choice and leads to brain drain, as the opportunity is not available in Malawi. This concurs with what nurse participants also mentioned.

From the data analysis, it seems there are competent lecturers at Kamuzu College of Nursing so that would not be the reason for brain drain among nurses. However, there is need for the government to introduce more specialisation programmes at Kamuzu College of Nursing so that nurses could have a wider choice of programmes. This concurs with the views of the nurses.

In terms of minimising the brain drain of nurses, the government should be strict with bonding contracts whenever a nurse secures a scholarship. However, one key informant had a different opinion that nurses would still go abroad like to the United Kingdom because they know they would be able to work and study at the same time. One key informant emphasised that it is the responsibility of the Ministry of Health to ensure that the nurses are getting support on merit with securing scholarships. There is also need for government to build more nursing institutions for postgraduate studies.

4.2.5.2.3 Underutilised Skills

Table 4-61 Interviews with Key Informants from Hospitals: Underutilised Skills

	Underutilised Skills (EF3) – Interviews with Key Informants from Hospitals			
Hospitals	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"the problem could be lack of equipment to use after upgrading due in adequate funding in hospitals..."	• lack of equipment	• lack equipment
		"we have a diverse and skilled workforce within the health facility, but sometimes we lack the tools to drive improvement so they should be provided to maximise our skills".	• provide tools	• provide tools
2	2	"..they are moving out because of the grading system that they are still putting on the same grade like the nurse midwife technician".	• put in the same grade	• put in the same grade
		"some nurses of course are not released, to carry out basic training, as management simply don't have the funds or capacity to release people".	• no funds for basic training	• no funds for basic training
3	3	"allocation of nurses is based on the needs of the hospital and availability of nurses".	• needs of hospital and availability of nurses	• needs of hospital and availability of nurses

		"although there is a shortage of nurses we allocate them according to the needs of the hospital not necessarily for the individual".	• allocation needs of hospital	• allocation needs of hospital
4	4	"masters actually doesn't change your position, it doesn't change your salary unless you wait for an advertised promotion and you don't know when, but it doesn't automatically change your status when you come back from school".	• masters doesn't change salary and position	• masters doesn't change salary and position
		"nurses are not promoted automatically when they achieve a higher qualification because it is not the responsibility of hospital management but Health Services Commission".	• promotion not automatic	• promotion not automatic
5	5	none	• none	• None
6	6	"in adequate resources also is another point whereby nurses are not able to utilize their skills".	• inadequate resources	• inadequate resources
		"every morning allow staff to raise any concerns that they may have had from the day before and then work to sort those concerns out. The results should then circulate to all of the practice staff so that everyone remains up to date. There is also need to supply nurses with enough equipment".	• allow staff to raise concerns; supply enough equipment	• allow staff to raise concerns; supply enough equipment

The data illustrates that when nurses return to work after upgrading their qualifications to a higher cadre, they face the challenges of equipment so their skills are not fully utilised and they get frustrated. In comparison with nurse participants' interviews, they mentioned that there is misplacement of nurses in different hospital wards because the allocation of nurses is based on the needs of the hospital. Nurses also become frustrated because after upgrading themselves they remain in the same grade. However, a response from one key informant indicates that there is no system in place for staff to receive a promotion straight away after upgrading their qualifications. However, the hospitals do not have the authority to promote staff because the Health Services Commission is responsible for the promotions of nurses.

From the data presented in the above table, the key informants had different opinions on the underutilised skills. Two key informants illuminated that brain drain would be mitigated if nurses were provided with resources to perform their clinical duties. This is consistent with what the majority of nurses also elaborated. Another key informant highlighted that although there could be economic challenges, training is important for nurses to develop their knowledge and skills. Another key informant mentioned that when nurses achieve a higher qualification, they should be promoted to mitigate brain drain. During interviews with nurses, it was revealed that, some nurses remain in the same grade with the same duties when they achieve a higher qualification so their skills become underutilised. Another key informant with a different opinion mentioned that every morning nurses should be allowed to raise any

concerns that they may have had from the day before and then work to sort those concerns out so that everyone remains up to date.

4.2.5.3 Semi-Structured Interviews with Key Informants from NMCM, CHAM and MOH: Education Factors

4.2.5.3.1 Training

Table 4-62 Interviews with Key Informants from NMCM, CHAM and MOH: Training

Training (EF1) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"…one of the areas that has improved a lot is nursing because most of the nurses have been supported for upgrading themselves, career progression. So this is one of the areas that in terms of government it has been given a plus".	• nurses have been supported for upgrading	• nurses have been supported for upgrading
		"..most of the nurses were and are being supported for upgrading themselves".	• nurses supported for upgrading	• nurses supported for upgrading
CHAM	2	"lack of career progression due to lack of scholarships to upgrade is one of the issues".	• lack of career progression • lack of scholarships	• lack of career progression • lack of scholarships
		"government should provide more scholarships to nurses to develop their skills and knowledge".	• provide more scholarships	• provide more scholarships
MOH	3	"…curtailment of scholarships to needy students".	• curtailment of scholarships	• curtailment of scholarships
		"government should introduce a transparent system of identifying needy students to be awarded scholarships".	• transparent system	• transparent system

From the data presented in the table above, a key informant mentions that nurses are supported with upgrading of their qualifications to a higher cadre. On the other hand, two other key informants mention that nurses seriously contemplate leaving their jobs because of curtailment of scholarships in Malawi. This confers with what the majority of nurses and key informants from hospitals also highlighted.

The data illustrates that in order to mitigate brain drain, the government should provide more scholarships to nurses to enhance their learning. The government could also introduce a transparent system of identifying needy students and offer them scholarships. This verifies what the majority of nurses had highlighted.

4.2.5.3.2 Education Standards

Table 4-63 Interviews with Key Informants from NMCM, CHAM and MOH: Education Standards

Education Standards (EF2) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	" if scholarship is not related to nursing nurses are removed from pay roll.."	• scholarship not related to nursing	• scholarship not nursing related
		"nurses are able to pursue Masters and PhD programmes in Malawi".	• pursue Masters and PhD programmes	• pursue Masters and PhD programmes
CHAM	2	"there is only one college KCN which can train them into other specialties".	• one college offering specialties	• one college offering specialties
		"…increase the number of institutions which will train specialty cadres".	• increase institutions	• increase institutions
MOH	3	"in adequate health training institutions".	• inadequate health training institutions	• inadequate health training institutions
		"increase the number of health training institutions and expand space existing ones".	• increase training institutions; expand space	• increase training institutions; expand space
Measures implemented by government to retain registered nurses: Nurses are supported to upgrade and their salaries are not removed from pay roll if they follow the procedure.				

As the table above shows, the nurses are removed from pay roll if their chosen programme is not related to nursing career. The nurses are required to follow the public service training guidelines and procedure in the Ministry of Health. The data also shows that there is only one institution namely Kamuzu College of Nursing which provides specialisation programs so this frustrates nurses and leads to loss of them.

From the data presented in the above table, nurses are able to upgrade to Masters and PhD programmes. This is consistent with what two key informants from hospitals also mentioned that there are competent lecturers at Kamuzu College of Nursing so that would not be the reason for brain drain among nurses. Two key informants highlight the need to increase the number and expansion of nursing institutions in Malawi.

4.2.5.3.3 Under Utilised Skills

Table 4-64 Interviews with Key Informants from NMCM, CHAM and MOH: Underutilised Skills

Underutilised Skills (EF3) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"..government has tried to maintain nurses within the hospitals because they know when I'm in government I will be sponsored to go for further education".	• government has maintained nurses	• government has maintained nurses
		"some nurses realise that eventually they get a scholarship if they don't leave".	• they get a scholarship	• they get a scholarship
CHAM	2	"after training nurses are required to work in areas of their specialties but sometimes it does not work like that due staff shortages".	• staff shortage	• staff shortage
		"putting nurses in places according to their expertise would motivate them".	• expertise	• expertise
MOH	3	"some nurses are not doing the work for which they were trained, i.e. nursing the patients. They are either made coordinators of some vertical programs such as Malaria Control Program and this demotivates others who are overworked and end up leaving the system".	• not doing work trained for	• not doing work trained for
		"nurses ought to do the job they were employed for instead of moving them to other jobs not related to nursing".	• nurses to do jobs employed for	• nurses to do jobs employed for

The data shows that nurses feel their skills are underutilised because nurses do not always work in wards or sections that they have experience in due to nurse shortages. In some cases, nurses are not doing the work for which they were trained instead they are made as coordinators of some projects so this frustrates other nurses and consider leaving the system because of work overload.

From the data presented in the above table, one key informant articulated that some nurses realise that they would get a scholarship at some point while working for the government so they would not consider leaving as their skills could be utilised. Two key informants expounded that brain drain would be mitigated if the nurses were allocated to departments according to their expertise. This also concurs with what key informant from hospitals and the majority of nurses illustrated during interviews. In this light, underutilized skills are seen as an important factor and consistent with the literature (Slote, 2011).

4.2.5.4 Focus Group Discussion One with Nurses: Education Factors

Table 4-65 Focus Group Discussion One: Education Factors

Focus Group Discussion One with Nurses from QECH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"..you wait for interviews to come, others it's just automatic promotion. And they even jump from one grade to another grade, even other grades here, with so many benefits attached. These issues really make people really move out".	• you wait for interviews others it's just automatic promotion.	• automatic promotion
	"it is better if people were promoted on merit not favouritism".	• promote on merit ; favouritism	• promote on merit ; favouritism
Participant 2	"..the current situation is like they have banned everybody from education, it means, with the current situation there is nothing like advancement. So it wasn't sustainable".	• no education advancement	• no education advancement
	"..training plan that the Ministry has, has to be clearer" "It would help a great deal if nurses were put in right wards in line with their knowledge and skills instead of forcing them where they are not good at".	• clear training plan • put in right wards in line with knowledge and skills	• clear training plan • put in right wards in line with knowledge and skills
Participant 3	"..people just go to the Ministry and they are told by mouth; you can go. They come back here and they go back to school, they start their academic process, the HR comes and stops them, their salary is freezed. How can somebody help themselves?"	• HR freeze salary	• HR freeze salary
	stopping ones salary because he or she is going for further studies is not on".	• no stopping salary	• no stopping salary
Participant 4	"..there are no scholarships from the government for individuals to go to school. So that's another area that somebody might want to say; I just need advancement, definitely the best thing to do is to quit this job and go elsewhere…".	• no scholarships	• no scholarships
	"..government could do is work with international partners to fund nurses to achieve higher qualifications to develop their skills and knowledge".	• government to work with international partners	• government to work with international partners
Participant 5	"just last week, one of my own nurses cleared to pursue master's degree and she is back saying; there is no funding for you….let's say they find greener pasture they will go and get that".	• no funding	• no funding
	"the government must show its commitment by funding nurses for masters programmes we need to grow academically".	• government to funding nurses	• government to commitment
Measures implemented by government to retain registered nurses: The participants corroborated there was none.			

As shown in the table above, it seems some nurses after attaining a higher qualification, they get promotion without attending any interviews while some are required to attend interviews organised by the Health Services Commission, so this frustrates nurses because of inequality. The nurses also consider leaving their jobs because of the lack of scholarships. In addition, when nurses find a scholarship through their own means they do not go on a paid study leave so they are removed from pay roll.

To minimise the brain drain, the data shows that nurses should promoted on merit. Training plan for further studies should be clearer on funding nurses. The focus group one also proposed that assigning nurses in departments in line with their individual knowledge and skills would motivate the nurses. According to Reitz (2005), Alcobendas and Rodriguez-Planas (2009) education and skills may be underutilised in the host country. This also concurs with what the majority on nurses and some key informants had mentioned. The focus group also expounded that nurses' salaries should not be stopped whether they go for further studies on self-funding or secured a scholarship independently. This is also consistent with what the majority of nurses and some key informants had highlight. One participant alluded that the government should be in operation relationship with international partners to fund nurses for higher qualifications. The government should show its commitment to fund nurses for Masters programmes.

4.2.5.5 Focus Group Discussion Two with Nurses: Education Factors

Table 4-66 Focus Group Discussion Two: Education Factors

Focus Group Discussion Two with Nurses from MZCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"..limited choices on specialisation, we have very minimal if we compare with others outside the country in the nursing profession. I get trained in paediatrics" . "I work may be in antenatal. They don't bother whether you have gone to school for specialty and they don't even know the specialisations itself". "..it becomes very demotivating for the registered nurses may be to colleagues with a diploma, to get the same salary, to be on the same grade with somebody who is nurse midwife technician".	• limited choices of specialisation • specialization • demotivating get same salary	• limited choices of specialization • no allocation of nurses according to specialization • same salaries different qualifications
	"they need to introduce more specialization programmes at KCN".	• introduce more specialization programmes	• introduce more specialization programmes
Participant 2	"…everybody should actually look for their funds. So it's challenging for people who come from may be poor families if you had wishes to become registered nurse, so it's challenging".	• challenging to look for funding	• challenging to look for funding
	offering enough nurses scholarships and not remove them from pay roll".	• offering nurses scholarships	• offer nurses scholarships
Participant 3	"..this time around, for the registered nurses who are just finishing their studies, I think it is challenging in the sense that they don't get employed immediately, there is a delay in recruiting the registered nurses".	• delay in recruiting registered nurses	• delays in recruitment
	"Immediately they finish training programme, nurses should be employed straight away".	• employ nurses straight away after training	• employ nurses straight away after training
Participant 4	"…there are few scholarships which are provided by the government to registered nurses may be to continue further with their education".	• few scholarships • taken off pay roll	• few scholarships • taken off pay roll

	"..if you find on your own a scholarship, I mean a school that you want to go for further studies, and you have your own fees, still more the government will take you off the pay roll. So that's another demotivating factor".		
	"we desperately need funding from government to upgrade. On the same note we don't like when our salaries have been stopped simply because we secured funding through our own initiative".	• need government funding • no stopping salaries	• government funding • no stopping salaries
Measures implemented by government to retain registered nurses: The government introduced some Masters degree and PhD programmes but they are taking just a few nurses.			

The analysis of data shows that there is limited choice of specialisation courses so nurses do not have many programs to choose from depending on their areas of interest at Kamuzu College of Nursing. Nurses also get frustrated because some registered nurses are in the same grade pay with nurse midwife technician yet their qualifications are different. The data also shows that nurses consider leaving their jobs because when they secure a scholarship independently they remove them from pay roll so they do not get any salary. The majority of nurse participants, key informants and focus group one also highlighted this.

From the data presented in the above table to mitigate brain drain, it seems that the government introduced higher education at Kamuzu College of Nursing. However, there is need to increase the intake of students and introduce more specialisation programmes. The data also illustrates that there is need for government to offer more scholarships to nurses and maintain them on pay roll.

4.2.5.6 Focus Group Discussion Three with Nurses: Education Factors

Table 4-67 Focus Group Discussion Three: Education Factors

Focus Group Discussion Three with Nurses from KCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	".. it's quite frustrating. And especially when you see that this person is not even a hardworking person. And maybe even in class you were together and he or she was a bulldozer, but that is the same person who is promoted or sent for postgraduate even before that person clocks 4 years".	• frustrating hardworking person not promoted	• frustrating hardworking person not promoted
	"when we are promoted we need to do the job in line with our promotion not doing the same job you were doing before promotion and promotion be based on merit".	• promotion on merit	• promotion on merit
Participant 2	"I feel people should be promoted on merit. If this person is really a hardworking person, intelligent person deserves promotion… Why should it be mandatory after 4 years? All these are demotivating and demoralizing nurses. So they would rather get out".	• mandatory promotion after 4 years	• mandatory promotion after 4 years
	"I feel people should be promoted on merit. If this person is really a hardworking person, intelligent person deserves promotion".	• promote on merit	• promote on merit

Participant 3	"…there is no career structure in Ministry of Health for the nurse to say; when you graduate as a nurse, depending on your area of interest, you can specialize in dermatology nursing, you can specialize in ENT nursing (Ear Nose Throat-ENT), you can specialize in orthopaedic nursing, you can be a special nurse in theatre technology, you can specialize in oncology; all the disciplines you can specialize in".	• no career structure	• no career structure
	"they should allow us to work in sections that we are interested in instead of forcing us where we heart is not there".	• allow us to work in sections that we are interested in	• allow us to work in sections that we are interested in
Participant 4	"..to belong to an institution it's through in-service training depending on the training needs of nurses, because then you will know each and every employee at Kamuzu Central Hospital. But that is not there".	• no in service training	• no in-service training
	"when they are planning training they need to assess training needs of nurses first not just choosing same people that management wants to attend an in service training".	• assess training needs	• training needs
Participant 5	If the hospital is requiring a nurse in the pediatrics, even though you are interested in midwifery or you are interested in medicine, they will put you there. And I told them that; you can put me there but that's not my interest, I will work there with half my heart, but my interest is in the ICU. And they didn't answer me until I finished my orientation, and I personally put myself into ICU, they didn't even go back to say anything I just went there because my interest is in the ICU and I have never worked anywhere else apart from the ICU".	• misallocation of nurses	• misallocation of nurses
	"no one should be forced to work in a section that he/she is not comfortable because here we are dealing with people's life not working in a supermarket".	• not forcing anyone to work in a section not comfortable with	• not forcing anyone to work in a section not comfortable with
Participant 6	"…when you get that extra training that you have attained, there is no guarantee that you will get a promotion as well. There is no incentive at all, it's like you remain on the same level with your education, that's frustrating..."	• no incentive after training	• no incentives after training
	"..our skills can be well utilized by giving us enough equipment and placing us in right department according to our experience".	• enough equipment and place nurses in right department	• enough equipment and place nurses in right department
Measures implemented by government to retain registered nurses: There is provision of in service training. However, the selection of who to attend the training is not open.			

The data illustrates that nurses decide to leave because after attaining a higher qualification they are not promoted or do not get a salary increment. If there are any promotions, they are not on merit. The same nurses get favours from their superiors to attend in service training. The data also illustrates that nurses work in any ward or any section of the hospital without considering their individual areas of expertise.

From the data presented in the above table, there is need for the nurses to be get promotion on merit without any form of favouritism. The focus group three also proposed that that it would be ideal if nurses were working in wards based on their skills and knowledge rather than forcing them to work in the wards, they do not have expertise. There is also need for management to assess training needs of nurses before sending the nurses on training.

4.2.6 Exploring Globalisation Factors

From the literature review in this study, Globalisation factors include Global labour movement, Interdependent and Interconnected societies and Liberalized policies. The three child nodes are under the parent nodes of globalisation factors (See Table 4-1).

4.2.6.1 Semi-Structured Interviews with Nurses: Globalisation Factors

4.2.6.1.1 Global Labour Movement

Table 4-68 Interviews with Nurses: Global Labour Movement

	Global Labour Movement (GF1) - Interviews with Nurses			
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	"…if you have money you can get a visa say to the UK and can easily go and work there".	• money and visa	• money and visa
		"it is the freedom of movement so nobody can be stopped from going abroad".	• freedom of movement	• freedom of movement
	2	"..as far as nursing is concerned so you tend to go elsewhere you can practice".	• nurses practice elsewhere	• nurses practice anywhere
		"…they know that I will be employed elsewhere as a nurse".	• employed elsewhere	• employed elsewhere
	3	"..everyone wants money to survive eventually you just decide to leave to reduce your suffering".	• wants money to reduce suffering	• wants money to reduce suffering
		"…we now live in a global village".	• global village	• global village
2	4	"…the destabilization of the financial income that somebody gets in a month that's what influences them may be to leave".	• destabilisation of income	• destabilisation of income
		"It's good to see other countries given an opportunity".	• to see other countries	• to see other countries
	5	".. you look at the ranges of their pay and look at how well they are getting paid, with how much you are getting in Malawi".	• ranges of pay	• ranges of pay
		"salaries should also improve".	• improve salaries	• improve salaries
	6	"…the training that is offered to nurses in Malawi, enables them that they can work anywhere in the world".	• nurse training enables them to work anywhere	• nurse training enables them to work anywhere
		"..the nurses the way they are prepared, it's like they are marketable anywhere in the world".	• nurses marketable	• nurses marketable
3	7	"we do not want to stay where we are not comfortable with so we always go where things are better, living conditions, better housing, better infrastructures".	• stay where things are better	• stay where things are better
		"we see those things we admire and we wish we were there".	• admire things	• admire things
	8	"..places offer monies and they would influence the nurses…."	• places offer monies	• places offer monies
		"…the right to work anywhere."	• right to work anywhere	• right to work anywhere
	9	"..we are like living in poverty".	• poverty	• poverty
		"I would go anywhere as long as I get work permit visa to work in any country like UK for better life".	• get work permit visa	• get work permit visa
4	10	none	• none	• none

	11	"…because nursing is a global issue, so it can suit anywhere, where ever you go you are able to work, so there is no problem".	• nursing suits anywhere	• nursing suits anywhere
		"nurses are on high demand in most countries so that's why nurses are always on the move".	• nurses on high demand	• nurses on high demand
	12	"..if I go to UK, then it will do better than just staying here in Malawi".	• UK better than staying in Malawi	• UK better than staying in Malawi
		"…if someone is going to work in UK, he needs to have proper documents or he must be given a go ahead by government".	• travel with proper documents • government to give a go a head	• travel with proper documents • government to authorise
5	13	"…just recently we had a nurse from the paediatric ward who had gone to Australia, I think that was just last month. She has moved to Australia because she found a chance on the internet".	• chance on internet	• chance on internet
		It's difficult to stop nurses not to emigrate because they have rights to travel".	• nurses have rights to travel	• nurses have rights to travel
	14	"..nurses from Malawi are allowed to work in other countries".	• nurses from Malawi allowed to work	• nurses from Malawi allowed to work
		"as long as one is not breaking the law, anyone can live in any country of his or her choice".	• not breaking law	• not breaking law
	15	"..some of these countries did it for selfish reasons; they wanted their countries to have more improved health systems than these".	• improve health systems	• improve health systems
		"my husband is in Australia so at some point I will have to follow him and none has control over it".	• no control over it	• no control over it
6	16	"the NHS, they were saying nurses were free to apply in the UK that one could also contribute to brain drain".	• free to apply	• free to apply
		"nurses should pay some tax you know to the government so that the government should also benefit".	• nurse pay tax to government	• nurse pay tax to government
	17	none	• none	• none
	18	"the nurses are free to move outside the country to look for greener pasture…."	• free to move	• freedom of movement
		"….exit interviews to find out why a nurse is leaving because sometimes management are not even bothered to know why you are leaving the job".	• exit interviews	• exit interviews
Measures implemented by government to retain registered nurses: Exchange visit programme. For example some nurses went to Norway for Neurology Nursing.				

The data illustrates that access to the internet contributes to the brain drain, as nurses are able to compare their salaries in Malawi with those of other countries coupled with high demand for nurses in developed countries. Nurses go to places with better living conditions, housing and infrastructure. The data also shows that nurses trained in Malawi have the freedom of movement and would work in most countries like the United Kingdom. Despite these issues, the government of Malawi in collaboration with other governments send nurses to countries like Norway on exchange visit programmes.

From the data presented in the table 4-68, the majority of participants mentioned that because of the freedom of global movement, it is difficult to mitigate brain drain among nurses. However, there was need to improve the salaries of nurses in Malawi. There is also need for

nurses to be paying tax to the Malawi government after emigrating as the government trained most of them. The data also illustrates that, if a nurse wants to go and work abroad, managers could be conducting exit interviews with them when they tender their resignation letter to know the reasons for leaving.

4.2.6.1.2 Interdependent and Interconnected Societies

Table 4-69 Interviews with Nurses: Interdependent and Interconnected Societies

Interdependent and Interconnected Societies (GF2) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	none	• none	• none
	2	none	• none	• none
	3	none	• none	• none
2	4	none	• none	• none
	5	"…we also have nurses maybe exchange nurses program who are coming in from other countries and then coming to tell us the sort of work that they do and how it's so much less work than what you do…"	• exchange nurses program	• exchange programs
		"..difficult to control because of technology so people share information about job opportunities".	• difficult to control because of technology	• difficult to control because of technology
	6	"..some have friends and relatives who gives them available job opportunities abroad".	• friends and relatives give job opportunities	• friends and relatives give job opportunities
		"you cannot stop people from communicating so you cannot do anything really".	• cannot stop people from communicating	• cannot stop people from communicating
3	7	none	• none	• none
	8	none	• none	• none
	9	none	• none	• none
4	10	"..people get in touch so easily this time around and they are actually connected to the whole world, so, that make them to be aware of what is happening in the global world".	• people connected to the world	• people connected to the world
		"the coming in of social network sharing of information is so good it cannot be stopped".	• social network	• social network
	11	none	• none	• none
	12	none	• none	• none
5	13	"…the availability of contacts from outside world through the NGOs which come. Sometimes you interact….. And you try to find a way out, they support you then you are gone".	• availability of contacts	• availability of contacts
		"if NGOs are offering scholarships they should be contacting the government not individual nurses directly for transparency purposes".	• NGOs offering scholarships to contact government	• NGOs offering scholarships contact government
	14	none	• none	• none
	15	none	• none	• none
6	16	none	• none	• none
	17	none	• none	• none
	18	none	• none	• none

The data shows that exchange nurses' programmes compel nurses in Malawi to leave the public sector because nurses share information. In addition, people are interconnected all over

the world with the presence of social networks such as WhatsApp and Facebook, so nurses become aware of what is happening in the global village. The table also shows that, the majority of nurse participants did not see interdependent and interconnected societies as important to brain drain. According to Pillay (2009), information and communication technology processes have brought time and distance together thereby working as a mechanism for increased spread of ideas.

From the data, it seems that the majority of nurses did not mention ways to mitigate brain drain among nurses in Malawi as they felt it was not an important factor to brain drain in Malawi. The introduction of new technology had led people to share information about job opportunities elsewhere. There was also a proposal that any NGOs that offer scholarships should be contacting the government first not contacting the individual nurses for transparency purposes.

4.2.6.1.3 Liberalized Policies

Table 4-70 Interviews with Nurses: Liberalized Policies

Liberalized Policies (GF3) - Interviews with Nurses				
Hospital	**Nurse Number**	**Data**	**Key Words**	**Comments**
1	1	none	none	none
	2	"..you tend to go elsewhere you can practice provided you seek permission from the Nurses and Midwives Council you go there you work".	• seek permission from Nurses and Midwives Council of Malawi	• seek permission from nurses and Midwives Council of Malawi
		"the government where a particular nurse is going they should be paying tax to the Malawi government".	• government to pay tax	• government to pay tax
	3	none	• none	• none
2	4	none	• none	• none
	5	none	• none	• none
	6	none	• none	• none
3	7	none	• none	• none
	8	none	• none	• none
	9	"the fact that the liberalization of policies, people are now free to move to others, there was chance. When the policies were tighten up to say no you are for Malawi maybe we don't think people can have that courage to move out".	• free to move	• free to move
		"if both countries could be in operation relationship so that nurses who already migrated should be giving talks to those who remained in the source country to tell them about the challenges they face in destination country".	• countries be in operation relationship; nurses giving talks	• countries be in operation relationship; nurses giving talks
4	10	none	• none	• none
	11	none	• none	• none
	12	none	• none	• none
5	13	none	• none	• none
	14	none	• none	• none
	15	"..if you look at most of the regulatory bodies, they were not that strict in deploying".	• regulatory bodies not strict	• regulatory bodies not strict
		"…put restrictions on nurses who move from their countries to other countries without valid reasons, they have work here, unless they are not employed and	• put restrictions on nurses	• put restrictions on nurses

		they are seeking employment to that country".		
6	16	none	• none	• none
	17	none	• none	• none
	18	"nurses freely go to any country they wish to go".	• nurses go to any country	• nurses go to any country
		"nurses could be restricted from moving abroad to ensure we have enough nurses and offer incentives".	• restrict from moving abroad	• restricting movement

The data shows that most of the nurses have not seen liberalized policies as contributing factor to brain drain among nurses in Malawi. Nurses seek permission first from the Nurses and Midwives Council of Malawi if they want to go and work abroad. However, people are free to move to any place.

The data in the above table shows that the majority of nurse participants did not see liberalised factors that contribute to brain drain of nurses. However, one participant expounded that when a nurse goes abroad for work, the destination country could be paying tax to Malawi government for employing Malawian nurses. Another participant mentioned that both destination and source countries could be in operation relationship so that nurses who already migrated could be giving talks to nurses in Malawi and tell them the challenges they face in a destination country. There is also need to restrict international recruitment and offer incentives to nurses to mitigate brain drain.

4.2.6.2 Semi-Structured Interviews with Key Informants from Hospital: Globalisation Factors

4.2.6.2.1 Global Labour Movement

Table 4-71 Interviews with Key Informants from Hospitals: Global Labour Movement

Global Labour Movement (GF1) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	"..disparities in working conditions, pay/remuneration levels because our colleagues pay better wages then people will be pulled to those areas and even working conditions are better, they have better equipment".	• disparities in working conditions, pay levels	• disparities in working conditions, pay levels
		"with the freedom of movement nurses still leave perhaps could be reduced by improving disparities in working conditions and remuneration".	• freedom of movement • improve disparities	• freedom of movement • improve disparities
2	2	"..some other people are given bonds for five years but the majority they don't because of the work of our human resource systems because even the human resource systems, even like the supervisor can report to the human resources but nothing is being done, so like all those things they are not working. People are free to move".	• majority of nurses not bonded	• majority of nurses not bonded

		"Reinforcing the bonding thing".	• reinforcing bonding	• reinforcing bonding
3	3	"..Some have gone to the UK, others have gone to South Africa, others have gone to the USA and other countries, because of the poor salaries that we are getting here in Malawi".	• poor salaries	• poor salaries
		"in terms of salary…….unless there is an improvement what the nurses are getting, nurses will still be leaving Malawi coupled with their rights".	• improve salaries • nurses rights	• improve salaries • nurses rights
4	4	"…you can even see the adverts all over, everything there displayed even the package, so if one sees that the package is there, definitely they will be tempted to go and work outside the country".	• adverts all over	• adverts all over
		"It's difficult to control…."	• difficult to control	• difficult to control
5	5	"…in other countries they have better working conditions, they receive good pay so these factors can affect us to run away".	• better working conditions • good pay	• better working conditions • good pay
		"It would also be a good strategy to ask nurses before they leave why they want to leave".	• ask nurses why they want to leave	• ask nurses reason for leaving
6	6	"I think it is on a small scale regardless, it is to do with the incentives, social economic, political and this education factor. But globalisation not much".	• incentives	• incentives
		"the government should be very strict with bonding contracts to curb brain drain in Malawi".	• government be very strict with bonding contracts	• government be very strict with bonding contracts
Measures implemented by government to retain registered nurses: The government put in place bonding contracts. However, enforcement of the bond is problematic.				

As Table 4-71 above shows, nurses consider leaving because of disparities in working conditions and pay. This concurs with what nurse participants also mentioned. Some nurses do not sign a bonding contract upon getting a scholarship to pursue higher education. The study noted that the bonding arrangement has faced enforcement problems so nurses take it as an opportunity to leave. The feeling among key informants is that the enforcement of the bonding contracts is a challenge because the system is simply as an administrative arrangement for processing nurses' scholarships for further studies rather than a legal document to ensure that upon finishing their studies they would return to the MOH. The data also shows that destination countries place advertisement in a local newspaper in a source country or on internet regarding nurse vacancies so this causes nurses to leave their jobs.

From the data, it seems that although there is freedom of movement, brain drain improving disparities in working conditions and pay could reduce brain drain. We have also noted that enforcement of bonding contracts is a problem in the MOH. In this regard, bonding arrangement could be an effective means to mitigate brain drain in Malawi so management should enforce bonding contracts. There is also need for management to carry out exit interviews before the nurses leave to establish the reasons behind their resignations.

4.2.6.2.2 Interdependent and Interconnected Societies

Table 4-72 Interviews with Key Informants from Hospitals: Interdependent and Interconnected Societies

Interdependent and interconnected Societies (GF2) – Interviews with Key Informants from Hospitals				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	none	• none	• none
2	2	"..it's the very same issue that the people there have exposure…."	• exposure	• exposure
		"these days people are interconnected worldwide and you cannot stop them from sharing information".	• people are connected worldwide	• people are connected worldwide
3	3	none	• none	• none
4	4	none	• none	• none
5	5	none	• none	• none
6	6	none	• none	• none

The data shows that most key informants did not see interdependent and interconnected societies as significant factors that contribute to brain drain among nurses in Malawi. This concurs with what fourteen nurse participants also mentioned. However, only one key informant in the table above observed that the exposure that nurses get when they travel encourages them to consider leaving the public sector.

4.2.6.2.3 Liberalised Policies

Table 4-73 Interviews with Key Informants from Hospitals: Liberalized Policies

Liberalized Policies (GF3) - Interviews with Key Informants from Hospital				
Hospital	**Key Informants Number from Hospitals**	**Data**	**Key Words**	**Comments**
1	1	none	• none	• none
2	2	"The deliberate policies in countries like the UK for example recruit nurses from developing countries".	• deliberate policies to recruit	• deliberate policies to recruit
		"they could also increase verification fees to curb brain drain".	• increase verification fees	• increase verification fees
3	3	none	• none	• none
4	4	"..other countries like the UK, they are open to employ from other countries…"	• other countries open to employ	• other countries
		"the government and other governments should be very strict in policing nursing movements".	• strict nurse movements	• strict in nurse movements
5	5	"..the other one would be liberalized policies, maybe they have better policies in other countries than here in Malawi, so, that can push someone".	• better policies in other countries	• better policies in other countries
		"..the policies in developed countries are ones that make nurses to want to go so it is a challenge to convince someone to stay".	• policies in developed countries	• policies in developed countries
6	6	none	• none	• none

The data illustrates that deliberate policies in other governments such as the United Kingdom to recruit nurses especially from developing countries encourage nurses in Malawi to consider leaving their jobs. The literature mentions that most developing countries continue to experience the loss of an increasing number of highly skilled health professionals such as nurses, doctors, dentists, and pharmacists by migrating to developed countries. This is because developed countries such as the UK, USA and Canada have had in market terms, a higher demand for healthcare workers that has not been satisfied domestically (Prescott and Nichter, 2014; Kaba, 2011).

From the data presented in the table above, one key informant mentioned that there is need to increase verification fees. Currently, nurses pay K60, 000 Malawi Kwacha ($88) to NMCM in respect of verification fee as a prerequisite before emigrating. Another key informant mentioned that the government of Malawi and other governments should be strict in policing the movement of nurses. One key informant stated that the policies in developed countries are the ones that make nurses to want to go, so it becomes a challenge to convince nurses to stay. Three key informants could not establish ways to mitigate brain drain because they did not see liberalized policies as an important factor that contributes to brain drain of nurses in Malawi. The majority of nurse participants also highlighted this.

4.2.6.3 Semi-Structured Interviews with Key Informants from NMCM, CHAM and MOH: Globalisation Factors

4.2.6.3.1 Global Labour Movement

Table 4-74 Interviews with Key Informants from NMCM, CHAM and MOH: Global Labour Movement

Global Labour Movement (GF1) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"..people would want to move around. They see people working they feel I can also do better than this so I think we've had a lot of nurses going outside Malawi".	• people want to move around	• people want to move around
		"it could be reduced by providing better incentives both financial and non-financial".	• provide financial and non-financial	• provide financial and non-financial
CHAM	2	"lack of professional development, lack of technology, lack of resources to implement evidence based practice or to share best practices".	• lack of professional development, technology and resources	• lack of professional development • technology and resources

		"….train more nurses over and above required domestically. They also need to track brain drain trends and also movement of nurses from the public sector to other jobs within our country".	• train more nurses; track brain drain trends	• train more nurses • track brain drain trends
MOH	3	"human rights and recognition that an individual is free to work anywhere…."	• human rights and recognition	• human rights and recognition
		"post nurses to work in health facilities they come from".	• work in health facilities they come from	• work in health facilities they come from
Measures implemented by government to retain registered nurses: The government introduced 52 percent to-up salary but it is still seen as low considering the current cost of living.				

The data shows that nurses would want to move around because they think if they emigrate, they would be better than now. The salaries are still low although the government introduced 52 percent top-up salary as a measure to retain nurses. Nurses consider leaving for another country because they lack professional development, lack technology and lack resources to implement the best care practice in Malawi. The data also shows that the human rights and recognition that an individual is free to work anywhere as long as they meet the requirements of a particular country motivate nurses to leave.

As Table 4-74 shows, to mitigate brain drain, there is need for management to provide better financial and non-financial incentives to nurses. The government of Malawi could also train more nurses over and above required domestically. They could also track brain drain trends and movements from the public and to other jobs within Malawi. Another key informant articulated that nurses could work in health facilities (home district) where they come from.

4.2.6.3.2 Interdependent and Interconnected Societies

Table 4-75 Interviews with Key Informants from NMCM, CHAM and MOH: Interdependent and interconnected Societies

Interdependent and Interconnected Societies (GF2) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	"they have to get verification from here (NMCM) so UKCC would contact us we've got this we want to verify. We charge I think about K60,000.00 as verification fee".	• verification fee	• verification fee
		"people are well connected nowadays so it is really difficult to stop them communicating".	• people are well connected	• people are well connected
CHAM	2	"there are Agencies in the UK that recruit nurses from developing countries so they take it as an opportunity".	• recruitment agencies	• recruitment agencies
		"although there is sharing of information especially on job	• sharing job opportunities	• sharing job opportunities

		opportunities, it is not significant factor of brain drain".	information not significant	information not significant factor
MOH	3	"gross disparities (between government and private health sector) and low salaries nurses working in the public health facilities leading them to look for greener pastures elsewhere".	• gross disparities in salaries	• gross disparities in salaries
		"the government should be comparing salaries of nurses, for example, within the SADC region and make the necessary adjustment".	• compare salaries of nurses across SADC region	• compare salaries of nurses across SADC region

The nurses seek permission first from the Nurses and Midwives Council of Malawi if they want to go and work abroad and are required to pay K60,000 Malawi Kwacha ($88) as verification fee to the Council. It is a prerequisite for any nurse intending to travel to the United Kingdom to register with United Kingdom Central Council for Nursing, Midwifery and Health. The nurses are compelled to leave their jobs for United Kingdom because recruitment agencies facilities them. The data also shows that nurses seriously consider leaving their jobs because of gross disparities in salaries between public and private sectors.

From the data presented in above table, one key informant mentioned that people communicate regularly nowadays so they share information of job opportunities. Another key informant mentioned that although there is sharing of information especially on job opportunities through recruitment agencies, it is not an important factor of brain drain among nurses in Malawi. One key informant stated that the government of Malawi could be comparing salaries of nurses in Malawi with those in the SADC region in order to make the necessary adjustments of nurses' salaries in Malawi.

4.2.6.3.3 Liberalized Policies

Table 4-76 Interviews with Key Informants from NMCM, CHAM and MOH: Liberalized Policies

Liberalized Policies (GF3) – Interviews with Key Informants from NMCM, CHAM and MOH				
Organisation	**Key Informants from NMCM, CHAM and MOH**	**Data**	**Key Words**	**Comments**
NMCM	1	UK has a policy to recruit nurses from different parts of the world for example from Africa and Asia so that alone compels nurses and doctor to move".	• UK policy to recruit nurses	• UK policy to recruit nurses
		"there is need to demand compensatory payments from countries where Malawian nurses are to Malawi to mitigate the damage of brain drain".	• demand compensatory payments	• demand compensatory payments
CHAM	2	"there is high demand for health care professionals in UK so visa rules are a bit relaxed for professionals like nurses".	• relaxed visa rules	• relaxed visa rules
		"there is need for governments to sign memorandum of understanding on restricting international movements and offer incentives for the nurses not to consider leaving".	• restricting movements; offer incentives	• restricting movements • offer incentives
MOH	3	".. as long as they meet the requirements of the country they want to work".	• meeting requirement	• meeting requirement
		"address gross salary disparities".	• gross salary disparities	• gross salary disparities

The data illustrates that a country such as the United Kingdom has a policy to recruit nurses from different parts of the world so nurses in Malawi become motivated to leave for the UK. This concurs with what nurse participants, key informants from hospitals also mentioned. According to Buchan (2006), recruitment campaigns and changes to immigration policy, countries of the global core have admitted healthcare professionals from the global periphery to fill vacancies. These policy changes and recruitment campaigns create opportunities for frustrated nurses to emigrate.

From the above data, one key informant articulated that there is need to introduce compensatory payments from destination countries to Malawi to mitigate the damage of brain drain. Another key informant proposed an introduction to a memorandum of understanding between countries to restrict international recruitment of nurses. However, Mensah (2005) argues that attempts to restrict international recruitment for skilled health-care workers to stay have proved largely ineffective in sub-Saharan Africa.

4.2.6.4 Focus Group Discussion One with Nurses: Globalisation Factors

Table 4-77 Focus Group Discussion One: Globalisation Factors

Focus Group Discussion One with Nurses from QECH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"there is freedom of movement so no one can stop anyone from looking for a job elsewhere".	• freedom of movement	• freedom of movement
	"the government has failed, it has not improved the working conditions and put in place a sustainable way to retain the registered nurses".	• needs to improve working conditions	• needs to improve working conditions
Participant 2	"as long as there is still high demand for nurses in UK or USA, nurses will not stop going there. That way they improve their life style".	• high demand for nurses	• high demand for nurses
	"the government could be asking for tax from countries where nurses have gone to as it is difficult to convince them not to go".	• ask for tax from countries	• ask for tax from destination countries
Participant 3	"it has not improved the working conditions and put in place a sustainable way to retain the registered nurses".	• working conditions not improved	• working conditions not improved
	"introducing non-financial rewards such as vouchers, prizes and gift cards to nurses would be good".	• introduce non-financial rewards	• introduce non-financial rewards
Participant 4	"my training had made me to work anywhere in the whole world so I can move to any country I feel safe and also maybe I may also want to learn from them".	• training enabled to work anywhere	• training enabled to work anywhere
	"…scholarships that are sourced by individual nurses, they should be encouraged to inform management at an early stage so that they are able to find cover well in advance".	• inform management at an early stage	• inform management at an early stage
Participant 5	"it's ok for the government to restrict anybody to work elsewhere if they had paid for them. But if they have not trained them, they haven't paid for them, it means somebody is free to go elsewhere".	• free to go elsewhere	• free to go anywhere if not sponsored
	"…bonding system should be enforced so that nurses are aware of any conditions attached to it if they don't cooperate".	• enforce bonding system	• enforce bonding system
Measures implemented by government to retain registered nurses: There are bonds which nurses sign when applying for a scholarship to retain nurses. However, the bonds are not followed up by MOH			

As the table above shows, it seems there is free movement of nurses so they are not restricted to work in any country of their choice as long as there is a demand for nurses in a particular country. Although, there are bonding contracts when applying for a scholarship that the government introduced to retain the nurses, the MOH do not follow them up. This concurs with what majority of key informants also highlighted during face-to-face interviews as a measure the government put in place to retain nurses. There are some nurses in Malawi who are sponsor by the government of Malawi to pursue their studies and some fund themselves. In this light, those who sponsor themselves do not have conditions attached so they are compelled to leave for another country if they wish to do so. However, Apter (2009) points out that the availability of jobs in other countries due to globalisation have speeded up the spread of brain drain.

The data in the above table shows that the government could improve the working conditions and put in place sustainable ways to retain the nurses. Another participant mentioned that the government of Malawi could be asking countries that recruit Malawian nurses to remit tax. One participant expressed that, there is need to introduce non-financial rewards such as vouchers, prizes and gift cards to nurses. Investing in nurses by showing appreciation in creative ways could be one of the best ways to retain nurses and create a sustainable culture of success. Another participant mentioned that nurses should be encouraged to inform management at an early stage when they source a scholarship independently. There was a proposal to enforce bonding system so that the nurses know the training rules and regulations guide.

4.2.6.5 Focus Group Discussion Two with Nurses: Globalisation Factors

Table 4-78 Focus Group Discussion Two: Globalisation Factors

Focus Group Discussion Two with Nurses from MZCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"developed countries are always looking for nurses and doctors so as my colleague has just said everybody wants good life so by going to places like UK you actually know your life will improve at some point".	• developed countries look for nurses	• developed countries look for nurses
	"if verification fees could be increased as one way of emigration restriction".	• increase verification fees	• increase verification fees
Participant 2	"…they are using modern equipment than what we use here, and they are also using the facilities for relaxation, which we don't have here".	• modern equipment	• modern equipment being used in other countries
	"the government should provide modern equipment".	• provide modern equipment	• provide modern equipment
Participant 3	"better pay in other countries, if we go outside here Malawi, we find that people are getting more than what we get here".	• better pay in other countries	• better pay in other countries
	"simply improve the salaries…."	• improve salaries	• improve salaries
Participant 4	"we have a qualification as nurses that enable us to work in any country. That's why you see nurses going to UK, Botswana and other countries".	• qualification as nurse	• qualification as nurse
	"the government of Malawi could be asking destination countries where the nurses are emigrating to pay tax".	• asking for tax	• asking for tax
Measures implemented by government to retain registered nurses: Sometimes we see nurse exchange programmes but they are not done on regular basis.			

The data illustrates that there is high demand for nurses in most developed countries so nurses are compelled to go there to improve their lifestyle considering that they would be getting a better salary than in Malawi. The data also shows that nurses enjoy working where there is modern equipment and facilities for relaxation. In addition, the qualification that nurses possess enables them to work in most parts of the world. This has also been lamented by nurse participants, key informants and focus group discussion one. There was a concern that nurses' exchange programmes between Malawi and other countries were not on regular basis.

To mitigate brain drain, from the data presented in the above table, there was a proposal to increase verification fees as one way of emigration restriction. Another participant articulated that the government should improve salaries and provide modern equipment to the nurses. The government of Malawi could also be asking destination countries where the nurses are emigrating, to pay tax to mitigate the damage of brain drain.

4.2.6.6 Focus Group Discussion Three with Nurses: Globalisation Factors

Table 4-79 Focus Group Discussion Three: Globalisation Factors

Focus Group Discussion Three with Nurses from KCH			
Focus Group Discussion	**Data**	**Key Words**	**Comments**
Participant 1	"although Malawi has nurse shortages, there is no way one can turn down an offer for a job in the UK unless you do not want to develop yourself and your family. The salaries there are far much better than here".	• better salaries	• better salaries
	"if the government could restrict the number of nurses by agreeing with destination country to set examinations in a source country before doing more paper work".	• set examinations	• set examinations
Participant 2	"..we as a country, we are very underdeveloped. And those countries that are advanced in development…"	• very underdeveloped	• very underdeveloped
	"our government should be asking for compensatory money when nurses leave for any country".	• ask for compensatory money	• ask for compensatory money
Participant 3	"while I agree with my colleagues, my point is that developed countries have relaxed policies to recruit healthcare workers like us due to shortage of nurses in those countries. We know that life there is better than in our country".	• relaxed policies in developed countries	• relaxed policies in developed countries
	"…restricting nurses is a violation of individual freedom of movement. But I agree if our government could start getting tax from the countries where nurses are working".	• get tax from where nurses are working	• get tax from where nurses are working
Participant 4	"the crisis of nurses in many parts of the world which means that nursing now operates in a global labour village. There is too much poverty in Malawi so once I can get an opportunity to go abroad I will not hesitate to go".	• nurses operate in global labour environment • too much poverty in Malawi	• nurses operate in global labour environment • too much poverty in Malawi
	""there is need to enhance exchange programmes among nurses between countries".	• enhance exchange programmes	• enhance exchange programmes
Participant 5	"..you can move to a country where you see that there is a little bit of money than what you are getting".	• move to a country with a little bit of money	• move to a country with a little bit of money

	"there is freedom of movement so we cannot be restricted to go somewhere otherwise they would violate our freedom of movement".	• freedom of movement	• freedom of movement
Participant 6	"with the introduction to technology like WhatsApp, Facebook etc people are able to give each other opportunities online so this has also encouraged brain drain not only in Malawi but also in other developing countries. Some of the nurses have friends and relatives in other countries so they can share information regarding nursing jobs for example in the UK where most Malawian nurses go".	• introduction to technology • friends and relatives share information	• introduction to technology • friends and relatives share information
	"…payment for the recruitment of nurses should be introduced but would also depend on the willingness of destination countries to pay source countries".	• introduction of payment for recruitment of nurses	• payment for recruitment of nurses
Measures implemented by government to retain registered nurses: The participants corroborated there was none			

The data analysis shows that some developed countries have relaxed policies to attract nurses due to crisis of nurses' shortage, so nurses consider going to such countries to get better salaries. The data also shows that the coming in of modern technology such as WhatsApp and Facebook has enabled people to share information on any job opportunities. In agreement Pillay (2009) underscores that globalisation has resulted in a growing demand for skilled personnel because societies have become interdependent and interconnected. A study by Ohmae (1993) also pinpoints that globalisation is a borderless world where events taking place in one part of the world are quickly spread across the globe.

From the data presented in the above table to minimize brain drain, there was a proposal to introduce a payment for poaching nurses from Malawi. The government could also restrict the number of nurses by agreeing with the destination country to set examinations in Malawi before doing more paperwork. However, nurses have freedom of movement so restricting them is a violation of individual freedom of movement. There is also need for management to enhance exchange programmes for nurses between Malawi and countries.

4.3 Strategies and Measures which Could be put in Place to Retain Nurses

The primary aim of this section is to identify the most appropriate strategies and measures to put in place to prevent further loss of the registered nurses to keep the Malawi health sector system functional. Based on results, there are strategies and measures under Economic, Political, Technological, Social, Education and Globalisation that are considered.

4.3.1 Economic Factors

The majority of participants expounded that management should consider increasing the salaries of nurses because the unmatched increase in the cost of living relentlessly and negatively affects household food security. The study also identified delays in delay in paying

salaries and delays in increasing nurses' salaries after promotion. In this regard, management should be increasing the salaries of nurses as soon as they get a promotion. Several studies also show that low salary is a major factor that causes brain drain (Ngoma and Ismail, 2013; Vidal, 2015; Docquier, 2006; Vidal, 2015). The study also revealed that locum allowance and risk allowance are low, so management could consider increasing both allowances. In addition, the introduction of fully paid workshops also leads to brain drain among nurses. In this light, there was need for management to consider revising the fully paid workshops because most nurses are unhappy with the current set up. As tax is a significant factor, Rasool et al. (2012), management should consider reducing the amount of tax paid by nurses.

Management could consider enforcing bonding contract when a nurse wants to go to another country. In addition, in respect of brain drain damage, the government of Malawi could start taxing countries that recruit nurses from Malawi.

4.3.2 Political Factors

Although the majority of participants did not take political violence as a significant factor that causes brain drain, politicians should refrain from issuing threats to nurses. The political leaders should take the leading role in praising the nurses for the wonderful job they do, instead of castigating them.

Management should show good practice by discouraging regionalism, nepotism and tribalism. This would enable nurses be promoted on merit and treating all nurses equally without discriminating against anyone. The study also found that politicians interfere with disciplinary decisions made by regulatory bodies like the NMCM. In this regard, politicians should refrain from interfering with disciplinary decisions made about nurses. Docquire and Rapport (2007) also reported that educated and skilled individuals from Africa often migrate to more stable economies primarily to flee from the unstable and often dire political climate.

4.3.3 Technological Factors

There is need for management to ensure that nurses are working with adequate equipment and that medication should always be available. Management should also ensure that equipment is in a good working order at all times and repair them when they break down. Maluwa et al. (2012); Ngoma and Ismail (2013) highlight that the lack of basic equipment is one of the challenges in developing countries.

Management should discourage nurses from improvising things to treat patients as this compromises quality and put life of patients in danger. It is poor service delivery when nurses use clinical judgement to diagnose a patient because they lack equipment. Therefore, management should ensure that resources are always available in hospitals and support nurses to develop their skills to use equipment well.

Management should make a significant investment in infrastructure by building more wards with enough capacity, ventilation and modern equipment. They should also purchase new chairs and desks for nurse offices. The study also found that some nurses live in institutional houses but the houses are in bad condition. Therefore, management should ensure that they repair all institutional houses. According to Maluwa et al (2012), work environment should be conducive.

4.3.4 Social Factors

Managers and hospital administrators have the obligation to ensure that personal protective equipment is available in order to create a healthy working environment. Although nurses receive risk allowance, managers could consider introducing work related illness medical insurance cover for nurses. This is because HIV/AIDS renders the health workplace a dangerous place in sub-Saharan Africa (WHO, 2006; Tawfik and Kinoti, 2003).

With the rising cost of items, managers could consider increasing salaries of nurses to meet the cost of living. Management could also consider having a fund to offer house loans to nurses. Management and hospital administrators have the obligation to provide nurses with a set of uniform.

The study also found that nurses get frustrated to work in overcrowded wards with heavy workload, long working hours and non-provision of mandatory medical check-up in line of duty. In this regard, there is need to consider the capacity of wards, recruit more nurses to reduce workload. Some authors Kingma (2006); Muula et al. (2006); Adzei and Atinga (2012) report that difficult conditions and heavy workloads worsen when nurses migrate, and remaining health workers may deliver lower quality care because of time constraints. It is significant if all nurses undergo a medical check-up at least once a year to ensure they are in good health. The research also found that some nurses who stay in an institutional house are concerned about the bad condition of the houses. It is the obligation of managers and hospital administrators to ensure that all institutional houses maintained on regular basis. To make the work environment conducive, management should replace all the old and broken furniture, broken windows of hospital wards. Management could also consider introducing housing

allowance for nurses to create a sense of satisfaction mostly the nurses who are in private rented houses.

4.3.5 Education Factors

There is need for managers to carry out training needs assessment to identify the nurses who require training without discriminating against anyone. The study also found that there is limited choice of specialisation courses, so nurses do not have many programs to choose from, in their areas of interest at Kamuzu College of Nursing. In this regard, there is need for government to introduce more specialisation programmes. Findings from existing research on push factors Rasool et al. (2012) state that education standards in some developing countries have declined hence encouraging the brain drain. Management should ensure that allocation of nurses is according to nurses' experience or area of specialisation.

The study also found that some registered nurses are in the same grade pay with nurse midwife technician yet their qualifications are different. The majority of nurses did not see this as good practice. In this case, management could ensure that nurses grading system is revised and promotions are done on merit. There is no system in place for staff to get promotion straightaway after upgrading their qualifications so management should be open enough to inform nurses about policy and procedures on promotion. Reitz (2005); Alcobendas and Rodriguez-Planas, (2009) highlight that education and skills may be underutilised in the host country.

4.3.6 Globalisation

Management could consider decentralising the core medical and clinical personnel in enforcing bonding contracts and other activities such as recruitment and reward. Kuehn (2007) reports that global free movement of labour and competition for human resources enables developed countries to fill their shortages of health workers with nurses from less developed countries. Apter (2009) concurs that the availability of jobs in other countries due to globalisation has speeded up the spread of brain drain.

It was found that nurses in Malawi pay a verification fee of MK60, 000 ($88) to the NMCM if they wish to go and work abroad. In this case, the management of NMCM could consider increasing the verification fee. There is also need to have nurses who are working abroad to come to Malawi and share with nurses in Malawi the challenges they face while working abroad so that nurses in Malawi can make an informed choice as a way of sensitizing them. This means that recruitment campaigns create opportunities for dissatisfied nurses in the global periphery, resulting in emigration among nurses. In this regard, the government of

Malawi could consider imposing tax on countries that are recruiting nurses from Malawi. Figure 4-1 shows a roadmap to guide the implementation of brain drain strategies.

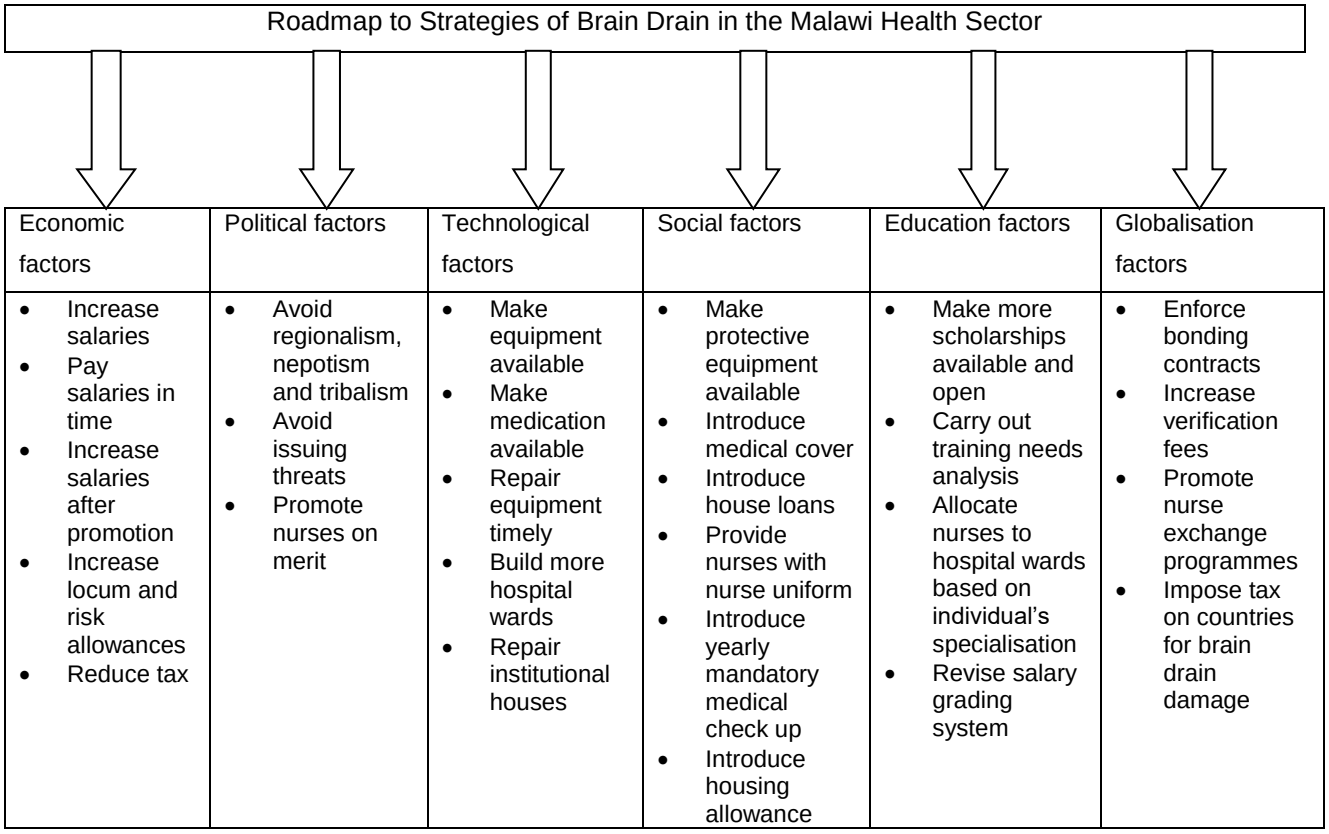

Figure 1-2 Roadmap to guide implementation of brain drain strategies

Referring to Figure 4-1, the results act as a guide to policy makers, hospital managers and stakeholders the most appropriate strategies to put in place to prevent the further loss of registered nurses in the Malawi health sector. The evidence available suggests that addressing international health workforce migration requires both understanding the local drivers of (inward or outward) migration (Cometto et al., 2013), as well as identifying evidence-based policy options.

4.4 Summary

The chapter has presented and analysed the empirical data the author collected from the case studies in Malawi. The data analysis is on the six categories that are economic factors, political factors, technological factors, social factors, education factors, globalisation factors. The main findings are summarised as follows:

Economic factors: The study established that the low salaries, delays in paying salaries, delays in salary adjustments after promotion, low locum payments, fully paid workshops are

factors that contribute to brain drain. The study also identified that, the salaries of nurses and locum payments are too much. The study found that nurses consider leaving their jobs because of the availability of nursing jobs in other countries.

Political factors: The majority of participants established that political violence and crime tribal tensions are not significant factors that contribute to brain drain. A few participants mentioned leadership, threats, and speeches by political leaders as significant factors that cause brain drain. The study found that politically motivated positions, lack of political will, regionalism, nepotism and tribalism are factors that contribute to brain drain among nurses in Malawi. In addition, the research found that limited career structures, under funding, non-recognition of experience and qualifications of nurses are other factors that contribute to the brain drain.

Technological factors: The study established that is there lack of equipment in the hospitals. Some of the common equipment that are in short supply includes thermometers, suction machines, oxygen concentrators, blood pressure machines and defibrillators. The study also found that there is lack of medication in the hospitals so it adversely affects nurses to perform their clinical duties. The study found that nurses improvise and use clinical judgement when performing their clinical duties because they do not have the equipment. As a result, nurses leave because they do not feel comfortable to work in this kind of environment. The study also found that hospital wards are small and congested with patients, which make the environment not conducive to work in. Some of the hospital structures are old without proper ventilation and nurses use dilapidated chairs and desks in the wards.

Social factors: The study found that some nurses in line of duty contract Tuberculosis, HIV/AIDS and Cholera because sometimes they work without personal protective equipment such as gloves and masks. The study found that the cost of living in Malawi for basic things such as food, clothes, accommodation and transport is high so nurses struggle to support themselves and their families. The nurses struggle to build or buy a house before reaching retirement age because of low salaries. The study found that corruption exists in some government departments including the Ministry of Health. Although corruption exists in Malawi, it does not necessarily cause brain drain among nurses. The study found that nurses use their own money to buy a set of nurse uniform and there is no provision of meals on night shift staff. The study also found that nurses get frustrated to work in overcrowded wards with heavy workload, long working hours and non-provision of mandatory medical check-up in line of duty. The research also found that the nurses who stay in an institutional house are concerned about the bad condition of the houses.

Education factors: The research found that the lack of training opportunities, the lack of scholarships cause brain drain among nurses. The study also found that if nurses want to go for further studies on self-sponsorship or if they secure funding on their own they get rid of them on the pay roll.

There is favouritism in the choice of nurses who attends training, as they were the same nurses who attend training. The study found that nurses mostly in central hospitals are not fully involved in carrying out research projects so they do not develop their research skills. In addition, the study found that there are few areas of specialisation programmes at Kamuzu College of Nursing so this does not give nurses a wider choice for a higher qualification. The study found that nurses work in any part of the hospital without considering their skills and knowledge. The study also established that some registered nurses are in the same grade pay with nurse midwife technician yet their qualifications are different.

Globalisation factors: The study found that some nurses do not sign a bonding contract upon getting a scholarship when going to pursue higher qualifications and the enforcement of the bonding contract was problematic.

The study established that nurses communicate with friends and relations anywhere due to the presence of technology so they become aware of job opportunities and salaries in other countries. In addition, the study found that deliberate policies by other governments as the United Kingdom to recruit nurses especially from developing countries encourages nurses to consider leaving their jobs for another country.

This chapter has presented and analysed the empirical data the researcher collected from the case studies. It has also discussed how the determinants of brain drain can be improved as an initiative to mitigate brain drain, and the measures that are already in place to mitigate brain drain in Malawi. The next chapter will discuss the determinants of brain drain from the analysis in the context of the literature.

Chapter 5 : DISCUSSION

5.1 Discussion of Determinants Identified from the Analysis in Context of the Literature

From this data, it can be concluded that there are different determinants of brain drain under economic factors, political factors, technological factors, social factors, education factors and globalization. As such, it is imperative to understand the determinants of each aspect of brain drain before providing strategies and measures to retain the nurses. The discussion is on the research findings using the data collection methods discussed in this study.

5.1.1 Economic Factors

In this research, economic factors include salaries, taxation, living standards and employment opportunities.

5.1.1.1 Salaries

The majority of nurses highlighted that they receive low salaries and this causes nurses to consider leaving their jobs. From the low salaries that the nurses are paid are spent on transport to commute to and from work if they are not staying near the hospital facility. They also use part of their salary to pay for their accommodation, which further reduces their take home pay. In a memorandum, the Secretary for Human Resource Management and Development in 2015 mentioned that 'government approved revision of salaries for employees in the civil service in grades J and below effective 1st July 2015 (The Government of Malawi, 2014). However, the nurses felt it was not adequate. Studies by Vujicic et al., (2004); Cometto et al., (2013); Haupt and Kane, (1998) state that, the size of the wage differential between source and destination country does correlate with the migration of health workers. Despite the low salaries, other factors expounded by nurses during the interviews included late salary payments, delays in implementing a salary increase after promotion, low locum payment and a low risk allowance. The nurses also revealed that full board workshops or seminars that deny nurses of obtaining allowances because those organising workshops/seminars pay for accommodation and meals are also factors that contribute to the brain drain. Some nurses at Mzuzu Central Hospital boycotted a locum due to management's failure to pay them in full their June, July and August, 2015 remuneration (Mwale, 2015).

The key informants from the hospitals concurred with the nurses that low salary is a key factor that causes the loss of nurses. Despite the low salaries, the key informants also agreed with the nurses that low locum payment that nurses receive and full board workshops or seminars which deny nurses of having allowances because accommodation and meals are paid for by

those organising workshops/seminars are also factors that contribute to the reduction of nursing staff. The key informants from NMCM, CHAM and MOH also agreed with the majority of nurses, key informants from hospitals and all the three focus groups to low salaries as a significant factor. The Nurses cannot afford to pay their own transport to work; their children's fees or buy their own nurses uniforms because they are on low pay. The prices of goods have risen which makes life difficult for the nurses. In addition, they work more for less pay so this also contributes to nurses leaving their jobs. Several studies consistent with this study have shown that low salary is a major factor that causes loss of staff (Ngoma and Ismail, 2013; Vidal, 2015; Docquier, 2006). There is an example given in the literature that a newly qualified nurse in the United Kingdom earns GBP 19,166 (US $33,290) which is about ten times what a nurse would earn in Malawi (Vidal, 2015). As a result, a nurse would be attracted to go to the UK rather than staying in Malawi because of the salary. Muula and Maseko (2006); Ngoma and Ismail (2013) consider salary as an important factor. The government of Malawi with partners introduced 52 percent top-up salary in 2005, however, according to Mwapasa (2005) the salary increase has not improved job satisfaction, mainly because salaries remain much lower than those offered in the private sector or outside Malawi. The nurses were frustrated and in March 2015 they gave the government a seven-day ultimatum demanding non-taxed leave grants and salary increments (Mkandawire, 2015).

5.1.1.2 Taxation

The data illustrates that high taxation is one of the determinants of loss of staff among nurses in Malawi. The nurses are not able to save enough money because 'take home pay' is low due high tax that they pay to the government. The key informants from the hospitals, from NMCM, CHAM, MOH and focus group discussions also concurred with the majority of nurses. This is also consistent with (Rasool et al., 2012) that people who emigrate are unhappy with the level of taxation and living costs because they already receive low salaries. These responses were frequently given from the participants at all levels demonstrating the extent to which heavy taxes affect salaries. The 52 percent top-up introduced in 2005 by the Malawian government as part of the Emergency Human Resources Programme (EHRP) is taxed so the actual take home pay is less. There is no adequate explanation in the tax deductions resulting in discontent. For instance, in the month of August 2011, 52% was described on pay slips as "tax free allowance". This brought relief to health workers as they thought that the top up would no longer be taxed. However, starting in the month of September, the amount started to be taxed although it was still called "tax free allowance" (Tambulasi and Chasukwa, 2015). The health workers were told that there was anomaly in the month of August 2011 tax administration and the money was required for reimbursement. Nurses in Malawi are also considering leaving because despite the high tax, their locum payment is taxed in addition to

the tax paid on their low salary. Several studies (Beine et al., 2008; Docquier, 2006) have shown that high taxation is a deciding factor when staff change employment.

5.1.1.3 Living Standards

The nurses considered leaving their posts due to high prices of commodities, responsibilities for extended families, high transport fares, high house rent and the non-provision of meals for nurses working at night. Key informants from hospitals explained that nurses have limited opportunities to make extra money apart from their salaries. The nurses have dependants and struggle to support them as a result of the high cost of living and their low salaries. The focus group discussions, the key informants from NMCM, CHAM and MOH concurred with nurses and key informants from the hospitals that living costs of living were high in terms of transport expenses to and from work and accommodation costs especially for the nurses who were staying far away from the health facilities. The World Bank (2011) report that the economic conditions of African countries have been on the decline for decades so this worsening state of affairs has adverse effects on living standards and the quality of life.

The nurses are concerned with alarming rate at which the cost of living is increasing in Malawi and its impact on poor households especially those with low salaries. Because of low salary, the nurses were not able to support their families. The data from the Centre for Social Concern (CFSC) cost of living report for 2011 support these findings. It indicates that the cost of living went up by 21% between January and October 2011 whereas the earning power increased at an average of 7% for civil servants and almost at the same rate for other sectors (CFSC, 2012). The unmatched increase in the cost of living compared to these incomes continues relentlessly and is having a negative effect on household food provision.

5.1.1.4 Employment Opportunities

Nurse participants indicated that apart from the employment opportunity itself other factors also come into play. These factors include, low salaries, poor environment, poverty, lack of housing, poor infrastructure, non-recognition of nurses and plans to advance careers through upgrading. As such, it was not only the employment opportunity itself that contributes to loss of staff but also a combination of other factors already noted.

Key informants explained that nurses consider leaving their jobs because of the availability of nursing jobs in other countries, for example in the UK where Malawian nurses often find employment having a high demand for nurses. Nurses also leave because of lack of opportunities for promotion and the poor economy. Besides the employment opportunity, frustration due to low salaries and unfavourable working conditions contributing to loss of

nursing staff in Malawi. Several studies Dzvimbo (2003); Dimaya et al.(2012); Ngoma and Ismail (2013) highlight that, higher wages and better employment prospects in developed countries create incentives for skilled workers from developing countries to migrate.

5.1.1.5 A Comparison of Economic Factors of Brain Drain in the Literature Review and Data Collected

Table 5-1 compares the economic factors of brain drain in the literature review and economic factors this study found.

Table 5-1 Comparison of Economic factors of brain drain

Literature Review	Data Collected
low salaries	• low salaries • delays in paying salaries • delays in adjusting salaries after promotion • low locum allowance • fully paid workshops/seminars
high taxation	• high tax • taxation on locum payment
high living standards	• high prices of commodities • costly transport fare • costly house rent
employment opportunities	• employment opportunities in other countries • lack of opportunities for promotion

In terms of minimising or mitigating the brain drain, there is a need for increasing the salaries, locum and risk allowances. There is also delayed payment of salaries. In this regard, there is a requirement for management to pay the salaries on time. After promotion, management should not delay in adjusting the salary of nurses. Despite raising the salaries, the government could also introduce loans for nurses with low interest rates. It was also highlighted that donors who are in operational relationship with the government should remove the full board workshops arrangement and instead pay participants allowances to obtain their own choice of accommodation and meals. As for the full board workshops in his memorandum, the Secretary for Health expressed that “reports reaching the Ministry of Health from various development partners indicate staff in the Ministry of Health are boycotting full board workshops and seminars by the development partners. This is despite heavy costs having already been incurred in the organisation of such activities that are aimed at providing the much-needed continued personal development of staff in the Ministry of Health. The objective is to develop skills which in turn will translate into an improved health service delivery at all levels across the country. Government made this provision in order to ensure a full, timely, uninterrupted and serious participation of its officers in workshops and seminars and not take these activities as extra income generating activities. The Ministry has therefore directed that all officers in

this Ministry who have been identified and invited to attend such full board workshops to always do so without fail. Also, all heads of Department in the Ministry are to ensure that their officers under their charge are to comply with the directive and report to this office if officers did not comply with directives. Please be reminded that failure to comply with an instruction is in terms of the Malawi Public Service Regulations (MPSR 1:20) (3), an act of misconduct for which the concerned officers will be liable for disciplinary action which can be meted out against them" (Lilongwe Secretary of Health, 2016:1).

There is a need for reducing government income that nurses pay which often stated by the majority of nurse participants after discussions. In addition, the management could stop deducting income tax from locum payment as heavy taxation further reduces nurses' nurses' already low salaries.

There is a need for revising salaries to meet the rising prices of commodities, support extended families, increased transport fares and accommodation costs. Additionally, management could consider building more institutional houses to ease the accommodation problem for nurses and provide transport and housing allowances. Management could also provide nurses on night duty with free or low cost meals.

Interviews with nurses, key informants and focus group discussions proposed that management should raise the salaries of the nurses and provide nurses with the necessary resources to make the environment more favourable. The same informants proposed that the government could employ more nurses and provide them with incentives to minimise the loss of nurses to other countries.

5.2.1 Political Factors

In this study, political factors include political violence, crime tribal tensions, and non-democratic institutions.

5.2.1.1 Political Violence

A majority of nurses highlighted that political violence is not a contributing factor to reducing numbers of nurses in Malawi. Although one participant emphasised that the change of leadership and another participant said that speeches by political leaders are factors that led to loss of staff but they are not significant factors creating this problem. However, it was suggested that political leaders should be emollient in the language they use so that nurses are not frustrated. Key informants along with focus group discussions concurred with the nurses that political violence did not cause the loss of nurses. However, one key informant highlighted that nurses receive threats from politicians so there was need for politicians to stop

issuing threats to nurses and provide a work place, pay and conditions acceptable for nursing staff to undertake their duties. Although (Rasool et al., 2012) state that although many African countries experience ongoing violence and crime, this does not apply in the context of Malawi.

5.2.1.2 Crime Tribal Tensions

The majority of nurses explained that crime tribal tensions are not factors that contribute to loss of staff among nurses in Malawi. This is consistent with what officials from NMCM, CHAM and MOH also reported. There were no measures that were suggested to minimise or mitigate the problem because the participants in the study did not see crime tribal tensions as a significant factor that contribute to staff losses. Akpokari (1998) highlights that any revival of old tensions will aggravate conflicts that in turn lead to migration. Docquier and Rapoport (2007) state that skilled individuals from Africa often migrate to more stable economies primarily to flee from the unstable and often dire political climate that they experience and more importantly for a better quality of life for the emigrants and their families.

5.2.1.3 Non-Democratic Institutions

Nurses mentioned that change of government, change of leadership, politically motivated positions, lack of political will, regionalism, nepotism and tribalism are factors that contribute to loss of nurses in Malawi. Key informants from hospitals revealed that under funding, non-recognition of experience, non-recognition of qualification of nurses, conflict between nurses and political personnel are worsening staff losses of nurses in Malawi. Several studies conducted by (Adepoju, 1991; Akpokari, 1998 and Takyi, 2002) show that a non-democratic institution adds to the losses of nurses.

Key informants from NMCM and CHAM agree that nurses work in non-democratic institutions. There is political interference as is seen when promotion of nurses is not on merit so nurses become frustrated and decide to leave. Political leaders give false promises to nurses that their working conditions would improve but in reality, there is no improvement. They also interfere with disciplinary decisions made by the regulatory body NMCM. On the other hand, one official from MOH revealed that the government supports nurses in respect of the of 52% top up allowance with the help of donors that nurses receive on a monthly basis on top of their salaries.

5.2.1.4 A Comparison of Political Factors of Brain Drain in the Literature Review and Data Collected

Table 5-2 compares the political factors of brain drain in the literature review and political factors this study found.

Table 5-2 Comparison of Political factors of brain drain

Literature Review	Data Collected
political violence	• change of leadership • threats • speeches by political leaders
crime tribal tensions	• none
non-democratic institutions	• politically motivated positions • lack of political will • regionalism, nepotism and tribalism • limited career structures • under funding • non recognition of experience and qualifications of nurses

To mitigate the loss of staff, the majority of nurses expounded that politicians should let nurses perform their duties professionally without any political interference. The nurses demand for equal opportunities so their posts should be on merit, not on political grounds. There was need for political will to recognize the nurses by allowing them to speak out about their concerns and provide them with enough resources to perform their clinical duties.

Managers could conduct exit interviews with nurses to identify specific factors that make them consider leaving so that there are timely interventions. In addition, there was need for hospital managers to have regular meetings with people in the community to let them know some of the challenges that the hospitals are facing. Key informants stated that politicians should stop politicising the nursing services. The nurses should be given promotion on merit and the Nurses and Midwives Council of Malawi (NMCM) should take a leading role in regulating nurses, which may include including disciplinary procedures, without any political interference.

5.3.1 Technological Factors

In this research, technological factors include equipment, technological support and investment in infrastructure.

5.3.1.1 Equipment

The nurses in Malawi struggle with inadequate supplies of medication, medical equipment and other essential supplies. In particular, nurses revealed that equipment such as aprons, syringes, suction machines, electro cardiograph machines, infusion pumps, patients' monitors,

thermometers, nebulizers, curtain for privacy, delivery packs, lifting aids and computers are always in short supply. The key informants from hospitals and focus group discussions corroborated these shortages. They also said that computers and access to the internet are lacking in the health facilities. Key informants from hospitals, NMCM, CHAM and MOH concurred with nurses on the ongoing lack of equipment. Furthermore, when the equipment is damaged and broken, repair are not completed and nurses use old and out-of-date technology such as blood pressure (BP) machines and thermometers. There was a general feeling that the shortage of resources meant that nurses could not provide quality care and, as a result, leading to more staff losses. Several studies viz. Maluwa et al. (2012); Dovlo (2007); Dodani and Laporte (2005) attested that the lack of basic equipment is one of the challenges in developing countries.

5.3.1.2 Technical Support

Nurses, key informants from hospitals elaborated that nurses do not have the technical expertise to use equipment and frustrated the nurses because it meant that they could not provide quality of care to patients. In this regard, there was need for management to provide nurses with resources to do their work and training on how to use equipment safely. However, Vidal (2015) indicates that most hospitals in Malawi experience inadequate material resources, which mainly result from limited availability of funds to purchase equipment. Some staff have poor computing skills, which could be remedied if the government installed internet facilities in all offices or create a room where nurses could meet and learn in their own free time how to use the computer and internet.

5.3.1.3 Investment in Infrastructure

Nurses, key informants and focus groups elucidated that hospital wards are small and congested with patients, which make the environment difficult to undertake their work in. Some of the hospital structures are old with poor ventilation with dilapidated chairs and desks in the wards. Some nurses live in institutional houses that are in poor condition. The nurses do not have facilities at work place such as rest rooms and equipment such as microwave and fridge microwave and fridge so that during their break time they could use them. In addition, the nurses do not have a functional library and face challenges with accessing the internet.

5.3.1.4 A Comparison of Technological Factors of Brain Drain in the Literature Review and Data Collected

Table 5-3 compares the technological factors of brain drain in the literature review and technological factors this study found.

Table 5-3 Comparison of Technological factors

Literature Review	Data Collected
inadequate supplies of medication lack of basic equipment	• lack of medication • lack of equipment: equipment that is in short supply, include thermometers, suction machines, oxygen concentrators, blood pressure machines and defibrillators
technical support	• improvising equipment • use of clinical judgment • lack of computer network • lack of skills to use equipment
lack of investment in infrastructure out dated hospital infrastructure	• small and congested hospital wards • old hospital infrastructures • lack of chairs and desks • no rest rooms • no microwave and fridge

To mitigate the loss of staff, there was need for government to make resources available in hospitals because a general lack of equipment hinders the nurses in performing their clinical duties so they become frustrated and leave. The hospital managers should ensure that the damaged equipment is repaired or replaced. The nurses adopt a manual system so there is need for the government to provide funding to procure digitalised technology to reduce the pressure of the workload. Ngoma and Ismail (2013) write that, technology in developed countries creates incentives for skilled workers from developing countries to migrate.

Nurses could also undergo periodic supervision to assess their performance when they are using the equipment. It was necessary to have regular meetings between nurses and management to help the two parties to identify any challenges that the nurses face.

Nurses, key informants from hospital and focus group discussions corroborated the building of more hospital wards and institutional houses. Some of the houses need regular maintenance to keep them in good condition. There was need to build a canteen at each hospital where nurses could relax and share ideas. A key informant from MOH revealed that the government had started digitalized healthcare in such health facilities as Kamuzu Central Hospital but they needed to extend this to all health facilities. There was also need to install air conditioners in the hospital wards. The government could also buy furniture such as chairs and tables for offices to replace the worn out ones. Although, Winters (2002) observes that

some countries have made significant investments in infrastructure, it seems most health facilities in Malawi are characterised by a lack of infrastructure due to the lack funds. For example, Kumbani (2016) notes that the health sector is under financial pressure as only a quarter of the amount projected for 2015/16 was realised amounting to $160 million (114.4 billion Malawi Kwacha) when $635 million (454 billion Malawi Kwacha) was needed. The health sector strategic plan 2011-2016 had projected a need for $1billion in 2015/2016.

5.4.1 Social Factors

Social factors include diseases, poverty, corruption and living conditions.

From the literature in this study, social factors include diseases, poverty, corruption and living conditions, which are the four child nodes under the parent nodes of social factors.

5.4.1.1 Diseases

Nurses and key informants from hospitals and officials from NMCM, CHAM and MOH agreed that nurses were afraid of contracting diseases such as Tuberculosis, HIV/AIDS and cholera as sometimes they work without personal protective equipment such as gloves and masks. In focus group discussions, nurses revealed that they decide to leave their posts because the government does not provide medical insurance cover for the nurses. Greater numbers of patients increase the nurses' workloads and patients tend to stay longer in the hospital or return at a later date. Increased contact with HIV/AIDS and tuberculosis patients creates greater exposure to infection and consequently increases stress to consider leaving their jobs. WHO (2006); Tawfik and Kinoti (2003) report that, HIV/AIDS renders the health workplace a hazardous location in sub-Saharan Africa. Bhargava and Docquier (2008) pinpoint that HIV prevalence rates in developing countries create a vicious circle, by increasing the emigration of nurses.

5.4.1.2 Poverty

Nurses hinted that poverty led to loss of staff because they could not adequately support their families and extended families due to their low salaries. The cost of living for basic consumables such as accommodation, transport, clothes and food is high in Malawi and nurses still use part of their already low salaries to meet these needs. As such, it becomes very difficult for nurses to raise their life style. These facts also concurred with what key informants also described. Key informants added that nurses retire without a house so they prefer to migrate so that they would be able to save money to build or buy a house in their homeland before they reach retirement age. This was also consistent with what nurses in focus group discussions outlined. Dodoo et al. (2006) report that the brain drain of health care

professionals hit sub-Saharan Africa hard, where the increasing level of poverty is greater than the level of producing healthcare professionals to face the burden of the region's health issues.

5.4.1.3 Corruption

The nurses had mixed reactions regarding corruption. Two nurse participants acknowledged the existence of corruption as being theft of medication and money. They mentioned that corruption itself did not cause nurses to resign in Malawi but the main reason is the low salaries. Five nurse participants admitted that corruption existed and caused a number of nurses to consider leaving. Eight nurse participants decided not to comment on this question thinking it was a sensitive matter. Two key informants from hospitals and officials from NMCM, CHAM and MOH commented that, there was corruption in Malawi and this is having a negative effect on the functions of various government departments including the Ministry of Health. Although, they indicated there was corruption, it did not necessarily cause nurses in Malawi to leave. An example of corruption in Malawi was reported and refers to a former Ministry of Finance Budget Director in 2013 who was shot outside the gate of his Area 43 residence in Lilongwe and led to revelations of the plunder of public resources at Capital Hill referred to as 'Cash gate'. Former President Joyce Banda ordered an audit which British forensic auditor, Baker Tilly undertook between April and September 2013. About 24 billion Malawi Kwacha was siphoned from public coffers through dubious payments, inflated invoices and for goods or services never rendered. In May 2015, a financial report by audit and business advisory firm from PricewaterhouseCoopers also established that, about 577 billion Malawi Kwacha in public funds could not be reconciled between 2009 and 2014 (Khunga, 2016).

5.4.1.4 Living Conditions

The nurses mentioned that there were living conditions issues that contribute to the resignation of nurses in Malawi. They revealed that nurses use their own funds to buy their nurse uniforms and there is no provision of food for night staff.

The nurses become frustrated to work in overcrowded wards coupled with heavy workload and long working hours. WHO (2010b) reports that there are around 60 million healthcare professionals, and they tend to migrate to areas where working conditions are best. Buchan (2006) highlights that, excessive demands of work demotivates staff and produces stress, encouraging health workers to migrate or resign. Interviews with nurses also found that most of the nurses do not live in institutional houses because there are too few available. The nurses who reside in institutional houses were concerned about the poor condition of the dwellings, as the management did not repair them.

Interviews with key informants from hospitals revealed that insufficient personal protective equipment, disinterested nurses in bedside nursing care, inadequate institutional houses all contribute to nurses leaving their posts. The nurses rent private houses which are not managed by the Ministry of Health because there is an insufficient supply of institutional accommodation. The nurses are not provided with fridge and microwave ovens at their work place to keep fresh and warm their food which leads to their frustration.

5.4.1.5 A Comparison of Social Factors of Brain Drain in the Literature Review and Data Collected

Table 5-4 compares the social factors of brain drain in the literature review and social factors this study found.

Table 5-4 Comparison of Social factors of brain drain

Literature Review	Data Collected
Diseases: HIV/AIDS	• HIV AIDS, Tuberculosis and Cholera
Poverty	• poverty
Corruption	• corruption
Living conditions: heavy workload Long working hours	• heavy workload • nurses use their own money to buy uniform • no provision of meals • overcrowded wards • long working hours • no provision of mandatory medical check up

To minimise staff losses, the majority of participants explained that there was need for government to provide sufficient supplies such as gloves, aprons, masks to nurses to undertake their clinical duties. The nurses should have medical check-ups regularly to make sure they were in good health. There is a need to ensure that there is an ongoing cleaning service in the hospitals, provision of personal protective equipment, rooms are well ventilated and well lit. Cleaners should be given training in infection control. In the same vein, the government could also consider installing alcohol based hand sanitizers throughout the hospital units in places such as corridors and wards to control infection.

The majority of participants emphasised that the government should improve salaries levels of nurses. There is also need for offering loans to nurses to set up small-scale businesses to support their families. In addition, the nurses would like to have locum payment increased due to the heavy workload and the increased risk of infection from Tuberculosis and HIV/AIDS. Management should consider providing transport and housing allowances to nurses if they

were not living near the hospital facility. There was also need for government to consider building more houses for nurses as private rented houses were expensive.

The participants mentioned that there was still need for government to put in place strict measures to curb corruption in various government departments. As significant quantities of medication are supplied to hospitals, there is need to place 'Do Not Steal Me' labels in full on all medication in order to curb the misappropriation of these vital supplies. Management could establish measures to control fraud and corruption by the provision of workshops on prevention of corruption with nurses and other healthcare professionals who come into contact with medication in their line of duty.

To mitigate staff reduction, management should provide a nurse uniform, a pair of shoes and a transport allowance to the nurses. Management should also repair and maintain institutional houses that are dilapidated and build more houses. The basic equipment should be available and routine maintenance of all equipment provided.

5.5.1 Education Factors

Education factors in this study refer to training, education standards and underutilized skills.

5.5.1.1 Training

The majority of nurses explained that there was a loss of staff numbers as a result of poor provision of training opportunities, low provision of scholarships by the Malawi government, the removal of nurses from the pay roll and favouritism. Nurses are removed from the pay roll if they secure a scholarship independently. Some participants indicated that the opportunities for in service training were available but there was favouritism in nurses chosen to attend training. In agreement, key informants from hospitals explained that the government of Malawi was not actively providing scholarships to nurses due to financial difficulties. They argued that nurses have opportunities to upgrade because they are able to obtain scholarships from international organisations such as United States for International Development (USAID) and the National Aids Commission (NAC). This was contrary to the explanation given by nurses what the majority of nurses that they do not upgrade because of lack of low provision of scholarships. However, the key informants from hospitals as noted above concurred with the nurses that the government removed nurses from pay roll if they secured a scholarship independently so this frustrated nurses and contributed to the loss of nurses.

One official from NMCM narrated that nurses do have support with upgrading of their qualifications to a higher cadre. On the other hand, two other officials from CHAM and MOH lamented that nurses seriously contemplate leaving their posts because of the curtailment of

scholarships in Malawi. This was in agreement with what the majority of nurses and focus group discussions highlighted. In a Public Service Training Guidelines and Procedures (2014:19) statement it stipulates that “consideration for full Government or donor sponsorship/scholarship shall be made to employees, proceeding to attend a given training programme, who will fulfil the selection requirement for short and long term training, where management approval was granted through the responsible line manager/supervisor prior to applying for the programme”.

Several studies (Massey et al., 1993; Haupt and Janeba, 2009) highlight that many migrants in the developed world are highly skilled and in many situations, their educational capital is the only available platform for considering migration. Nurses also added that there was limited choice of specialisation subjects so nurses did not have many programs to choose from depending on their areas of interest at Kamuzu College of Nursing. This finding is consistent with focus groups discussions.

5.5.1.2 Education Standards

Nurse participants mentioned that they considered leaving because most of the time they were not involved in carrying out research projects, hence they did not develop their research skills. They also revealed that Malawi has only one nursing institution which is the Kamuzu College of Nursing where nurses pursue postgraduate studies but there were few courses of specialisation. This did not offer nurses a wider choice and leads to nurses leaving, as opportunities were unavailable in Malawi. However, key informants from hospitals supported that, the government introduced PhD programs so nurses were able to upgrade themselves with government support. The government has experienced lecturers who are capable of teaching both at Masters and PhD levels in nursing.

5.5.1.3 Underutilised Skills

The nurse participants mentioned that there was misplacement of staff in different wards. Key informants agreed with nurse participants and focus group discussions in relation to the misplacement of nurses. The nurses have different expertise in different hospital wards but due to shortage of nurses, they work in any part of the hospital ward so the nurses seriously contemplate leaving their jobs as a result. The nurse participants also revealed that they were not able to utilise their skills due to inadequate resources.

The key informants from hospitals expounded that when nurses return to work after upgrading their qualifications to a higher cadre they experienced equipment shortages, and as their skills were not fully utilised they decided to leave due to frustration. The nurses also became

frustrated because after upskilling themselves they remained in the same grade. However, a response from a key informant from the hospital stated that there was no system in place to promote staff straight away after upgrading their qualifications. The hospital management has no authority to promote staff because the Health Services Commission agrees the promotions. In some cases, nurses were not doing the work for which they were trained instead they were employed as coordinators of some projects which frustrates overlooked nurses. As a result, they consider leaving the system because of work overload.

5.5.1.4 A Comparison of Education Factors of Brain Drain in the Literature Review and Data Collected

Table 5-5 compares the education factors of brain drain in the literature review and education factors this study found.

Table 5-5 Comparison of Education factors of brain drain

Literature Review	Data Collected
training: higher education; lack of scholarships	• lack of training opportunities • availability of few scholarships • nurses are removed from pay roll • favouritism in the choice of nurses to attend training • some nurses are in the same grade pay with nurse midwife technician yet their qualifications are different • favouritism in promotion
education standards: declined standards	• nurses not fully involved in carrying out research projects • only one nursing institution thus Kamuzu College of Nursing to pursue postgraduate studies • few areas of specialisation
underutilized skills:	• misallocation of nurses in different wards/sections • nurses made as coordinators of some projects so this frustrates other nurses • nurses are faced with challenges of equipment after studies • registered nurse remain in the same grade for long time

To mitigate staff losses, there was need for nurses to have regular refresher courses and management should ensure that there was transparency and equity in the provision of training opportunities to nurses because they were the same nurses who attended training. The government could also secure funding to enable more nurses to upgrade their qualifications and not to remove them from pay roll when they secure scholarships independently. Key informants claimed that the government could provide more scholarships to nurses to develop

their skills and knowledge. The government could also introduce a transparent system of identifying needy students for scholarships. The government through NMCM could also introduce more specialisation programmes at Kamuzu College of Nursing.

To mitigate moderate losses of nurses, then, they should have greater involvement in research projects whether Malawi government or donors to develop their research skills and knowledge. There was also need for the government to sanction the building of more institutions and introduce greater specialisation programmes for nurses. There was need to maintain nurses on bonding contract whenever they want to go for further studies on scholarship arrangements as this would make them feel committed to the government. However, a key informant argued that nurses will still go abroad often to the UK because they know they would be able to work and study at the same time.

To ameliorate staff reduction, there was great need to allocate nurses to wards according to their ward expertise and providing them with equipment rather than obliging them to work in any hospital ward. There was also a need to assess training needs of nurses, initially first before sending them on training course and they should be promoted on merit. The nurses should raise any concerns that they may have had before hand and then endeavour to solve those concerns or to find solutions to those concerns so that everyone remains up to date.

5.6.1 Globalisation Factors

Globalization refers to global labour movement, interdependent and interconnected societies and liberalised policies.

5.6.1.1 Global Labour Movement

The nurses reported that access to internet contributed to staff movement, as nurses were able to compare their salaries in Malawi with those of other countries. Nurses go to places with better living conditions, housing and infrastructure. Nurses trained in Malawi have freedom of movement and can work in most countries such as the UK because their syllabus was not very different from the Malawi syllabus. The majority of participants hinted that it was difficult to maintain staff numbers among nurses because of freedom of movement. However, there was need to improve the salaries of nurses to retain them in Malawi and the need for nurses to pay tax to the Malawi government after emigration. Managers could also be conducting exit interviews with nurses as soon as they tender their resignation letter to discover the reasons for their leaving. Kuehn (2007) states that global free movement of labour and competition for human resources enables developed countries to fill their shortages of health workers with nurses and doctors from less developed countries.

Key informants from the hospitals stated that the nurses considered leaving because of disparities in working conditions and pay. This concurred with what the nurse participants also articulated. Some nurses did not sign a bonding contract upon accepting a scholarship when they wanted to go and pursue studies for higher qualification. This motivated them to leave, as there are no any conditions attached to them. Although there is freedom of movement, improving disparities in working conditions and pay of nurses would reduce staff movement.

5.6.1.2 Interdependent and Interconnected Societies

Nurses leave the public sector because of nurses' exchange programme as they share information about job opportunities. They are interconnected around the world with the presence of social networks such as WhatsApp and Facebook so nurses become aware of what is happening in the global village. Ohmae (1993) points out that, globalisation is a borderless world where events taking place in one part of the world quickly go across the globe via 24-hour news channels. However, the majority of nurse participants articulated that interdependent and interconnected societies do not cause staff movement among nurses in Malawi. Key informants from hospitals and focus group discussions concurred with the majority of nurses that interdependent and interconnected societies do not cause brain drain among nurses in Malawi. However, one key informant proposed that the exposure that nurses experience when they travel motivates them to consider leaving the public sector. The introduction of modern technology and the internet allow nurses to share information allowing them the possibility of finding a position elsewhere.

5.6.1.3 Liberalized Policies

The majority of nurses had not mentioned liberalised policies as a contributing factor to staff movement of nurses in Malawi. However, one participant stated that when nurses go abroad to work, the destination country should be paying tax inform of co-operative compensation to the government of Malawi. Another participant added that, both destination and source countries should be in operation relationship so that nurses who have already migrated could be talking to those who remained in the source country to tell them about the challenges they may face in a destination country. The majority of nurses did not mention factors to lessen staff reduction, as they did not see it as an important factor that contributes to loss of nurses.

A key informant from hospital commented that deliberate policies in other governments, such as the UK, to recruit nurses especially from developing countries encourage nurses in Malawi to consider leaving their jobs. Another key informant explained that there is need to increase verification fees. Currently, each nurse pays K60, 000 Malawi Kwacha ($88) to NMCM as a verification fee to emigrate. Another key informant hinted that the government of Malawi and

other governments should be vigilant in policing the movement of nurses. However, this oppression may be harsh so the author suggests a gentle negotiation may be a better way.

The officials from NMCM and CHAM explained that a country such as the UK has a policy to recruit nurses from different parts of the world and inducing nurses in Malawi to leave for the UK.

5.6.1.4 A Comparison of Globalisation Factors of Brain Drain in the Literature Review and Data Collected

Table 5-6 compares the Globalisation factors of brain drain in the literature review and Globalisation factors this study found.

Table 5-6 Comparison of Globalisation factors of brain drain

Literature Review	Data Collected
global labour movement: availability of jobs in other countries similar syllabus relaxed policies; human rights	• access to internet • better salaries • better living conditions • better housing and infrastructure • non reinforcement of bonding contract
interdependent and interconnected societies	• people interconnected all over the world • nurse exchange programme
liberalized policies: recruitment campaigns and changes to immigration policy	• deliberate policies

The Public Service Training Guidelines and Procedure (2014:20) stipulates that "Consideration for full Government or donor sponsorship/scholarship shall be made where the employee agrees to sign a training bond and an undertaking prior to proceeding on a long-term training programme". Although there is a bonding contract written in the public service training guidelines and procedures of the Ministry of Health, some participants question its effectiveness as it faced enforcement problems so there was need for management to maintain the bonding contract. One focus group emphasised that the government could introduce non-financial rewards such as vouchers, prizes and gift cards to nurses for good performance. This is investing in nurses by showing appreciation in creative ways and may be one of the best ways to retain nurses and create a sustainable culture of success.

There is need to introduce compensatory payments from destination countries to Malawi to mitigate the damage of loss of staff. A key informant from the NMCM explained suggested the introduction of a memorandum of understanding between countries to restrict international recruitment of nurses. However, nurses in focus group discussion and interviews argued that restricting this is violation of individual freedom of movement.

5.7 New Conceptual Framework from Author's Research

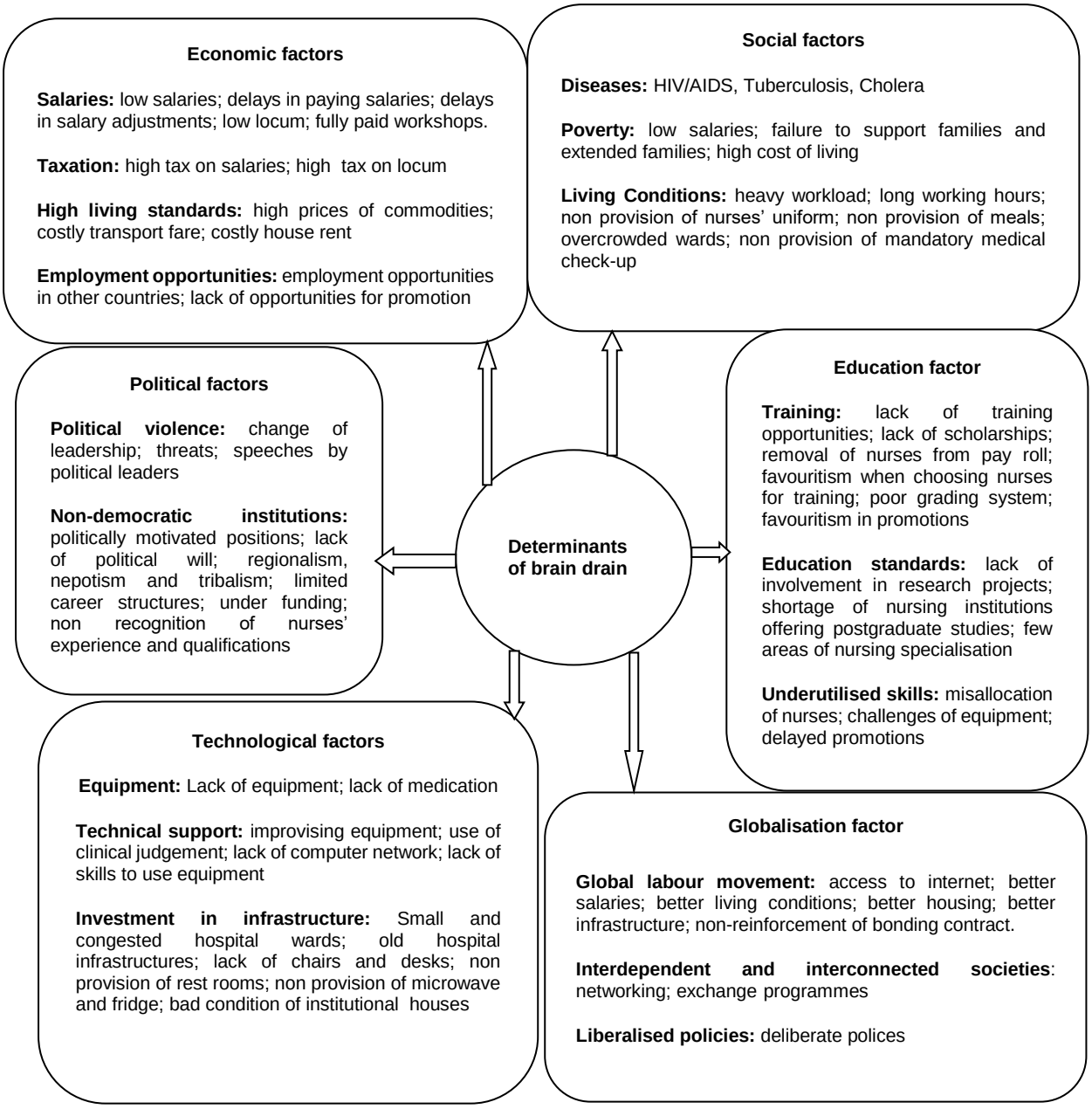

Figure 5-1 New conceptual framework for research (Author)

Diagram 5-1 depicts a new conceptual framework for this study. The Six main categories of brain drain were explored. They include economic factors, political factors, technological factors, social factors, education factors and globalization. There are parent and child nodes under each category for conducting analysis.

5.8 Summary of key Findings

This study used different data collection methods because it provides a unique instance of, where appropriate, providing some generalisation (Blaikie, 2000). Although it is argued that

case study methodology suffers from the limitations of generalisations (Yin, 2009) it is still possible to draw 'tentative' or 'provisional' generalisations although they are not conclusive (Flyvbjerg, 2006; Mjøset, 2006). To this end, the study findings have significant impact on creating awareness of determinants of brain drain and making recommendations to the policy makers and public sector managers on strategies and measures in an informed, well-focused and coordinated manner to retain nurses in Malawi.

During the course of this study, the researcher was also interested in determining the strategies and measures to put in place to retain nurses in Malawi. The recommendations were from the suggestions of the nurses and key informants, as well as on researcher's own interpretations of the research findings.

Below is a summary presentation of answers to all the three objectives.

5.8.1 Economic Factors

The study established that the low salaries that the nurses receive contribute to brain drain because the nurses struggled to support their families, meet transport and housing costs. The nurses do not have housing allowance so they use their salary to pay for their private rented accommodation. The study found that there are delays in paying nurses their salaries and delays in increasing nurses' salaries when they receive a promotion. The study also identified that locum allowance and risk allowance were low so nurses become frustrated and leave. The study also found that fully paid workshops/seminars also lead to brain drain.

The study identified that nurses' salaries and locum payment are heavily taxed so they struggle to meet their basic needs. The research found that nurses were concerned with the alarming rate at which the cost of living is increasing in Malawi and its impact on poor households especially with the low salary that nurses are paid. Transport and house rent costs were high.

The study found that the nurses consider leaving their posts because of the availability of nursing jobs in other countries such as the UK that have a high demand for nurses due to the nursing shortage and aging population. The lack of opportunities for promotion was another factor that contributes to the brain drain of nursing staff.

5.8.2 Political Factors

The research established that change of leadership, threats, and speeches by political leaders were significant factors that cause brain drain among nurses.

The study found that crime tribal tensions were not a major factor that cause brain drain among nurses in Malawi.

The study found that politically motivated positions, lack of political will, regionalism, nepotism and tribalism are factors that contribute to the loss of nurses in Malawi. In addition, the study established that non-democratic institutions, limited career structures have led to brain drain. The study also found that under funding, non-recognition of nurses' experience and non-recognition of nurses' qualifications frustrates them and lead to turnover of staff.

5.8.3 Technological Factor

The study found that shortages of resources in public hospitals indicated that nurses could not provide quality care thereby leading to brain drain due to frustration and demoralization. Some of the essential equipment that is in short supply in most hospitals include thermometers, suction machines, oxygen concentrators, blood pressure machines and defibrillators. The study also found that there is lack of medication in hospitals so it adversely affects nurses in performing their clinical duties.

The research discovered that nurses improvise when performing their clinical duties because they do not have equipment. As a result, nurses leave because they do not feel comfortable working in this kind of environment. The study also established that there is a lack of computer networks in the health facilities and the nurses lack skills to use available equipment and become frustrated so they decide to leave their posts.

The study affirmed that hospital wards are small with too many patients, which make the environment difficult to work in. Some of the hospital structures are old and without proper ventilation and nurses use dilapidated chairs and desks in the wards. The study also established that there are no rest rooms, microwave ovens and fridges so nurses become demotivated and leave. The research also discovered that some nurses live in institutional houses but the houses are in poor condition needing proper maintenance.

5.8.4 Social Factors

The study recorded that some nurses in line of duty contract diseases such as Tuberculosis, HIV/AIDS and Cholera because sometimes they work without personal protective equipment such as gloves and masks so nurses decide to leave.

The study noted that the cost of living for basic things such as food, clothes, accommodation and transport is high in Malawi so nurses struggle to support themselves and their families.

The nurses struggle to build or buy a house before reaching retirement age. The low salaries that nurses are paid attribute to this.

The study uncovered corruption existing in some government departments including the Ministry of Health. In this case, the government is not able to obtain enough funding to buy adequate resources for nurses and other healthcare professionals. Although corruption exists in Malawi, it does not necessarily cause brain drain among nurses.

The study understood that nurses use their own money to buy a set of nurses' uniform and there is there is no provision of meals at work for night shift staff. This frustrates nurses and they decide to leave the public hospital. The research also found that nurses become frustrated to work in overcrowded wards with a heavy workload, long working hours and the non-provision of a mandatory medical check-up in line of duty.

5.8.5 Education Factors

The research found that the lack of training opportunities, the availability of only a few scholarships provided by Malawi government caused brain drain among nurses. This demonstrates the reluctance of the MOH to send nurses for further studies due to financial constraints.

The study also recognised that when the nurses want to go for further studies on self-sponsorship or if they secure funding independently, their names are removed from the pay roll.

The study established that there was favouritism in the choice of the nurses who attend training because the same nurses were attending training.

The study also found that there was limited choice of specialisation courses, so nurses did not have many programs to choose from in their areas of interest at Kamuzu College of Nursing.

The study found that nurses, mostly in the central hospitals, were not fully involved in carrying out research projects so they did not develop their research skills.

The research found nurses work in any part of the hospital without considering their skills and knowledge. This arrangement helped to strengthen health service delivery due to under staffing problems. However, the nurses are not happy with management strategy.

The study found that some nurses were not doing the work for which they were trained instead they were made coordinators of some projects which frustrated other nurses who felt left out and considered leaving the system because of work overload.

The study also found that some registered nurses are in the same grade pay as a nurse midwife technician yet their qualifications are different. The majority of nurses take this as bad practice.

5.8.6 Globalisation Factors

The study found that some nurses do not sign a bonding contract upon obtaining a scholarship when pursuing higher qualifications because enforcement of the bond is problematic. Although there is, decentralisation in the management of the hospitals most activities are still managed at the MOH headquarters in Lilongwe. The human resources management department do not enforce the signing of bonding contract so nurses take advantage of this lackadaisical attitude.

The research found that with the presence of technology, nurses communicate with friends and relations all over the world so they become aware of what is happening in other countries in terms of job opportunities and salaries.

The study recorded that nurses in Malawi pay a verification fee of MK 60,000 ($88) to the NMCM if they want to go and work abroad.

The study also discovered that deliberate policies by other governments like the United Kingdom to recruit nurses especially from developing countries encourage nurses to consider leaving their jobs for another country.

5.9 Conclusion

The relationship between data analysis and discussion is interrelated in qualitative research. Both of the processes contribute to developing a conceptual framework. The discussion in this chapter relate to all the objectives of the study. For this research, the data analysis is from the six categories to identify the main issues and problems of this research study. They include economic factors, political factors, technological factors, social factors, education factors and globalization. There are parent and child nodes under each category for conducting the analysis. The discussion has examined the extent to which determinants of brain drain that influence nurses in Malawi could be improved as an initiative to minimize or mitigate the brain drain. The determinants of brain drain have been identified and discussed based on the literature review. The chapter has also discussed strategies and measures to put in place to retain the nurses.

The next chapter presents a summary of the study. It discusses the overall conclusion, contributions to the field of study, limitations of the research, recommendations and areas for future research. Lastly a chapter summary is drawn.

Chapter 6 : THESIS OVERVIEW AND CONCLUSIONS

6.1 Introduction

The process of this research has been presented and discussed in-depth in this thesis. The chapter presents a detailed answer to the research aim and objectives that have been presented in chapter one. In addition, this chapter discusses the overall conclusion, contributions to the field of study, limitations of the study, recommendations and areas for future research.

6.2 Reviewing the Structure of Thesis

This study has demonstrated from chapter one to chapter five how it has been conducted.

Most developing countries continue to experience the loss of an increasing number of highly skilled health professionals such as nurses, doctors, dentists, and pharmacists by migrating to developed countries (Kirigia et al., 2006). This is because developed countries such as the UK, USA and Canada have had in market terms, a higher demand for healthcare workers that has not been satisfied domestically and have attracted such professionals (Prescott and Nichter, 2014; Kaba, 2011). As a result, there is a shortage of nurses in most developing countries because of migration to developed countries, a phenomenon known as brain drain in the human resource management discipline. Nove (2011) elucidates that, Malawi is one of the countries in the sub-Saharan Africa experiencing the brain drain of nurses. Preview research in the area of brain drain has identified a number of determinants requiring both developing and developed countries to take initiatives in order to control or minimize brain drain. Although a huge amount of research is published in this field, most of them are from destination countries i.e. the developed countries, and little is done from source countries i.e. developing countries (Kalipeni et al., 2012; Buchan et al., 2005; Larsen et al., 2005; Ngoma and Ismail, 2013). Therefore, this research has filled the lacuna by providing a source country perspective of brain drain of nurses using an empirical case of Malawi's Ministry of Health.

The following main research question was developed based on a wide-ranging literature review and answers to the question addressed the research objectives in order to achieve the aim of the study:

"What are the determinants of brain drain of registered nurses in the Malawi Health Sector?"

In order to answer this question, the researcher has to have an in-depth understanding of the theoretical background and clarify relevant concepts to demonstrate knowledge and ability

through conducting the research in the Malawi health sector public hospitals. This research intends to investigate the determinants of brain drain of registered nurses in Malawi. The main purpose of the study is to have a clear understanding of the determinants of brain drain and develop a theoretical framework with the hope to curb brain drain in Malawi to improve the country's health service provision and delivery.

In order to answer the research question, the following objectives were defined to help develop a logical and practical process for the accomplishment of the study aim:

Objective 1: To undertake an in-depth analysis of the major six determinants (economic, political, technological, social, education and globalisation) that influence brain drain of registered nurses in Malawi.

In order to answer the main research question a field study was carried out to collect data. It was aimed at investigating the determinants of brain drain of registered nurses in Malawi.

Clearly, the determinants of brain drain are crucial in any developing country as far as policymaking is concerned. The study revealed major determinants of brain drain of nurses in Malawi, as it seems there is a longstanding problem with retaining nurses in Malawi. The tipping points were identified under the categories namely economic, political, technological, social, education and globalisation factors. Although the government has some measures they implemented to retain nurses such as 52 percent top-up salary, bonding contracts, in-service training and provision of houses, it remains that the government is not doing enough to retain the nurses. The brain drain of nurses was found to contribute to the shortage of nurses. As Table 6-1 below, demonstrates the determinants of brain drain which have been defined from the analysis.

Table 6-1 Determinants of brain drain defined from the analysis

Economic Factors	• Salaries: low salaries; delays in paying salaries; delays in salary adjustments after promotion; low locum; fully paid workshops • Taxation: high tax on salaries; high tax on locum • High living standards: high prices of commodities; costly transport fare; costly house rent • Employment opportunities: employment opportunities in other countries; lack of opportunities for promotion
Political Factors	• Political violence: change of leadership; threats; speeches by political leaders • Non-democratic institutions: politically motivated positions; lack of political will; regionalism, nepotism and tribalism; limited career structures; under funding; non recognition of nurses' experience and qualifications

Technological Factors	• Equipment: lack of equipment; lack of medication • Technical support: improvising equipment; use of clinical judgement; lack of computer network; lack of skills to use equipment • Investment in infrastructure: small and congested hospital wards; old hospital infrastructures; lack of chairs and desks; non provision of rest rooms; non provision of microwave and fridge; • bad condition of institutional houses
Social Factors	• Diseases: HIV/AIDS, Tuberculosis, Cholera • Poverty: low salaries; failure to support families and extended families; high cost of living • Living Conditions: non provision of nurses' uniform; non provision of meals; heavy workload; overcrowded wards; long working hours; non provision of mandatory medical check-up
Education Factors	• Training: lack of training opportunities; lack of scholarships; removal of nurses from pay roll; favouritism when choosing nurses for training; poor grading system; favouritism in promotions • Education standards: lack of involvement in research projects; shortage of nursing institutions offering postgraduate studies; few areas of nursing specialisation • Underutilised skills: misallocation of nurses; challenges of equipment; delayed promotions
Globalisation Factors	• Global labour movement: access to internet; better salaries; better living conditions; better housing; better infrastructure; non-reinforcement of bonding contracts • Interdependent and interconnected societies: networking; exchange programmes • Liberalised policies: deliberate polices

To this end, it was found that there are determinants of brain drain under economic, political, technological, social, education and globalisation factors. This study therefore calls on policy makers and public sector managers to focus their strategies and measures on these factors to retain nurses in Malawi.

Objective 2: To examine the extent to which the major determinants of brain drain can be improved as an initiative to minimise brain drain in Malawi.

This objective has been achieved through empirical findings and making comparisons. According to the data analysis, economic, political, technological, social, education and globalisation factors were defined as contributing to brain drain of nurses in Malawi. Hence, it was necessary to examine the extent to which these major determinants of brain drain could be improved to minimise it.

This research reveals that it could be seen that investigating determinants of brain drain of nurses required a comprehensive approach that provided and recognised viewpoints of nurses and key informants. Malawi is one of the countries in the sub-Saharan Africa experiencing the loss of nurses. This brain drain is considered as a significant contributor to the further weakening of already fragile health systems in Malawi (Alam et al., 2015). Therefore, it was necessary to understand the determinants of brain drain of nurses, in order to identify strategies and measures that could be put in place to retain registered nurses.

Research Methodology in chapter three provides an overview of the research process for this study. In addition, it aimed at defining research strategy, data collection tactics and considered all the relevant constraints. Also note that, key research paradigms were discussed and analysed in order to define the appropriate research approach to conduct the study. They helped the researcher to come up with data collection instruments. The three objectives in this study are interrelated.

Six hospitals were included in the sample to make the study representative of Malawi as a whole. These were four central hospitals in Malawi namely Queen Elizabeth in Blantyre, Zomba Central in Zomba, Kamuzu Central in Lilongwe, Mzuzu Central in Mzimba, and two district hospitals namely Nkhotakota in Nkhotakota and Mzimba in Mzimba. The locations were purposively chosen to include both urban and rural settings, though within those locations, the nurses were selected through purposive and convenience non-probability sampling with the support of Chief Nursing Officers and Administrators. In total, eighteen registered nurses i.e three from each sampled hospital participated in the study and represented the whole potential population of nurses. The sample also included key informants from NMCM, CHAM, MOH Headquarters Official, Chief Nursing Officers, District Nurse Officer and Administrators by virtual of holding different positions in the health sector.

Objective 3: To determine strategies and measures that can be put in place to retain registered nurses in Malawi. The objective has been achieved by comparing the empirical findings to identify the similarities and differences. In this regard, the policy makers and public sector managers would be able to establish strategies and measures that are appropriate in the prevailing contextual conditions.

Economic Factors: Management should consider raising salaries for nurses because the unmatched inflation in the cost of living continues relentlessly and is negatively affecting household food security. Management could consider reducing tax deducted from the salaries of the nurses. Management could consider enforcing bonding contract when a nurse wants to go to another country. In addition, the government of Malawi could start taxing countries that

recruit nurses from Malawi in respect of the contextual stress emanating from the loss of nurses.

Political Factors: Management should discourage regionalism, nepotism and tribalism. This would ensure that nurses are promoted on merit and that they are treated equally without discriminating against anyone. Politicians should refrain from interfering with disciplinary decisions made to discipline nurses. They should also take a leading role in praising nurses for the job they do, instead of castigating them.

Technological Factors: Management should ensure that nurses are working with adequate equipment and that medication is available. They should also ensure that equipment is in a good working order at all times and repair them whenever they break down. Management should discourage nurses from improvising things to treat patients as this compromises quality and put life of patients in danger. Therefore, management should ensure that resources are always available in hospitals and nurses should be supported to develop their skills to use equipment.

Management should make a significant investment in infrastructure by building more hospital wards with enough capacity, ventilation and modern equipment. They should also purchase new chairs and desks for the nurses. Management should ensure that the old hospital structures are safe.

Social Factors: Managers could consider raising salaries of nurses to meet the increases in the cost of living. Management could also consider having a fund to offer house loans to nurses. This may engender a sense of satisfaction when the nurses access the loans.

There is need to consider the capacity of hospital wards, recruit more nurses to reduce workload. It is the obligation of managers and hospital administrators to ensure that maintenance of the institutional houses is up-to-date. All old and damaged furniture, broken windows in hospital wards should be replaced to make the work environment appropriate, attractive and practical. Management could also consider introducing a housing allowance for nurses to create a sense of satisfaction.

Education Factors: There is need for managers to carry out training needs assessments equitably and identify nurses in fairness who can attend training. There is also need for the government to introduce more specialisation programmes. Management should ensure that the allocation of nurses in wards is in line with their experiences or area of their specialisation. Management could ensure that nurses grading system is revised and promotions are made on merit.

Globalisation Factors: The management could consider enforcing bonding contracts. The management of NMCM could consider increasing the verification fee. There is also a need to invite nurses who are working abroad to come to Malawi and share with nurses in Malawi the challenges and experience they face while working abroad as a way of sensitizing them so that nurses in Malawi can make an informed decisions regarding their careers. The government of Malawi could consider imposing a levy on countries that are recruiting nurses from Malawi. It is important to consider introducing exit interviews to find out why nurses want to leave Malawi.

6.3 Contributions to field of Study

This study has made significant contributions to the research of brain drain in an area that mostly focuses on nurses who have already migrated. It has made tremendous theoretical and empirical contributions to the study of human resource management and management in general as explained below.

6.3.1 Theoretical Contributions

This research contributes to the enrichment of the theoretical knowledge pool of determinants of brain drain of registered nurses in the Malawi Health Sector and offers guidance to policy makers and hospital managers the most appropriate strategies and measures to put in place to prevent further loss of these much-needed professionals to keep the Malawi health sector system functional.

The studies on brain drain mostly concentrate on nurses who already emigrated while ignoring those who are still working as nurses in developing countries. This means that the majority of issues about brain drain ignore the current trends based on empirical enquiry. For instance, there is a theoretically taken for granted position that low salaries will lead to brain drain in developing countries (see Oberoi and Lin, 2006). However, this study shows that there are other underlying and significant factors in addition that contribute to the brain drain of nurses. Therefore, this research makes an important and timely theoretical contribution to the study of the phenomenon of the brain drain of nurses in Malawi.

To conclude, through the research of the case of the Malawi health sector, this study has hugely contributed to the theoretical understanding of the economic, political, technological, social, education and globalisation factors within the conceptual framework of determinants of brain drain.

6.3.2 Empirical/Practical Contributions

Apart from the theoretical significance, the study has also made empirical contributions by offering guidance in an informed, well-focused and coordinated manner to policy makers and hospital managers the most appropriate strategies and measures to put in place to prevent further loss of nurses the much-needed professionals who help to keep the Malawi health sector system functional.

6.3.3 Perspectives

This study was conducted in the field at six different public hospitals. As such, the research findings could provide as a theoretical foundation, examples and guidelines for the upcoming researchers who would carry out research in this area.

Moreover, this research was carried out in hospital environment; as such, the theoretical implications provide significant contributions in relation to other research in this area. In addition, the research findings may not only be applied to nurses but could also be relevant to other healthcare professionals.

6.4 Limitations of the Research and areas for Future Research

Two major limitations of this study are associated with data collection and analysis.

First, despite the researcher making prior arrangements with hospital administrators to visit the health facilities, securing interviews with registered nurses of different departments at the time the researcher arrived at the health facilities proved time consuming due to low number of nurses on duty. Although, all interviews were granted as noted, this process delayed the progress of the interviews. Furthermore, some participants were not happy to divulge all the information on political factors due to fear of sanctions. The use of many interviews suitably mitigated the impacts of this problem. Moreover, all the interviewees were assured of confidentiality and anonymity, which helped to reduce fears and anxiety.

The second limitation was that, the study was conducted under time constraints and the researcher could not compare the findings across all categories of the participants. This implies that more could have been done and the room for such further comparison is welcome. This will be a future focus when continuing this study.

6.5 Summary

This chapter has presented a brief summary of the thesis. The chapter has also reviewed the research aim and objectives of this research and confirmed each objective by conducting research processes. Also presented in this chapter are contributions to the field of study, limitations of the study and areas for future research.

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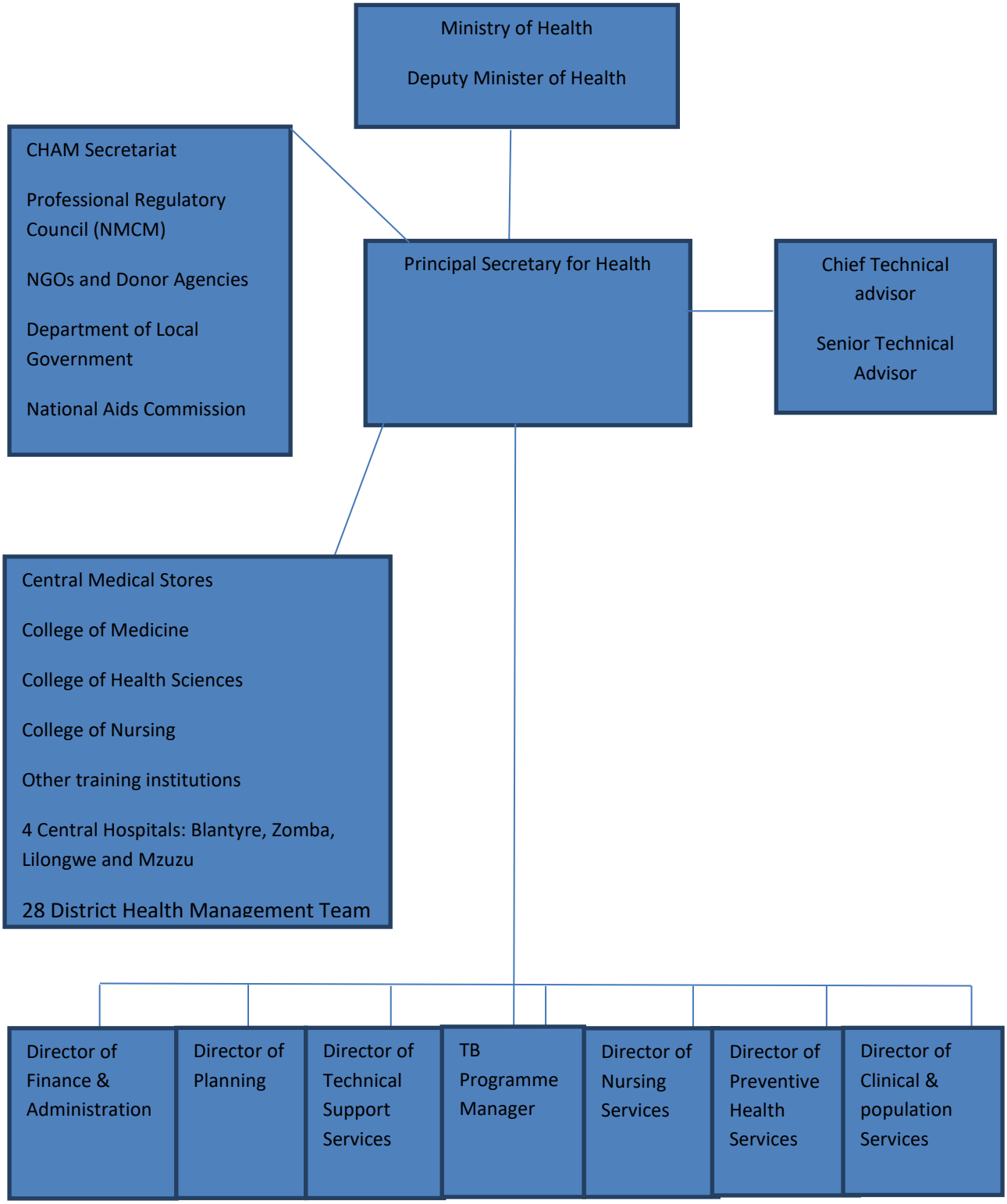
APPENDICES

APPENDIX 1: MAP OF MALAWI SHOWING HOSPITALS SAMPLED

APPENDIX 2: MAP OF AFRICA

Sub-Saharan Africa is all countries in Africa except for Morocco, Algeria and Egypt.

APPENDIX 3: ORGANOGRAM OF THE MINISTRY OF HEALTH



Source: Conticini (2004)

APPENDIX 4: NUMBER OF HEALTH FACILITIES IN MALAWI 2003-2010

	Number of facilities in 2003									Number of facilities in 2010								
Ownership	Central Hospital	District Hospital	Mental Hospital	Community / Rural Hospital	Health Centre	Dispensary	Maternity	Rehabilitation Centre	TOTAL	Central Hospital	District Hospital	Mental hospital	Community / Rural Hospital	Hospital (other)	Health Centre	Dispensary	Maternity	Rehabilitation Unit	TOTAL
CHAM	0	0	1	4	113	18	2	1	160	0	0	1	18	20	109	12	4	1	162
Local Government	0	0	0	0	13	7	13	0	33	0	0	0	0	0	10	7	13	1	31
MoH	4	21	1	15	219	54	2	0	319	4	23	1	18	1	258	54	2	0	361
MoH/ CHAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
MoH/Local	0	0	0	0	39	2	0	0	42	0	0	0	1	0	45	4	0	0	51
Total	4	21	2	20*	393**	93**	17	1	575	4	23	2	37	21	423	77	17	2	606

Note:

* 1 is other and the ownership is not indicated.

** Includes 8 other health facilities whose ownership is not indicated.

*** Includes 12 other facilities whose ownership is not indicated.

Source: Ministry of Health (2010a and 2010b)

APPENDIX 5: LETTER OF INTRODUCTION

Telephone: + 265 789 400
Facsimile: + 265 789 431
e-mail mohdoccentre@gmail.com
All Communications should be addressed to:
The Secretary for Health

In reply please quote No. MED/4/36c

MINISTRY OF HEALTH
P.O. BOX 30377
LILONGWE 3
MALAWI

1st December 2015

Andrew Chimenya
University of Bolton

Dear Sir/Madam,

RE: Protocol #15/4/1411: Investigating determinants of brain drain of health care professionals in developing countries: The case of Malawi health sector

Thank you for the above titled proposal that you submitted to the National Health Sciences Research Committee (NHSRC) for review. Please be advised that the NHSRC has **reviewed** and **approved** your application to conduct the above titled study.

- **APPROVAL NUMBER** : **NHSRC # 15/4/1411**
  The above details should be used on all correspondence, consent forms and documents as appropriate.
- **APPROVAL DATE** : **01/12/2015**
- **EXPIRATION DATE** :This approval expires on **01/12/2016**
  After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the NHSRC secretariat should be submitted one month before the expiration date for continuing review.
- **SERIOUS ADVERSE EVENT REPORTING** :All serious problems having to do with subject safety must be reported to the National Health Sciences Research Committee within 10 working days using standard forms obtainable from the NHSRC Secretariat.
- **MODIFICATIONS**: Prior NHSRC approval using standard forms obtainable from the NHSRC Secretariat is required before implementing any changes in the Protocol (including changes in the consent documents). You may not use any other consent documents besides those approved by the NHSRC.
- **TERMINATION OF STUDY**: On termination of a study, a report has to be submitted to the NHSRC using standard forms obtainable from the NHSRC Secretariat.
- **QUESTIONS**: Please contact the NHSRC on Telephone No. (01) 789314, 0888344443 or by e-mail on mohdoccentre@gmail.com
- **Other:**
  Please be reminded to send in copies of your final research results for our records as well as for the Health Research Database.

Kind regards from the NHSRC Secretariat.

.....
FOR CHAIRMAN, NATIONAL HEALTH SCIENCES RESEARCH COMMITTEE

SECRETARY FOR HEALTH
2015 -12- 01
P.O. BOX 30377, CAPITAL

PROMOTING THE ETHICAL CONDUCT OF RESEARCH
Executive Committee: *Dr.B. Chilima (Chairman), Prof. E. Molynuex (Vice Chairperson)*
Registered with the USA Office for Human Research Protections (OHRP) as an International IRB
(IRB Number IRB00003905 FWA00005976)

APPENDIX 6A: SEMI-STRUCTURED INTERVIEW GUIDE:

(Nurses, Chief Nursing Officers and Administrators)

DETERMINANTS OF BRAIN DRAIN

1. ECONOMIC FACTORS

Q1. What economic factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of economic factors?

2. POLITICAL FACTORS

Q1. What political factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain nurses in terms of political factors?

3. TECHNOLOGICAL FACTORS

Q1. What technological factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurse?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of technological factors?

4. SOCIAL FACTORS

Q1. What social factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of social factors?

5. EDUCATION FACTORS

Q1. What education factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of education factors?

6. GLOBALISATION FACTORS

Q1. What globalisation factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of globalisation factors?

INITIATIVES, STRATEGIES AND MEASURES TO CURB BRAIN DRAIN IN MALAWI

Q1. What do you think must be done in order to retain registered nurses?

Q2. What is the Government of Malawi already doing in order to retain registered nurses? (**Probe**) In what way, is it working or not working?

Q3. What is your assessment of these measures against brain drain? Are they able to deliver the desired goal? What challenges do you think presently exist? What challenges do you think the future will present?

Q4. Do you think the measures have had an impact on brain drain? (**Probe**) in what way?

Q5. Why are measures against brain drain among registered nurses important for Malawi? How do you interact with the government on measures against brain drain among registered nurses?

Q6. What do you think motivate registered nurses to remain in Malawi?

Q7. How do you position your role in helping the government in curbing brain drain among registered nurses?

Q8. What is the impact of brain drain among nurses on health services delivery? Please explain.

APPENDIX 6B: SEMI-STRUCTURED INTERVIEW GUIDE OF MINISTRY OF HEALTH HEADQUARTERS OFFICIAL

DETERMINANTS OF BRAIN DRAIN

1. ECONOMIC FACTORS

Q1. What economic factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of economic factors?

2. POLITICAL FACTORS

Q1. What political factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain nurses in terms of political factors?

3. TECHNOLOGICAL FACTORS

Q1. What technological factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of technological factors?

4. SOCIAL FACTORS

Q1. What social factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of social factors?

5. EDUCATION FACTORS

Q1. What education factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of education factors?

6. GLOBALISATION FACTORS

Q1. What globalisation factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of globalisation factors?

INITIATIVES, STRATEGIES AND MEASURES TO CURB BRAIN DRAIN IN MALAWI

Q1. What is the Government of Malawi already doing in order to retain registered nurses? (**Probe**) In what way, is it working or not working?

Q2. What is your assessment of measures against brain drain? Are they able to deliver the desired goal? What challenges do you think presently exist? What challenges do you think the future will present?

Q3. Do you think the measures have had an impact on brain drain? (**Probe**) in what way?

Q4. Why are measures against brain drain among registered nurses important for Malawi?

Q5. To what extent are the views/needs of nurses considered in terms of measures against brain drain.

Q6. What is the working relationship between the Ministry of Health and Christian Health Association of Malawi and Nurses and Midwifery Council of Malawi in terms of curbing brain drain?

Q7. How do you position your role in helping the government in curbing brain drain among registered nurses?

Q8. What is the impact of brain drain among nurses on health services delivery? Please explain.

APPENDIX 6C: SEMI-STRUCTURED INTERVIEW GUIDE OF NURSES AND MIDWIVES COUNCIL OF MALAWI MANAGER

DETERMINANTS OF BRAIN DRAIN

1. **ECONOMIC FACTORS**

Q1. What economic factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of economic factors?

2. POLITICAL FACTORS

Q1. What political factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain nurses in terms of political factors?

3. TECHNOLOGICAL FACTORS

Q1. What technological factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of technological factors?

4. SOCIAL FACTORS

Q1. What social factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of social factors?

5. EDUCATION FACTORS

Q1. What education factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of education factors?

6. GLOBALISATION FACTORS

Q1. What globalisation factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of globalisation factors?

INITIATIVES, STRATEGIES AND MEASURES TO CURB BRAIN DRAIN IN MALAWI

Q1. What is the Government of Malawi already doing in order to retain registered nurses? (**Probe**) In what way, is it working or not working?

Q2. What is your assessment of measures against brain drain? Are they able to deliver the desired goal? What challenges do you think presently exist? What challenges do you think the future will present?

Q3. Do you think the measures have had an impact on brain drain? (**Probe**) in what way?

Q4. Why are measures against brain drain among registered nurses important for Malawi?

Q5. To what extent are the views/needs of nurses considered in terms of measures against brain drain.

Q6. What is the working relationship between the Ministry of Health and Nurses and Midwifery Council of Malawi in terms of curbing brain drain?

Q7. How do you position your role in helping the government in curbing brain drain among registered nurses?

Q8. What is the impact of brain drain among nurses on health services delivery? Please explain.

APPENDIX 6D: SEMI-STRUCTURED INTERVIEW GUIDE OF CHRISTIAN HEALTH ASSOCIATION OF MALAWI MANAGER

DETERMINANTS OF BRAIN DRAIN

1. ECONOMIC FACTORS

Q1. What economic factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of economic factors?

2. POLITICAL FACTORS

Q1. What political factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain nurses in terms of political factors?

3. TECHNOLOGICAL FACTORS

Q1. What technological factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of technological factors?

4. SOCIAL FACTORS

Q1. What social factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of social factors?

5. EDUCATION FACTORS

Q1. What education factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of education factors?

6. GLOBALISATION FACTORS

Q1. What globalisation factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of globalisation factors?

INITIATIVES, STRATEGIES AND MEASURES TO CURB BRAIN DRAIN IN MALAWI

Q1. What is the Government of Malawi already doing in order to retain registered nurses? (**Probe**) In what way, is it working or not working?

Q2. What is your assessment of measures against brain drain? Are they able to deliver the desired goal? What challenges do you think presently exist? What challenges do you think the future will present?

Q3. Do you think the measures have had an impact on brain drain? (**Probe**) in what way?

Q4. Why are measures against brain drain among registered nurses important for Malawi?

Q5. To what extent are the views/needs of nurses considered in terms of measures against brain drain.

Q6. What is the working relationship between the Ministry of Health and Christian Health Association of Malawi in terms of curbing brain drain?

Q7. How do you position your role in helping the government in curbing brain drain among registered nurses?

Q8. What is the impact of brain drain among nurses on health services delivery? Please explain.

APPENDIX 6E: FOCUS GROUP DISCUSSION GUIDE TO NURSES

DETERMINANTS OF BRAIN DRAIN

1. **ECONOMIC FACTORS**

Q1. What economic factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of economic factors?

2. POLITICAL FACTORS

Q1. What political factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain nurses in terms of political factors?

3. TECHNOLOGICAL FACTORS

Q1. What technological factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurse?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of technological factors?

4. SOCIAL FACTORS

Q1. What social factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of social factors?

5. EDUCATION FACTORS

Q1. What education factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of education factors?

6. GLOBALISATION FACTORS

Q1. What globalisation factors do you think influence brain drain among registered nurses in Malawi?

Q2. How could each one of the factors mentioned be minimised or mitigated?

Q3. Out of these, what measures have been implemented by government to retain registered nurses?

Q4. Out of these, what measures have not been implemented to retain registered nurses?

Q5. What do you think must be done in order to retain registered nurses in terms of globalisation factors?

INITIATIVES, STRATEGIES AND MEASURES TO CURB BRAIN DRAIN IN MALAWI

Q1. What do you think must be done in order to retain registered nurses?

Q2. What is the Government of Malawi already doing in order to retain registered nurses? (**Probe**) In what way, is it working or not working?

Q3. What is your assessment of these measures against brain drain? Are they able to deliver the desired goal? What challenges do you think presently exist? What challenges do you think the future will present?

Q4. Do you think the measures have had an impact on brain drain? (**Probe**) in what way?

Q5. Why are measures against brain drain among registered nurses important for Malawi? How do you interact with the government on measures against brain drain among registered nurses?

Q6. What do you think motivate registered nurses to remain in Malawi?

Q7. How do you position your role in helping the government in curbing brain drain among registered nurses?

Q8. What is the impact of brain drain among nurses on health services delivery? Please explain.