UNIVERSITY OF GHANA

MIGRATION INTENTIONS OF FINAL YEAR STUDENTS IN THE UNIVERSITY OF GHANA MEDICAL SCHOOL

BY

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DECLARATION

I hereby declare that except for the references of other people's work which have duly been acknowledged, the work presented here is solely by my effort. This work or any part thereof has not previously been presented in any form to the University or to any other body.

…… ……

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CERTIFICATION

I hereby certify that this thesis was supervised in accordance with the procedures laid down by the university

…… ……

DR. LILY YARNEY DATE

(SUPERVISOR)

DEDICATION

This thesis is dedicated to God almighty for the strength and grace to reach this pinnacle in academic circles. A special gratitude to my loving mother, Regina whose words of encouragement and push for tenacity ring in my ears.

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LIST OF ABBREVIATIONS

AHWO	Africa Health Workforce Observatory
BBC	British Broadcasting Corporation
CIA	Central Intelligence Agency
ECH	Ethical Committee for Humanities
EU	European Union
GATS	General Agreement on Trade in Services
GHS	Ghana Health Service
HIV/AIDS	Human Immunodeficiency Virus Infection/ Acquired Immunodeficiency Syndrome
HR	Human Resource
HRM	Human Resource Manager
HSS	Health Sector Salary Scheme
IOM	International Organization for Migration
KMO	Kaiser-Meyer-Olkin Measure of Sampling Adequacy
KNUST-SMS	Kwame Nkrumah University of Science and Technology – School of Medical Sciences
MDG	Millennium Development Goals
MS	Medical Sciences
MOH	Ministry of Health
OECD	Organization for Economic Co-operation and Development
PPME	Policy Planning Monitoring and Evaluation
SPSS	Statistical Package for Social Sciences

UCCMS	University of Cape Coast Medical School
UDS	University of Development Studies
UGMS	University of Ghana Medical School
UK	United Kingdom
UN	United Nations
UNICEF	United Nations Children's Fund
UNDP	United Nations Development Program
UNPD	United Nations Population Division
US	United States
USD	United States Dollar
USMLE	United States Medical Licence Examinations
WHO	World Health Organization

ABSTRACT

The migration of health professionals after completion of medical school causes the health system in Ghana to be less resourced in terms of human capital. The role of doctors is very essential in health care delivery as it is reflective in the quality of services given. It is in view of this that the study was done to find out the migration intentions of final year medical students and the factors that influence their intentions. The research further identifies some of the retention strategies by the Ghana Health Service. In order to concretize and objectify the discussion, a case study was conducted taking the particular situation of the University of Ghana Medical School. Data was collected using the mix method of data collection. The study purposively selected all students (150) of the final year class. Students filled a questionnaire on their migration intentions and this was followed by an in depth interview with 10 students based on their availability and willingness to be interviewed to understand the factors that influence their intentions. The study revealed that majority (70.4%) of the final year medical students had intention to emigrate after completion of their studies. Three main reasons accounted for their desire to move out of Ghana, these are poor economic conditions (0.78), cost of living in Ghana (0.64) and poor working conditions (0.64). They were however attracted to foreign countries mainly due to quality of life abroad (0.86), standard of living abroad (0.85) and better opportunities for family abroad (0.76). Nevertheless, the decision to move out of the country could be hindered by certification (0.80), obligatory work commitments after community service (0.51) and government policies in destination countries (0.68). Some of the strategies put in place to improve retention of doctors include improvement of salaries and improved conditions of service. Based on the findings of the study, it is recommended that retention is likely to be successful when salaries are improved coupled with a stable economic conditions.

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

A basic characteristic of individuals is their movement from place to place. The right to move was recognized globally over a half century ago with the implementation of the Universal Declaration of Human Rights (UDHR). The UDHR states in Article 13 that "Everyone has the right to freedom of movement and residence within the borders of each state" and "Everyone has the right to leave any country, including his own, and to return to his country" (UN, 2003). The United Nations (1998) recommended definition of a long-term migrant as, " a person who moves to a country other than his or her usual residence for a period of at least a year and a short-term migrants as a person who moves for at least three months but less than a year" (UN, 2003). "Migration is a process of social change during which a person moves from one cultural setting to another in order to settle for a longer period of time or permanently" (Mygind *et al*, 2006).

Globalization has made the world grow smaller and the movement of labor around the globe has become much easier than ever before. Historically, labor movements were often a result of political disagreement (Iredale, 2001) and economic failure (Borjas, 1989). The movement of people may also be to escape from oppression or simply to make lifestyle changes. Health worker shortages across countries are some of the consequences of globalization. It is evident that the movement of health professionals has raised a lot of concerns right from the 1970s to date due to research on the subject (Johnson, 1974; Mejia, 1978; Salt & Findlay, 1989; Sanchez, 1992 Pang *et al*, 2002, Asampong *et al*, 2013). One of the factors for this great concern is due to the essential role human capital plays in every health system. Often times health systems in developed countries tend to attract health professionals from developing countries who are less resourced in terms of human

capital. Typically, low wages and poor working conditions often described as ‘‘push’’ factors are examples of factors which cause health professionals to move to developed countries where they can get better wages and improved working conditions among others (Boon & Ahenkan, 2008; Easterly & Nyarko, 2008; WHO, 2006).

Global trends in health worker migration highlights on the shortages of physicians. There exists evidence to show that in 1972 about 6 per cent of the world's physicians (140,000) were located in countries other than those of which they were nationals. Considerably, about 86 per cent of all migrant physicians were working in five countries (Australia, Canada, the Federal Republic of Germany, the United Kingdom (UK) and the United States (US) (Mejia *et al*., 1979). In 2006, the World Health Organization estimated that there was a shortage of more than 4.3 million health personnel across the world. Low-income countries were particularly more affected by shortages. In total, 57 countries recorded critical shortage; of this 36 were sub-Saharan African countries (WHO, 2006). For instance in the US, the number of overseas-educated doctors passing Step 3 of the United States Medical Licence Examinations (USMLE) examinations (criteria to full registration to work as a medical doctor in the US) increased by 70% from 2001 to 2008. The number of new full registrations of foreign trained doctors in the UK reached its climax in 2003 at about 14,000. Even with only 5,000 new registrations recorded in 2008, UK still remains the second largest destination country for foreign-trained doctors after the United States (OECD, 2007).

Migration of health professionals can lead to weakness of the health system of a particular country when it comes to conditions of service. There are relative shortages of health workers in places where they are needed the most. According to the World Health Organization report, migration results in a compromise in health service delivery and service quality especially when the gap

created by migration is not filled (WHO, 2006). This has accounted for some challenges in attaining some of the Millennium Development Goals in developing countries especially those directly related to health (IOM, 2005; Liese & Dussault, 2004). Unless something drastic is done to avert the Human Resource for Health (HRH) crisis in Africa, it is highly unlikely that the health related Millennium Development Goals (MDGs) will be attained. Whether it is providing skilled attendants to reduce child mortality or for maternal services to achieve goal four and five or scaling up the provision of antiretroviral (ARVs) for HIV and AIDS treatment towards achieving goal six, the major challenge is making available suitably qualified staff in sufficient quantities to support these services (WHO, 2006).

1.1 Problem Statement

Ghana is one of the Sub-Sahara African countries faced with health worker shortages. Hagopian *et al*. (2004) stated that 5,334 doctors from Sub-Saharan Africa were practicing in the US; of this 86% were from Nigeria, South Africa and Ghana. Studies by Awumbila *et al* showed that out migration of doctors decreased from 72 in 1999 to 40 in 2004 (Awumbila *et al*, 2008). Mensah *et al*. (2005) suggested that this drop in doctor migration can be attributed to the implementation of the Health Sector Salary Scheme (HSS) (Mensah *et al*, 2005).

Even though evidence to support these results is few, the UK's implementation of the code of practice for recruitment of health care professionals might have been a great factor. Despite this decrease in out migration of doctors it was estimated that vacancy levels for doctors increased from 43% (1998) to 47% (2002) in the Ghana Health Service (Dovlo, 2002). Studies by Anarfi *et al*. (2010), showed that of the sample of 60 doctors, 13.3% had migrated and 30% had migration

intentions. It was estimated by Kotha *et al* (2012) that out of 228 Ghanaian students in their fourth year of study, 64.9% had migration intentions.

The Central Intelligence Agency (CIA) stated that in 2006 a doctor to people ratio was 14,732 people in 2006 and in 2009 it was one doctor to 11,929 people (CIA, 2011). It ranked Ghana at 164 out of 192 countries for doctor density (CIA, 2011). This shows that the doctor density is still low in Ghana from a global perspective. The distribution of doctors is also skewed to highly populated areas and to the South. Even though Ghana has a low doctor density, the health indicators point to the urgent need of more supply of doctors.

Statistics from the Africa Health Workforce Observatory (AHWO) report indicate that the life expectancy in Ghana is 61 years (AHWO, 2010). The maternal mortality rate in Ghana is on average is 350 per 100,000 live births (CIA, 2008) however; this figure varies for different regions. In the Northern region, maternal mortality levels are higher as it is less resourced in terms of health workers. It is estimated that on an average about 21% of pregnant women in Ghana received medical attention from a doctor and 71% had access to a nurse or midwife (AHWO, 2010). It was reported that between 1998 and 2003 Ghana recorded an increase in infant mortality (UNICEF, 2006). According to the United Nations Children's Fund (UNICEF) in 2006, under five mortality was 155 deaths per 1000 live births between 1983 and 1987, declined to 108 between 1994 and 1998 but rose to 111 between 1999 and 2003 (UNICEF, 2006).

The leading cause of morbidity is malaria, followed by acute respiratory infections, skin diseases, diarrhea and hypertension (AHWO, 2010). In Ghana the Human Immunodeficiency Virus Infection/ Acquired Immunodeficiency Syndrome (HIV/AIDS) prevalence rate is 1.8% (CIA, 2009) and the antiretroviral therapy coverage for people with advanced HIV is only 15% (WHO,

2010). These statistics show that the emigration of health professionals poses challenges to the health system in Ghana, and efforts aimed at retention of a great number of doctors is essential to improve the situation.

The health sector depends a lot on human resources and some level of expertise to effectively manage patients' health. However, it is faced with limited human resource capacity due to migration and poor retention of workers because of low incomes especially in developing countries (World Health Report, 2006). According to the Ministry of Health, in 2005 the doctor to patient ratio was 1:10,700 whilst in South Africa, United States and Cuba it was 1:1449, 1:820 and 1:169 respectively (Ministry of Health, 2007). This shows that Ghana is lagging behind compared to these countries. There is a lot of strain on doctors country wide. It is in view of this that all effort needs to be made to retain the doctors that are in the country.

There has been extensive research on the benefits of migration to both the source country and the destination country (Boon & Ahenkan, 2008; Overseas Development Institute, 2008). Most of these studies seek to reverse the perception that migration is disadvantageous to source countries. According to these studies, source countries benefit from remittances from migrants who contribute to the economic development of their countries. (Overseas Development Institute, 2008; Boon & Ahenkan, 2008). Although source countries benefit from migration through remittance to family from abroad, international migration can lead to source countries' unwillingness to continue to subsidize the studies of health professionals only to lose them to the developed world. The loss to developing countries can be estimated not only financially but also in lives lost as a result of the shortage of staff (WHO, 2006; IOM, 2005).

According to Dovlo (2003) unpublished preliminary studies show that the level of migration of physicians and nurses after graduation is estimated to be 50% to 70%, within a period of 5 years after graduation. This puts a great challenge on the Ministry of Health to implement its decentralization program related to health since majority are likely to be lost through migration. Even though all efforts are being made to improve the economy, inflation remains high and the stability of the local Cedis (US$1.00 = GH¢2.00) (based on 2003 estimate) is wobbly. An improved confidence in the economy is vital to improve service delivery and consequently retain health professionals (Dovlo, 2003).

The Ministry of Health, Ghana identified the problem of health professional migrating and thus put in certain strategies to retain its staff. These strategies include, the provision of hire purchase saloon cars, a tax waiver for imported saloon cars, continuing professional development, payment of additional duty allowances among others (Ministry of Health, 2007). Despite these incentives, the emigration of physicians continues to be a challenge. In 1998 a survey was conducted that showed that vacancy levels in the health sector varied from 7.6 per cent for doctors in Lesotho and 72.9 per cent for specialists in Ghana. (Dovlo, 2002 cited in IOM, 2005) According to Clemens, 50% of physicians born in countries such as Ghana, Mozambique, Angola, Tanzania, Zambia and Kenya were found to be working outside Africa (Clemens & Pettersson cited in Burch *et al*, 2011).

The migration of doctors' points to the urgency of the situation especially since the tuition of these professionals is highly subsidized by the government. Nayak (1996) estimated that India alone must have lost US$3.6 - 5.0 billion in terms of the costs invested in the training of an estimated 83,000 doctors who have emigrated since 1951 (Nayak, 1996 cited in Dovlo, 2003). The USA saved $26 billion in training costs because it gained an estimated total of 130,000 foreign medical graduates. Ghana, between 1986 and 1995 lost an estimated US$5,960,000 in tuition costs alone

from 61% of medical graduates who emigrated from just one medical school (Dovlo, 2003). These costs include training (from primary to tertiary education) cost contributions to Gross Domestic Product (GDP) and taxes, the costs of illness/ morbidity caused or aggravated by staff shortages, and costs arising from substituting less qualified staff or importing expatriates to fill the vacant posts (Dovlo, 2003).

A lot of focus has been given to certain individual factors that are likely to make people move and the extent to which they can influence the mobility of migrants (Okeke, 2009). Some research has been carried out on the intentions of physicians to emigrate. However, most of it is country specific (Dalena & Henkens, 2008). Dalena and Henkens (2008) examined the emigration intentions of Netherland inhabitants and the steps they took in the subsequent two years to ascertain whether their intentions were a true reflection of their actions. Their findings revealed that three percent of the Dutch population who had had intentions to emigrate actually fulfilled their intentions in 2005, two years after.

There seems to be a lot of research on migration of doctors from their country of training and the migration intentions of doctors to migrate back to their source countries from their destination countries (Dovlo, 2003; Dovlo & Nyonator, 1999; Muula, 2006; Price & Weiner, 2008; Ihekweazu *et al*, 2005; Dambisya, 2003; Awases *et al*, 2004; Weiner *et al*, 1998; Asampong, 2013). It can be inferred that researchers have been interested in studying the issue after the act of migration has actively occurred. Literature on migration intentions of medical students are few and they are country specific (Aysit and Nil, 2002; Burch *et al*, 2011; De Vries & Reid, 2010; Dambisya, 2003; Rao *et al*, 1998; Dagnew *et al*, 1992; Akinyinka *et al*, 1992; Wynchank & Granier, 1991, Kotha, 2012).

Kotha *et al* (2012) conducted a study on the factors that will influence the decision of medical students to accept posting to rural areas upon graduating from medical school. The study captured some information on emigration intentions; however it did not focus more on the factors that influence intention to emigrate. There is limited research on the migration intentions of medical students in the source country which is the focus of this research. This study seek to meet this need by providing answers to the migration intentions of medical students after their studies, the factors that will influence the intentions of final year medical students to emigrate and strategies of GHS to retain doctors in the country. Findings of the study may serve as a source of useful information for stake holders of health to formulate and implement policies that will seek to retain the greater number of doctors.

1.2 General Objectives of the Study

The general research objective of the study is to find out the migration intention of final year medical students in the University of Ghana Medical School.

1.2.1 Specific Objectives

The specific objectives of the study were to:

1. Find out the migration intentions of final year medical students in the University of Ghana Medical School (UGMS) after their studies
2. Identify the factors that influence the intentions of final year medical students of UGMS to emigrate
3. Find out the strategies of Ghana Health Service (GHS) to retain doctors in the country.

1.3 Research Questions

The research sought to answer the following questions:

1. Do final year medical students of UGMS have an intention to migrate after their studies?
2. What are the factors that influence the intention of final year medical students to emigrate?
3. What are the strategies of GHS to retain doctors in the country?

1.4 Significance of Study

The study set out to understand the migration intentions of students. This research may inform policy direction in the formulation of strategies for students before they become physicians and improve on interventions to retain a greater chunk of medical students who graduate in Ghana. The information in this study can serve as a good platform for the government of Ghana to better liaise with governments in developed countries to reduce the effect of the pull factors on the doctors it produces in Ghana.

The study may also be relevant to managers especially in the Ghana Health Service to understand some of the push and pull factors that are likely to facilitate the emigration of doctors. Knowledge of these factors may lead them to make the necessary provision to reduce the push factors that exist in the system.

For purposes of further research, the study may serve as a platform for more studies on the topic. A more elaborate study with a larger sample size which covers other medical schools in Ghana and is based on a different methodology will further validate the conclusions of the study and make it reliable for generalization purposes.

1.5 Organization of the Study

This study is organized into six main chapters. Chapter one contains a general introduction to the research. It also includes the background, problem statement, objectives, research questions, hypothesis and significance of the study. Chapter two covers literature on migration.

Chapter three focuses on the methodology used for the study. Chapter four highlights the results of data gathered from the field. Chapter five contains the discussion of results. A summary of findings is provided in Chapter six. It contains recommendations for further research, lessons for managers and practitioners and suggestions for policy direction.

1.6 Definition of Terms

The following terms have been used throughout the study;

1. Migration is the movement of people across national borders.
2. Push factors are factors in a source country influences the decisions of an individual to move to another country.
3. Pull factors are factors in a destination country that attracts an individual to move there.
4. Intervening factors are factors that prevent an individual from moving to another country.

1.7 Conceptual Framework of Factors Influencing Migration Intentions

The figure below conceptualizes the factors that influence intention to emigrate.

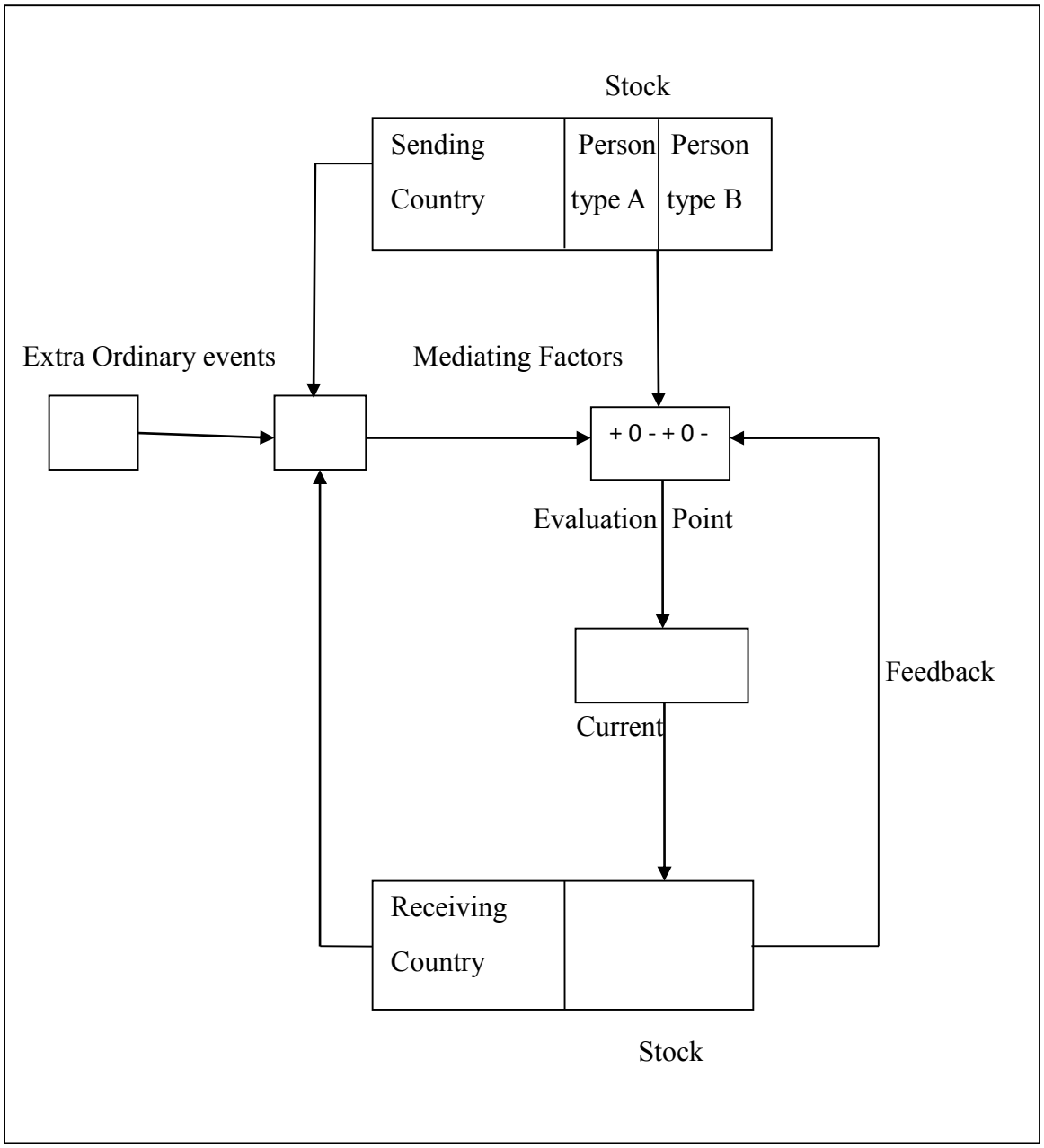

Figure 1.1 Conceptual Framework of Factors Influencing Migration Intentions

Adapted from Diamantides (1994)

The conceptual framework for this research was adapted from Diamantides (1994) and is modeled on theories of migration. The decision to migrate is influenced by the evaluation of the benefits of social, economic, psychological (Berry 2001; Boneva & Frieze 2001; Lee, 1966) and sociological factors (De Jong 2000; De Jong & Fawcett 1981). These socio-economic conditions constitute push and pull factors that will either drive (push) an individual away from the sending country to the receiving country or draw (pull) a person to it.

In the sending country, the propensity to migrate depends on the personality of the individual as explained from the human capital model (Boneva *et al*, 2001).The education, health and age of a person according to the human capital theorists can influence migration. Studies by Chiswick (1999) show how schooling or inborn capability increases an individual's likelihood of migrating. The reason behind this is that persons with higher schooling or ability can recover the cost of migrating faster and they may be more efficient in their migratory step and subsequently adapt more easily to condition in destination countries, be it to the language, norms or rules. It is also expected that the human capital of the highly educated is more internationally transferable and also yields a lower transactional cost tied to migration. Furthermore, the opportunities for the highly educated to work in an international labor market are greater; also the international labor market offers more opportunities to specialize than the internal market (Dalen & Henkens, 2008). According to this argument, since medical students are highly educated, they will have a high intention to migrate.

The human capital model also postulated that the stock of a person's health influences the migration intention of an individual. Thus a person who is healthy is more likely to emigrate that a person who is less healthy. This is because a healthy person can easily recoup the investment costs of migration than a person with a poor health.

Age is another indicator the human capital model uses to determine whether an individual will have a higher intention to migrate or not. The model argues that persons who are younger have a greater propensity to migrate than persons who are older. This is because younger persons have a greater period within which to recoup the investment cost of migration than older people.

Additionally, the ability to predict the intentions of a person to migrate can be coined from psychological characteristics of the individual when it comes to moving to a new environment. Horvath & Zuckerman (1993) describe two personality traits when it comes to migration: sensation seeking or a risk lover and the level of self-efficacy or the level of belief that an individual has that enables adaptability. A sensation seeker is seen as a risk lover or an adventurous person and is much more daring to move to a new environment than someone who is not a sensation seeker. Such a person has a greater probability to move due to the view of the world as a less threatening place and such a person has a greater capacity to take risk than someone who is not a sensation seeker. The second personality trait relevant to emigration is the self-efficacy.

A self-efficacious person is an individual with a strong belief that one can cope with a given situation. This personality trait influences the intention to migrate since one can predict whether the person can cope with new and unfamiliar environments a destination country presents (Sherer *et al*, 1982). Self-efficacy actually helps to test the theory of planned behavior as one can appreciate the difference between an intention and a behavior (Ajzen 1991). The personality trait will show whether one will turn an intention into a real action in the future or whether the intention will remain a decision.

Based on the human capital theory, students who have an intention to migrate are seen in figure 1.1 as ‘‘pool’’ and they can be grouped into type A or type B where a type A is a student who has

low intentions to migrate and type B is a student with high intentions to migrate. Thus a student who can be categories as type A is much older, less healthy, a non-sensation seeker and a non self-efficacious person whiles a type B student is younger, healthier, a sensation seeker and a self-efficacious person.

As illustrated in figure 1.1, the student with an intention to migrate makes an evaluation of plus and minus at a point called the ‘‘evaluation point’’ comparing plus and minus from sending country and receiving country based on feedback from relatives abroad at the ‘‘stock’’. The stock is composed of relatives or contacts in receiving country that feed the pool with information on the receiving country (Massey, 1999). The reasons that may lead a medical student to have an intention to move from one place to another entails socio-economic factors that hold the student within an area or attracts them to it and those factors that repel the student.

These are shown in figure 1.1 as the plus (+) and minus (-) signs. The factors that a student is indifferent to are shown in the figure as zero (0). This model emphasizes that the effect a factor will have on a student varies from person to person. For instance good weather is seen by all students as a plus while bad weather is seen as a minus. However a good educational system may be perceived by a student who is a parent with children in school going age as a plus whiles to a parent with no child a minus since such an area may attract high real estate taxes. An unmarried student may be indifferent to this because the person does not have children and also does not have a property in such an area.

Between the sending and receiving country however there are mediating factors that act as an intervening factors or control factors. These include visa restrictions, emigration laws at sending

country, immigration laws at receiving country and international certification. This is referred to as the ‘‘current’’, a point where the volume of migration is regulated.

Finally the desire to move from one country to another is not all together a rational decision. Sometimes people move due to ‘‘extraordinary events’’ as seen in figure 1.1. The influence of life cycles propels migration, for instance, cessation of education and entrance into labor force or retirement may reduce the hold of an area on a person (Lee, 1966). Thus from this model it is expected that because final year students are at the stage of changing a life cycle that is finishing school and entering into the job market, they are more likely to have migration intentions. Another important life cycle change is marriage, thus it is expected that students who are wives will move to join their spouses. Victims of injustice as well as perpetrators of crime may be forced to leave an area and all this falls under ‘‘extraordinary events’’. The figure 1.1 illustrates the conceptual framework for the study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of existing body of knowledge which is relevant to this study. The literature review covers two broad themes; theoretical review and empirical review on migration of doctors and factors influencing migration. It also reviews literature on sub-theme such as globalization and migration of health professionals, migration situation in Sub-Sahara Africa, antecedent factors of migration amongst physicians, consequence of migration and migration and policy response.

2.1 Globalization and Migration of Health Professionals

Migration of health professionals is an issue of international importance due to globalization. People across the world are now connected and dependent on each other through integration, communication, cultural and travel (Labonte & Schrecker, 2006). People move for many reasons some of it includes for search of work, to escape from oppression or for a desire to change one's lifestyle. Rising incomes, new medical technology, increased specialization of health services, and population ageing are also pushing up demand for healthcare workers in OECD countries (OECD, 2010; Kuehn, 2007).

An international migrant worker is defined by the 1990 United Nations (UN) International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families as "a person who is to be engaged, is engaged or has been engaged in remunerated activity in a State of which he or she is not a national" (UN, 1990). Statistics indicate that there is a total of about 175 million international migrants constituting about 2.9 per cent of the world population.

It is estimated that majority of the world's migrants live in Europe (56 million), Asia (50 million) and North America (41 million) of these about 60-65 million are economically active (United Nations Population Division, 2003).

International migration is not a new phenomenon however; the significant growth especially in terms of size and velocity indicates a new pattern in movement of people (IOM, 2002). The focus of policy makers is on the migration of skilled labor. The occupational categories that are on the move raise the concerns of ensuring fair distribution of human resources among source and destination countries (OECD, 2002). Health professionals have new opportunities opening up for them with the potential of getting better pay and career opportunities due to the liberalization of trade as a result of the General Agreement on Trade in Services (GATS), (OECD, 2002b).

Many countries began to employ health workers from foreign countries during the 1950s and 1960s in order to improve on their health systems. This raised the general concern for starting steps against brain drains which caused the World Health Organization (WHO) to embark on a study on the movement and stock of health worker migration (Mejia *et al*. 1979).

The research brought out the fact that as at 1972 about 6 per cent of the world's physicians (140,000) were located in countries other than those of which they were nationals. Considerably, about 86 per cent of all migrant physicians were working in five countries (Australia, Canada, the Federal Republic of Germany, the United Kingdom (UK) and the United States (US). The stock of nurses overseas was estimated to be lower, at about 5 per cent, but the key recipient countries were the same as for physicians with the exception of Australia (Mejia *et al*., 1979).

Statistics from a recent study indicate that countries such as USA, UK, Canada and Australia engage about 23-28 % of all internationally trained physicians and this further emphasizes the

dependence of developed countries on foreign trained and educated medical graduates (Mullan, 2005). Specifically low-income countries contribute between 40-75% of graduate from their medical schools to the countries indicated earlier, where UK and USA are the first and second beneficiaries respectively (Mullan, 2005). Further evidence suggests that about 5% of increase in migration of medical professionals in UK and 20% in Organization for Economic Co-operation and Development (OECD) countries originated from abroad (WHO, 2006). Despite these trends it is significant to emphasize the fact that not all developed countries depend on medical professionals from developing countries; Switzerland and Norway recruits mainly from Europe and only 1% from abroad (Mullan, 2005).

According to OECD (2000), there was a report of shortages of doctors in some parts of the country. The study showed that the recruiting of health professionals from abroad was a short-term measure employed by some OECD countries to meet their demand for health workers. Thus the increase in migration can be explain as a measure perceived to be a 'quick fix' for unexpected high demand for health workforce as training extra doctors takes many more years compared to recruiting from abroad. The global health workforce shortages present a great challenge for source countries from which health professionals are trained. The next sub-heading discusses how the problem impacts on Sub-Sahara Africa which is less resourced and faces the greatest disease burden in the world and yet has professionals migrating to developed countries.

2.2 Migration Situation in Sub-Sahara Africa

Literature shows that many African countries especially in Sub-Sahara Africa are experiencing migration of highly skilled workers in the health industry. Studies reveal that there is poor official

record keeping of health professionals that migrate to other countries, thus making it more challenging to estimate the magnitudes and trends (Chibango, 2013).

In the 21st century the migration of health professionals has lead to a human resource management crisis globally (Joint Learning Initiative, 2004). The crisis is overwhelming the world and the need for medical professionals is greatest in Africa. The continent is facing human resource crisis following the emigration of health professionals coupled with increase in population and disease burden especially recurrent communicable diseases and increased incidence of non-communicable diseases. Thus the demand for health services is high whiles the supply is low due to emigration. To put this into perspective, Africa has about 86.24% of the share of the world's population and shoulders about 75% of the world's disease burden and has 1.3% of the world's health work force (Joint Learning Initiative, 2004). This shows the global imbalance in healthcare workforce capacity between Africa and the developed world. It further suggests that the poorest countries with the worst shortages and health outcomes contribute the greatest percentage of physicians and medical graduates to high income countries (Taché, 2009).

The loss of medical professionals is gaining much precedence in countries in Sub-Sahara Africa and it is most referred to as brain drain. A report by the United Nations Development Program (UNDP) stated data to show that about 21 000 Nigerian doctors were practicing in the United States of America (USA) while their home country was understaffed (UNDP, 1993). According to the statistics about 60% of doctors who had their training during the period of the 1980s from Ghana migrated by the close of the year 2000. Literature shows that Sudan suffered from brain drain close to about 17% by the year 1978.

Zambia's situation was no different, records show that Zambia recorded about 1600 doctors practicing only few years prior to 2002 when it indicated a reduction to 400 (Sako, 2002). About 61% of doctors who graduated from one medical school in Ghana left the country between 1986 and 1995 to South Africa (6%), the United Kingdome (55%) and the United States of America (35%), (Dovlo and Nyonator, 1999, Dovlo, 2005). In 2006, research by Labonate Packer and Klassen indicated that Canada was a major receiver of most foreign trained health professionals especially nurses and doctors from Sub-Sahara Africa (Labonte, Packer and Klassen, 2006). Clemens and Pettersson (2008) found that about 65,000 African-born physicians and 70,000 African-born professional nurses were working overseas in a developed country. The findings showed that about 20% of physicians born in Africa and about 10% of nurses born in Africa were practicing in developed countries (Clemens & Pettersson, 2008).

Statistics indicate that Sub-Sahara Africa, the Indian subcontinent and the Caribbean have greatest incidence of health worker migration even though these areas are poor in resources (Mullan, 2005). These statistics reiterate the global imbalance which turns to affect the resource poor areas. The imbalance will continue to grow due to the high demand of health workers by high income countries like USA and UK. Some of the reasons behind this is the development of European Union in the region, which has reduced the barriers and further created another source of health worker migration for the less developed countries (Wismar *et al*, 2011). Additionally, the health reform in USA which targets to supply health to a great number of uninsured persons will undeniably draw international health worker emigration because of the increased demand for services. Even though USA health system has taken into consideration measures to control cost so as to make the impact of this increased in the provision of health services less on health expenditure, emphasis must be laid on the fact that additional health workers will be needed to

provide services for the additional millions of people who are uninsured (Orszag & Emanuel, 2010; Foster, 2010). The increase in demand creates an increase in the challenges resource poor countries encounter when it comes to health workers.

Appreciating the health worker crisis from the global, regional and national level, it is essential to know the causes of emigration. Some scholars have referred to this as the pull and push factors of international migration. These are the factors that are in the source country which drives health workers away due to attraction from factors in recipient or destination countries. The next sub-heading contains literature on the causes of health worker migration.

2.3 Antecedent Factors of Migration amongst Physicians

The push and pull model is the dominant framework for explaining nurse migration (Bach, 2007). According to Kline (2003), the antecedents for nurse migration are the political, social (personal), economic, legal, historical and educational forces that comprise this framework. The pull factors are conditions in the destination country that attract and facilitate the migration of nurses; the push factors are conditions that encourage nurses to leave their own country (Kingma, 2006a). These factors usually mirror each other; or example, a nurse from a country making a low salary will be pulled to a country offering higher wages (Kingma, 2006a). For the purpose of this study, the antecedents of migration of health workers have been categorized.

2.3.1 Personal Characteristics

Literature abounds on the extent to which individuals' personal characteristics could lead them to migrate from their home country into a foreign land. In a study conducted by Zaiceva and Zimmermann (2008), the researchers contended that young individuals tend to express a higher willingness to migrate, since the time to reap the expected returns from migration is longer for them compared to the older generation. This position is held by Mace (1990) in consistence with

the Matching concept. Similarly, Zaiceva and Zimmermann (2008) posit that individuals who are more educated are more likely to migrate considering the fact that they probably face lower costs of migration and job search. Additionally, Kotha *et al* (2012) and Kaushik (2008) found that intention to emigrate is likely to be more predominant among medical students and even more in elite institutions or institutions in the city capital (Kotha *et al*, 2012; Kaushik, 2008). This is consistent with Zaiceva and Zimmermann (2008) since these individuals are highly educated people. On the other hand, married individuals and those with children are expected to have lower willingness to migrate because of the psychic costs of separating from their families (Zaiceva & Zimmermann, 2008; Abuosi & Abor 2014).

According to Mincer (1978), migration may also lead to increased marital instability. Likewise, home owners are expected to have lower migration intentions, because of their greater attachment to the region and since they may face the additional costs of selling their property. Several studies (Blanchflower *et al*, 2007; Wadensjö, 2007) have reported that the majority of migrants are male, young and have relatively higher medium skill levels and are concentrated in low-skilled sectors. This is confirmed by Brenke and Zimmermann (2007) who documented an increase in net immigration flows from the new member states into Germany despite the "closed door" policy. The authors showed that females constituted the majority of these immigrants, and that these immigrants were underrepresented in highly qualified jobs despite high qualifications

2.3.2 Economic Conditions

Research has indicated economic factors as a major antecedent of migration amongst individuals. Migration is often linked to more and better employment opportunities (encompassing salaries, working conditions, career advancement, etc.) abroad. Wage differentials across countries play an

important role, but are not the only determinant, as other factors such as the possibility to offer a better and safer future to their children may also be a determinant. For instance, in a study on determinants of migration in Europe by Zaiceva and Zimmermann (2008), the authors found that regarding labour market status, unemployed individuals may be more willing to look for a job abroad, however, they may also be attached strongly to the social networks and experience liquidity constraints that could preclude them from moving.

Similarly, studies by Blanchflower *et al*. (2007) revealed that one's propensity to migrate correlates with his/her income per capita, unemployment rates and life satisfaction in their environment. Again, Wadensjö (2007) provided a remarkable increase in the number of foreigners in Ireland between 2003 and 2005, and the majority of this flow in 2005 consisted of nationals from the new member states the authors argued that the immigration to Ireland was primarily demand-driven. Very often indeed, migration of health workers will be a symptom of the difficulties faced by the health system, and more generally the society, of the country of origin rather than its direct cause (OECD, 2010). Contrastingly, in a study by Gilpin *et al* (2006), the authors reported that in the United Kingdom, the number of nationals that migrate from the new member states increased substantially, but they did not find a statistically significant relationship between increased immigration and the rise in the United Kingdom claimant unemployment.

2.3.3 Poor Working Conditions

According to Luck *et al* (2000), migration is primarily a response to globally uneven development, but usually explained in terms of factors such as low wages, few incentives or poor working conditions (e.g. Poor promotion possibilities, inadequate management support, heavy workloads, limited access to good technology and even to medicines). Similarly, Buchan *et al* (2004) contends

that poor working conditions are core factors motivating health workers to leave their country of origin and this is supported by the studies of Bach (2003) which found working conditions of health workers as major predictor of health workers' intention to migrate. In Ghana, 71% of health workers interviewed in destination countries mentioned living conditions and economic decline as the reasons for leaving their home country (Vujicic et al, 2004). Several studies (e.g. Buchan *et al*, 2006; Muula & Maseko, 2006) have also confirmed this position of literature form different cultural perspectives.

Poor working conditions are intensified in rural areas, where health workers feel they and their institutions are too often ignored and this category of people have been described by Dussault and Franceschini (2006) as victims of institutionalized urban bias in Development Policy. Although health workers may stay in rural areas, where it is easier to hold other jobs or engage in corrupt practices (Muula & Maseko, 2006), the intention to migrate will persist so long as they experience poor working conditions.

2.4 Consequences of Migration

The growing mobility of nurses has been criticized as occurring without a careful analysis of the implications of this movement on the nurses and on health care delivery systems that both send and receive them (Brush *et al*, 2004). However, in a study by Freeman (2012) on the migration intentions of nurses in a Canadian Border City, the researcher posited that the effects of migration can be considered both positive and negative depending on the viewpoint and the effects on the individual and stakeholders. Stakeholders in this regard include the source country, destination country, health care systems and the nursing profession. For example, positive consequences for the individual may include well-paying secure job and remittance for family back at home

(Boucher *et al*., 2005; Boon and Ahenkan, 2008), whereas negative consequences may produce for the home country loss of a scarce nursing resource. One consequence for source countries is a brain drain that diminishes nursing resources for their population (Meleis, 2003).

According to Kingma (2006), there are also social costs to the individual who migrates. For instance, adapting to a new country, a new culture, and an unfamiliar health care environment, with or without a support network can be a monumental task. Often these health workers, who may have children in their home country, are responsible for financially supporting their families. In addition, they frequently experience discrimination and exploitation by agencies and institutions in the destination country (Hawthorne, 2001). There are also positive consequences. For instance, in many countries in the world, a nursing license is viewed as a ticket to a better life (McCarthy, 2009). Remittances sent home improve the family life in the home country through redistribution of global wealth (Kingma, 2008). There is improved personal and professional safety and empowerment for some migrants (Meleis, 2003) who leave unsafe environments and countries with gender inequities (Bourgeault & Wrede, 2008).

Although the Philippines has had the most success in training nurses for export and benefited as a country from the remittances sent home, it serves as an example of unexpected negative consequences. The ease of nurse migration has resulted in physicians retraining as nurses to migrate, a waste of an already limited health human resource (Brush *et al*. 2004). The country also experienced a decrease in the quality of nursing education as evidenced by high exam failure rates as a result of schools being pressured to educate large numbers of nurses for both foreign and domestic markets (Perrin et al. 2007).

Freeman (2012) has observed that migration has consequences for the nursing profession, some known and others which are emerging. According to the author, there appears to be an attitude in

many countries that a supply of nurses exists somewhere in the world waiting to be enticed to migrate to their country and as a result, many developed countries are not educating enough nurses to meet their needs and instead, rely on the recruitment of nurses from other countries to address shortages (Buchan, 2006).

Hawthorne (2001) found that migrants also stress health systems resources if they require language competency training; orientation to vastly different health care systems and, to autonomous professional nursing roles and this assertion is confirmed by Buchan, Kingma and Lorenzo (2007). A positive effect however is that nurses from different cultures and countries contribute to making the nursing profession more culturally aware (Kingma, 2008).

Finally, Freeman (2012) posits that the uncontrolled growth in the business of exporting nurses for profit presents unknown consequences for the profession.

2.5 Migration and Policy Response

The active recruitment of developed countries from developing countries poses an ethical impact on the global workforce shortage and also potential negative impact upon the health system of recipient countries due to the variations in standards and training of personnel from developing countries. The effects of migration is an issue that is recognized globally, as a result most countries have developed policies, regulations and legislations to remedy the migration situation. Some countries such as the United Kingdom through the Department of Health have developed a first Code of Practice for International Recruitment in 2001 which was updated in 2004. The focus of the code was to shift the target from developing countries when it comes to recruitment of personnel unless the government formally agrees through the Department of Health (UK) to the recruitment (Department of Health, United Kingdom, 2004). A code of practice was also adopted

by the Commonwealth Secretariat in 2002 for the recruitment of international recruitment of health workers (Commonwealth of Government, 2003). The effectiveness of this code of practice has been questioned by many as a quick and cheap strategy to international migration of health workers since it is mostly not operational because there is no health law to promote internal and external monitoring with the corresponding incentives or sanctions.

Another approach adopted by some developed countries is investment into the training and skills development in countries they recruit health workers from. However this approach still strips developing countries that are less resourced of health professionals. For instance the UK government saved 65 million pounds from actively recruiting trained healthcare professionals from Ghana between the year 1999 to 2005 (Medact, 2006).

In 2005 there was a paper on the 'European Union's Development Policy'' which contained recommendations to promote partnership between the European Union (EU) and developing countries regarding the challenges globalization possess especially when it comes to health. The paper suggested that there will be the development of appropriate EU policies on economic migration, the promotion of cheaper and more secure channels for private migrant remittances, and policies to turn the "brain-drain" into a "brain-gain" through appropriate incentives and mobility schemes (OECD, 2006)

Some African countries having identified the challenges with retaining highly skilled workers in the country have taken steps to remedy the situation. These steps are in the form of introduction of compulsory community service, training, better pay and working conditions and greater international cooperation with main destination countries they loss health professionals to. South Africa for instance, introduced the new Immigration Act in 2002 which came into effect in 2003 which main focus was to attract the highly skilled labor into the country. The Act also introduced

a quota system of negotiation between social partners and the Labor, Trade and Interior Ministries (OECD, 2004)

The South African Department of Health also reformed the human management strategies so as to remedy the emigration of health professionals. There was the introduction of compulsory community service and review of the pay and working conditions for health professionals in the public service. In 1999 doctors who completed medical school were required to do a one year compulsory training and they were normally posted to the disadvantaged regions in the country. This strategic service served to retain doctors in the country for at least a year since they could not register as a physician without the service (OECD, 2004). Ghana also introduced a similar strategy where graduates from medical school were required to do a one year 'housemanship' which was increased by the Medical and Dental Council to two years in 2004. This was to ensure that graduates have a more comprehensive coverage in basic clinical disciplines and it is also in line with what is practiced in other countries (MOH, 2004).

The policy of training health professionals and also changing their curricula is a strategy that has been adopted over the years by African Countries. South Africa has implemented the strategy of training health professionals and revising curricula and adjusting the length of the program of students. The training is more focused on training doctors towards the diseases that are peculiar to the South African system to improve retention of practitioners and reduce them from being attractive to countries in the OECD member countries (OECD, 2004). This strategy has been criticized by Cohen (2001), who argued that the medical profession is a universal science and abandoning quality medical practices even though less expensive will not meet patient's needs (Cohen, 2001).

Improved salary levels seem to be a promising strategy to retention. According to Vujicic *et al.*, (2004), when a sample of health workers was asked what would make them remain in their home country, the majority in Cameroon (68%), Ghana (81%), South Africa (78%) and Uganda (84%) implied that an improvement in salary structures would be a good reason to stay (Vujicic et al, 2004). Again Yumkella (2005) reiterated the notion of improved salaries by indicating that junior doctors from Ghana and Zambia can expect to earn five times more if they emigrate to Lesotho, Botswana or South Africa (Yumkella, 2005). The South African government increased the average pay for public sector workers in the year 2000. General Doctors' were given an increase of 5% and specialist doctors received an increase of 12% (Erasmus and Hall. 2003). The government accepted the proposal of the Department of Health in South Africa to increase the allowances of physicians in priority rural areas which used to be 20 000 rand or 2500 USD (OECD, 2004).

In Ghana a variety of local and general incentives introduced may not have had the targeted impact because other factors needed to be in place. For instance in Ghana disparities in allowances of professionals for Additional Duty Hours Allowance (ADHA) seemed to have influenced emigration of nurses even though there was a net increase in salaries (Dovlo, 2003). The nurses felt that the disparity between them and other professionals such as doctors indicated that their efforts were not appreciated. Uganda appears to have had some success with instituting special remuneration levels for health professionals within the public sector (Dovlo, 2003).

Improving the working conditions of health professionals is a strong strategy identified in literature to improve retention as monetary incentives alone cannot achieve this goal (Buchan & Calman, 2004; Lehmann & Sanders, 2004; Schrecker & Labonte, 2004). A convincing case showing a link between monetary incentives, motivation and retention is drawn from a study targeting lower-level health workers in Gongola state, Nigeria, where male community health workers (CHWs) with

relatively higher remuneration stayed on average for 3.25 years compared to 2 years for male CHWs with lower pay (Bhattacharyya et al, 2001). For instance increase in salaries of Nurses in Botswana gave little results (Dovlo, 2003). Consistent with this views, Lehmann & Sanders (2004) stated that health professionals in South Africa had a greater probability to migrate compared to Ugandan professionals even though Ugandan health workers earn lower salaries compared to South African professionals (Lehmann &Sanders, 2004). Poor working conditions in South African health system accounted for this (Lehmann &Sanders, 2004). Similarly, WHO study of six African countries points to working and living conditions as a prominent cause for employee departure (cited in Lehmann & Sanders, 2004).

Finally, international cooperation concerning the mobility of health professionals is a policy direction countries have been embarking on to remedy the emigration situation. South Africa signed a memorandum of understanding with the Cuba and German government in 1996 to allow its national trained doctors to work in South Africa for a specific period of years. As a result of this agreement as at 2003 there were about 450 Cuban physicians (OECD, 2004).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter describes the methods that were used in the research. It provides details on the research design, study population, sampling technique and sample size, study area, research approach, data collection methods and tools and the approaches used in data analysis.

3.1 Research Design

The case study design was adopted as the study focused on the migration intentions of final year medical students in UGMS alone. This design was deemed appropriate as it allowed a detailed assessment of the factors that influenced intention to emigrate taking the particular situation of UGMS.

3.2 Study Population

The target population of this study was medical students in the University of Ghana Medical School. They were selected because per their training they are potential doctors. Additionally, the heads of the Human Resource (HR) unit and the Policy Planning Monitoring and Evaluation (PPME) unit of the Ghana Health Service (GHS) were also brought on board for the purpose of addressing the issue of the strategies put in place to improve retention.

3.3 Sampling Technique and Sample Size

Purposive sampling was used to select the final year medical students who are on the verge of completing medical school to become doctors within a period of less than a year. The final year class was selected because the study sought to find out their migration intention prior to their

becoming doctors. All final year students consisting of 150 persons were sampled from the population. Ten students were further selected purposively from the 150 students based on their availability to be interviewed, in-depth. In addition the heads of the Human Resource (HR) unit and Policy Planning Monitoring and Evaluation (PPME) unit of GHS were also purposively selected as they are employers of doctors and they are better informed on strategies put in place to improve their retention.

3.4 Study Area

The study area is the University of Ghana Medical School (UGMS) which is the premier medical school in Ghana. The UGMS was selected because it has the largest number of doctors produced over the years and accounted for the training of about sixty percent of all locally trained doctors in the country from 1990 to 1995 (Dovlo & Nyonator, 1999). The school is situated on the premises of the Korle-Bu Teaching Hospital located within the Accra Metropolitan Assembly Area. The Accra Metropolitan Assembly is the only district in the Greater Accra Region where medical training is given to students.

3.5 Research Approach

The research adopted the mixed method design. This approach was selected because it permitted the collection and analysis of both quantitative and qualitative data. The rationale for combining the methods was due to the fact that the quantitative method provided a means to gather numerical data on students who intended to emigrate however it did not provide the flexibility of understanding the factors that influenced their intentions as much as a the qualitative approach provided. The qualitative approach provided an understanding of the reasons influencing migration from the views of the final year medical students directly. Thus applying both the quantitative and

qualitative approach was practical to complement each other in the research to achieve the aforementioned aims and allow for more complete analysis.

Quantitatively the study built discussions on a post positivist point of view, expanding issues from the causes and effects of migration. Understanding was sought through compressing particular variables such as the push and pull factors of migration, using questions and measurements. The research established relationships by relating and also separating variables (pull and push) to give a better explanation to the study.

With qualitative research on the other hand, the study gathered views of ten final year students and the Human Resource Manager. These views were analyzed in a natural environment to reflect the pure subjective views of participants. The discussions were based on the knowledge grounding of the constructivist (Guba & Lincoln, 1982) or advocacy/ participatory (Mertens, 2003) perspectives.

In the case of a mixed method, knowledge was based on the pragmatic view (Maxcy, 2003) by projecting the point that truth is that which works. The most applicable findings or answers are drawn from final year students which best answer the research questions. Pragmatism presents a principle that indicates that quantitative and qualitative methods can be matched. Consequently data gathered sequentially or concurrently merged to appreciate the research problem.

3.6 Data Collection Methods and Tools

Two main methods were employed to collect data; the quantitative and qualitative methods. The self-administered structured questionnaire was the tool used to collect quantitative data whiles in-depth interview guide was used for the qualitative data. The in-depth interviews were tape recorded with mp3 recorder. The questionnaire was divided into three main parts. The first part

was on the demographic background of respondents, the section two was on migration intentions and the third part was on factors influencing intentions to emigrate. Section three was further grouped into push, pull and intervening factors of migration. For the purpose of rating, a five-point Likert scale was used ranging from 1 = very likely, 2 = likely, 3 = moderately likely, 4 = somewhat likely and 5 = unlikely. In effect, 1 and 2 represent high scores, 3 represents average while 4 and 5 represent low score (See Appendix 1).

3.7 Research Procedure

A pilot study was conducted to pretest the tools for appropriateness. The reason was to check whether it conveyed the same message intended. The study instruments were revised based on the pilot study. Prior to the administration of the questionnaires, permission was first obtained from the University of Ghana Ethical Committee for Humanities (ECH) with a reference number of ECH 050/13-15 (See Appendix 4). Additionally, consent was sought from all respondents and the purpose of the study was thoroughly explained to them. It was explained to respondents that joining the study was voluntary while terminating their participation attracted no penalty. The research was done in two phases. In the first phase self-administered structured questionnaires were given to final year medical students to be filled at their convenience. The majority of the questionnaires were completed in entirety with few missing responses. It attracted a response rate of 90% representing 135 students out of a total of 150 students. The results were analyzed and the significant factors that influenced intention to emigrate were obtained. Missing responses were excluded from the analysis accounting for differences in the reported number of participants' responses. This was followed by a qualitative phase where in-depth interviews were conducted. Ten students who were respondents to the questionnaire were selected from the final year class based on their availability to be interviewed in order to probe deeper into the factors obtained from

the quantitative phase. Also in-depth interviews targeted HRM of the GHS to find out strategies in place to improve retention.

3.8 Data Analysis

The Statistical Package for Social Sciences (SPSS) version 16.0 was used to analyze the quantitative data. The back ground information and frequency distributions of respondents were first determined. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was performed to find out if the data were adequate to conduct factor analysis. The significance level was set at 95%. The result of the KMO test was statistically significant ($P<0.05$) and indicated that the data were adequate to perform factor analysis. Thus factor analysis was performed on the factors that influence intention to emigrate. This was conducted because it is a data reduction approach that could identify the significant factors influencing intention to emigrate and at the same time could also group the data into groups of factors influencing emigration.

The in-depth interviews were transcribed after the data collection process. The interviews were analyzed by coding the main themes as expressed by the participants. The responses were discussed under main themes and sub-themes to reflect the subject views of the final year students.

CHAPTER FOUR

PRESENTATION AND DISCUSSION OF THE STUDY FINDINGS

4.0 Introduction

The findings of the study are presented in the following thematic areas; background information, the migration intentions, the factors that influence the intentions of final year medical students of UGMS to emigrate, the strategies of Ghana Health Service (GHS) to retain doctors in the country.

4.1 Background Information

Table 4.1 shows the background information of final year medical student. The majority (66.9%) of the participants were between 24 and 26 years of age and males composed 63.6% (*n*= 84) of the sample. Most of the participants were single (92.4%; *n* = 122) and had no children (93.9%; *n* = 124). Over half of the respondents were Akan (50.0%, *n*=65).

Ten students were interviewed in the qualitative phase of the study. Nine were males and one a female. All participants were single and had no children. The ethnicity of respondents was not captured.

Table 4. 1 Background Information

Background Information		Migration Plans		N(%)
		Yes	No	
Age				
	21-23	12(70.6)	5(29.4)	17(13.1)
	24-26	61(70.1)	26(29.9)	87(66.9)
	27-30	18(75.0)	6(25.0)	24(18.5)
	Above 30	1(50.0)	1(50.0)	2(1.5)
	Total	92 (70.8)	38(29.2)	130(100)
Sex				
	Male	62(73.8)	22(26.2)	84(63.6)
	Female	31(64.6)	17(35.4)	48(36.4)
	Total	93(70.5)	39(29.5)	132(100)
Marital status				
	Married	7(77.8)	2(22.2)	9(6.8)
	Divorced	1(100)	0(0)	1(0.8)
	Single	85(69.7)	37(30.3)	122(92.4)
	Total	93(70.5)	39(29.5)	132(100)
Having Children				
	Yes	6(75.0)	2(25.0)	8(6.1)
	No	87(70.2)	37(29.8)	124(93.9)
	Total	93(70.5)	39(29.5)	132(100)
Ethnicity				
	Akan	43(66.2)	22(33.8)	65(50.0)
	Ewe	15(68.2)	7(31.8)	22(16.9)
	Ga Adangbe	17(81.0)	4(19.0)	21(16.2)
	Northern	7(70.0)	3(30.0)	10(7.7)
	International Student and others	10(100.0)	2(0)	12(9.2)
	Total	92(50.0)	38(50.0)	130(100)

4.2 Migration Intentions

As illustrated in table 4.2 the majority of respondents indicated an intention to emigrate (70.4%, n= 95) whiles 29.6% had no intention to emigrate. This information was consistent with the qualitative results and it showed that most of the participant had an intention to migrate; 8 students out of 10.

The results in table 4.1 show that about 98.5% (n= 128) of respondents were between the ages of 21 and 30 years, of this 70% (n=91) had intentions to emigrate. These people are classified as type B persons in the conceptual frame work (See Figure 1). They consist of people who are younger, healthier, sensation seekers and self-efficacious persons who are more likely to have intention to emigrate as they are more likely to recoup the cost of migration.

Table 4. 2 Intention to Emigrate

Intention to Emigrate	Frequency	Percentage
Yes	95	70.4
No	40	29.6
Total	135	100

4.2. 1 Preferred Destination

The United States of America (USA) (55.3%, n=52) was the most preferred destination for students, followed by the United Kingdom (UK) (12.8%, n=12) and Germany (7.4%, n=7) as represented in table 4.3.

Similar findings came out in the in-depth interviews, respondents highlighted that USA was the first preferred country because cost of living was comparatively better there than in the UK. Contacts established by respondents in these countries was seen to be a major deciding factor to emigrate. In addition, the countries where UGMS lecturers obtained their specialist qualifications influenced the choice of respondents. For instance students identified with universities such as Harvard Medical School (USA), John Hopkins University (USA) and University of Aberdeen (UK).

Germany was the third preferred country due to the flexibility of entry requirements into a residency program and the challenges of the language barrier. Very few respondents (2 out of 10) pointed out India and South Africa as the fourth and fifth preferred destination.

Table 4. 3 Preferred Destinations

Preferred Destination	Frequency	Percentage
UK	12	12.8
USA	52	55.3
Germany	7	7.4
Canada	7	7.4
Not decided	1	1.1
Others	12	16.0
Total	94	100

4.2.2 Steps towards Migration

After establishing the migration intentions of respondents and their preferred destination countries, further information was sought on steps they had already taken towards their plans to migrate. In table 4.4, steps students had already taken towards migration are shown. Interestingly 51.1% (26.7% plus 24.4%) had ‘‘already registered or taken international examination’’ and had ‘‘established contacts with other migrants’’ respectively. A few (20.0%, n=18) had ‘‘already spent some time abroad’’ and had ‘‘enrolled in a language course’’ (12.2%, n=11) (see table 4.4).

The qualitative results was quite varied. None of the respondents indicated that they had registered or taken an international examination, however 3 of them mentioned their intention to do so soon after graduation. Out of the ten respondents, 3 had already spent some time abroad. Two persons out of the 3 had travelled to the USA for a visit and had established some contacts towards plans

to emigrate upon graduating from medical school. One person had gone to Germany for an exchange program to intern in a hospital. The program had given the student the opportunity to inquire about the entry requirements into a residency program. Two respondents had enrolled in a language course, studying German with the intentions to use the results to apply for schools in Germany.

The results points to the strong role feedback has in the intentions to emigrate. From the conceptual framework, information from receiving countries has an impact on the evaluation point where a person decides to leave his country or stay in his country (refer to Figure 1, in page 11).

Table 4. 4 Steps towards Migration

Steps towards emigration	**Frequency**	**Percentage**
Enrolling in a language course	11	12.2
Establishing contacts with other migrants	22	24.4
Browsing internet advertisement	9	10.0
Already spent some time abroad	18	20.0
Consulting recruiters	3	3.3
Registered or taking international exams	24	26.7
Nothing	3	3.3
Total	90	100

4.2.3 Maximum Period of Stay in Ghana before Emigrating

The study revealed the period a student intended to stay in Ghana before emigrating. More than half (55.2%, n=53) of all students who had intention to emigrate wanted to leave Ghana within three to five years after completing medical school, whiles 21.9% (n=21) wanted to leave within two years. Longer periods of stay recorded low percentages (See Table 4.4).

This finding resonates the qualitative results as majority of the participants interviewed intended to migrate after a period of two to three years, after graduating from school. The reasons that influenced this intention is a desire to complete the mandatory rotation for two years, to raise some money to facilitate travel intentions, start a family and to also gain some working experience.

The results reflect the role of ‘‘extra ordinary events’’ on migration as shown in the conceptual model (figure 1, page 11). From the model it was conceptualized that, the influence of life cycles such as the cessation of education and an entrance to work force will influence the hold of an area on an individual. It is not surprising that majority plan to leave immediately they complete their mandatory ‘‘house job’’ which qualifies them to get their license as a doctor and ushers them into the workforce.

Table 4. 5 Maximum Period of Stay in Ghana before Emigrating

Max Period of stay in Ghana before emigrating	Frequency	Percentage
Less than a year	10	10.4
Within two years	21	21.9
Within three to five years	53	55.2
5 years	11	11.5
9 years	1	1.0
Total	96	100

4.2.4 Intention to Specialize after Graduating from Medical School

A significant number of students had intentions to specialize after graduating from medical school (94.7%, n=126), of this 72.2% (n=91) wanted to travel outside the country. Surgery (30.4%, n=41), Pediatrics (19.3%, n=26) and Medicine or Ophthalmology (10.4%, n=14) were the most preferred areas of specialization and most students wanted to pursue these courses outside the country (See Table 4.6).

These findings were slightly different from the qualitative results as 4 out of 10 students wanted to specialize in surgery, 3 in Pediatrics, 2 in Obstetrics and Gynecology and 1 in Geriatric Oncology. The discussions made it clearer that some specialty areas in Ghana were well developed whilst others were not. Specifically as mentioned by a participant, ‘‘*Obstetrics and Gynaecology, Surgery and Medicine are well developed in Ghana whilst specialty areas such as Neurosurgery, Cardiology, and Geriatric Oncology one needs to migrate”*.

It became apparent from the discussion that most medical students would prefer to pursue residency programs abroad because in Ghana the duration can take longer than normal. The longer duration also comes with a corresponding cost component. On the average depending on the area of specialty, it can take about five to seven years. A participant pointed out, ‘‘*for me here in Ghana, I know some people who have finished their junior residency and they have been senior residents for quite a long time, they have been writing the exams over and over again but people go out and they are able to do it within the specified period of time”*. Nonetheless, a member was quick to add that since certain conditions in medicine are peculiar to a specific geographical region it is more advantageous to study in the country where one is looking at practising medicine. Students who

study abroad normally take some time to adapt to the conditions in the geographical area they eventually practise.

Another participant also pointed out that earlier this year, a policy was introduced which states that before a doctor can pursue further studies the doctor should have practiced for five years. Even though this policy is aimed at retention, it will influence a lot of doctors to emigrate for further studies especially among female doctors who may want to finish their specialty before having children. A female student stressed that, "*the five year policy will not help at all".* Another male student reiterated, "*the five year policy introduced, makes doctors wonder what was the basis for this policy, one would rationalize that it is because they want to post doctors to the districts but if countries like Germany are giving physicians opportunities to specialize why would I want to stay if the number of years I can specialize is increased unduly to increase my burden, I will leave, why would I stay, unless I do not know what I want*".

Table 4. 6 Intention to Specialize After Graduating from Medical School

Intention to Specialize	Migration Plans		N(%)
	Yes	No	
Specialization After Graduating from Medical School			
Yes	91(72.2)	35(27.8)	126(94.7)
No	3(42.8)	4(57.1)	7(5.3)
Total	94 (70.7)	39(29.3)	133(100)
Aspect Of Medicine One Wants To Specialize			
Obstetrics and Gynecology	12(66.7)	6(33.3)	18(13.3)
Surgery	29(70.7)	12(29.3)	41(30.4)
Medicine or Ophthalmology	12(85.7)	2(14.3)	14(10.4)
Pediatrics	19(73.1)	7(26.9)	26(19.3)
Urology or Maxillofacial	4(100.0)	0(0.0)	4(3.0)
Not yet Decided	6(100.0)	0(0.0)	6(4.4)
Others	9(52.9)	8(47.1)	17(13.5)
Total	91(72.2)	35(27.8)	126(100)

4.2.5 Target Country for Specialization

Table 4.7 illustrates the countries students targeted for specialization after their studies. The USA was the most targeted country (42.1%, n=53). A good number of students also had the UK (20.6%, n=26) and Germany (9.5%, n=12) in mind. A few also planned to pursue their specialization in Ghana.

The results is similar to finding on students preferred destination countries (Table 4.3). It also shows a strong deciding factor for emigration is the intention to pursue further studies. The reasons for preferring these three countries when it comes to the decision to pursue further studies is also similar to reasons given in subhead 4.2.1.

Table 4. 7 Target Country for Specialization

Target Country for Specialization	Frequency	Percentage
Ghana	15	11.9
UK	26	20.6
USA	53	42.1
Germany	12	9.5
Canada	8	6.3
Others	12	9.5
Total	126	100

4.2.6 Number of Years to Return to Ghana after Migrating

Most students had plans of returning to Ghana after some period. In table 4.8 majority of the students planned to return to Ghana after 5 years (36%, n=36.6) and 10 years (20.5%, n=23). Long term or permanent stay abroad recorded 19.6% (n=22). Shorter term stay abroad recorded lower percentages; for instance between 2-3 year (3.6%, n=4).

The in-depth interviews brought out the fact that most students had intentions to return after 5 to 10 years of stay abroad. Within this period students are likely to have pursued their specialty programs and worked for some time to save money towards private practice. The patriotic spirit of students was also reflected in this section. A participant indicated that he would like to come home because he studied medicine in order to save lives and he had more satisfaction in saving the lives of his own people. Another person indicated the desire to help improve the health system in Ghana by coming back with the knowledge and skills acquired abroad. Finally, the prestige attached to the doctor's work in Ghana compared to abroad, informed the decision to return.

Table 4. 8 Number of Years to Return to Ghana after Migrating

Number of Years to Return to Ghana	**Frequency**	**Percentage**
Long term or permanent	22	19.6
After 10 years	23	20.5
After 5 years	41	36.6
Between 3-5 years	16	14.3
Between2-3 years	4	3.6
Less than 2 years	5	4.5
8 years	1	0.9
Total	112	100

4.2.7 Intention to Practice Medicine

Table 4.9 shows the intention of student to practice medicine after graduating from school. A significant number have plans of practicing as doctors after school (96.2%, n=125). The others had plans of going into public health (0.7%, n=1), health administration (0.7%, n=1) and mining (0.7%, n=1). Overall public practice (55.6%, n=75) had the greatest score compared to private practice (34.8%, n=47) and some indicated to practice both (8.1%, n=11).

The qualitative findings reiterated the above results as 9 out of 10 students indicated an intention to practice as doctors upon graduation while only 1 student mentioned an intention to go into pastoral work.

Table 4. 9 Intention to Practice Medicine

Intention to Practice Medicine	**Migration Plans**		**N**
	Yes	**No**	
Desire To Work In The Hospital			
Yes	88(70.4)	37(29.6)	125(96.2)
No	2(40.0)	3(60)	5(3.7)
Reason For Saying No			
Public Health	0(0.0)	1(100.0)	1(0.7)
Health Administration	1(100.0)	0(0.0)	1(0.7)
Mining	1(100.0)	0(0.0)	1(0.7)
Preferred Practice			
Public	56(74.7)	19(25.3)	75(55.6)
Private	32(68.1)	15(31.9)	47(34.8)
Both	7(63.6)	4(36.4)	11(8.1)

4.3 Factors Influencing Intention to Emigrate

The factors influencing intention to emigrate were captured under three categories, pull factors, push factors and intervening factors. From the conceptual framework (Figure 1, page 11) a push factor is a factor that causes a student to move from the sending country to the receiving country. At the evaluation point a push factor is identified as a ‘‘negative factor’’ (-) whiles a pull factor is seen as a ‘‘positive factor’’ (+). Factors that are evaluated as ‘‘neutral’’ (o) do not have a significant role for a student to migrate.

Intervening factors is represented in the model as the ‘‘current’’ that regulates the extent of movement of people between the sending country and receiving country.

4.3.1 Push Factors Influencing Intention to Emigrate

The study revealed three major groups of push factors that influenced intention to emigrate. ‘‘Poor economic condition’’ (0.78) was the first dominant factor in the group 1 factors that influences intention to emigrate, the second was ‘‘political instability’’ (0.66), and third was ‘‘cost of living in Ghana’’ (0.64).

Findings from the quantitative results were similar to the qualitative. Students explained that poor economic conditions such as inflation in Ghana made the actual value of their salaries smaller. Opinions of members showed that the salary of junior doctors was 2000 cedis and it was woefully inadequate. A student explained further that, *doctors should be given what is due them*. According to the student, the basal pay of junior doctors is 1000 but allowances like over time, feeding and others come in to make it 2000. The opinion of the student was that the reason behind the frequent strikes was the inadequacy of the basal pay. Especially since retirement benefits of Social Security and National Insurance Trust (SSNIT) was based on the basal pay of 1000. An example was given

by the student to expand the point, he indicated that, *"imagine if you get to medical officer and you want to stay there without specializing, your basal pay is 1500 and you stay in this country and you do so much work till you are about 60 or 65, and you retire and your basal salary is calculated on 1500 then what work have you done then?"*.

Respondents did not mention political instability during the in-depth interview. They however, added that a lot is expected of a doctor financially. Firstly, a lot is expected of a doctor in his family. This is because the family invests a lot in the education of a doctor and they expect to recoup it when the person starts working. Secondly, society also places some demands on doctors. For example a doctor will normally be invited to chair programs and this role has some financially obligations. As a result of these demands doctors tend to spend more and this makes their incomes insufficient.

In the group 2 factors, ''working conditions'' (0.64) was the significant factor whiles in the group 3, ''the risk of occupational exposure'' (0.44) was major even though the relationship is not significant since it is less than 0.5. Further inferences can be made by considering all the three groups of factors to determine the next possible factors that can influence intention. When such observation is made, ''crime and violence'' (0.54, 0.19, 0.42), ''risk of occupational exposure'' (0.54, 0.20, 0.44) and ''inadequate medicine and equipment'' (0.36, 0.38, 0.39) respectively record strong scores from each group and are most likely to be the 3 factors that will influence additional intentions to emigrate compared to considering ''poor economic conditions'' in the group 1 factors alone (See Table 4.10).

The respondents pointed out ‘‘working conditions’’ as one of the push factors during the qualitative study. According to respondents the equipment one needs to work with is not available most of the times. Doctors have to keep improvising and this also makes their work difficult.

Another important push factor highlighted was ‘‘the risk of occupational exposure’’. A personal narrative was given by one of the students to explain the risk of occupational exposure, he said, ‘‘*a consultant of ours, a very prominent surgeon died at the floor of the emergency two years ago because there was no emergency drug at the emergency to give him. And this drug is a drug that should be so common. He was the only one who was doing the kind of surgery in Ghana at that time yet he died out of a very preventable death. So you ask yourself what is the benefit of staying here and giving your all and dying such a death?”*.

Another factor which was not captured in the quantitative results but highlighted during the interview was the stress students encountered in medical school. The student said, ‘‘*there is a lot of stress here, you have to see 50 patients a day, run around for blood, but if you go outside you will not be put under so much stress. Here you have to put everything in your head produce it on the spot, whilst when you go outside, you click a button and things will appear. Here consultants put so much stress on medical students, house officers, junior residents so if you go outside there will be some peace in your heart and you can relax*’’. Another member emphasized that this was a major reason behind intention to emigrate. He gave an example, he said, ‘‘*if you are posted to a district, you have to be the surgeon there and you do everything but it will not happen outside”*. Crime and violence in the quantitative study was not highlighted during the qualitative stage.

Table 4. 10 Push Factors Influencing Intention to Emigrate

Push Factors	**Group 1**	**Group 2**	**Group 3**
Working Conditions	0.213	0.643	-0.088
Inadequate Medicine And Equipment	0.357	0.384	0.393
Heavy Workloads	0.32	0.487	0.017
Risk Of Occupational Exposure	0.535	0.201	0.435
Crime And Violence	0.588	-0.191	0.424
Low Salaries	0.379	0.429	-0.241
Political Instability	0.669	-0.322	0.133
Deteriorating Quality Of Education	0.569	-0.195	0.177
Poor Quality Life	0.644	0.067	-0.085
Poor Economic conditions	0.786	-0.083	-0.029
Working Conditions Of The Private Sector	0.595	0.042	-0.327
Lack Of Opportunities For Career Advancement	0.49	-0.227	-0.151
Cost Of Living In Ghana	0.644	-0.002	-0.42
Won't Find A Good Job In Ghana	0.504	-0.299	-0.181

All values are significant at P=0.000 ($p<0.05$)

4.3.2 Intervening Factors Influencing Intention to Emigrate

Table 4.11 shows intervening factors that influence intention to emigrate categorized into two main groups; group1 and group 2. The first three factors in group 1 that hinders migration from the results are certification (0.80), qualifying for visas (0.74) and government policies in destination countries (0.68).

The qualitative results also reflected a similar trend. Students explained the challenge of ‘‘certification and government policies in destination countries’’ by giving examples of some examinations doctors need to take to be accepted in to medical practice in some countries. In USA for instance students emphasized the strict admission requirement where prospective students are required to write United States Medical Licence Examinations (USMLE 1& 2) one and two within not more than two years of graduating from medical school. The student pointed out that this two years is also the time students are required to do their rotation and they are swamped with a lot of work. This makes it challenging to get a high score on the examinations. Also for a student to effectively pass the USMLE 2, one needs to be in the American Medical System doing an internship since it is a practical examination. Based on the views of students during the in-depth study, ‘‘qualifying for a visa’’ was not a challenge.

The group 2 shows adjusting to ‘‘climatic conditions in destination country’’ (-0.51) even though it has a negative association with the group1 factor (See Table 4.11). Students interviewed refuted the fact that ‘‘weather conditions’’ was a strong factor to prevent them from moving.

It can also be deduced that additional final year students who may have an intention to emigrate will have intervening obstacles such as ‘‘obligatory work commitment after community service’’ (0.52, 0.37) and ‘‘government policies in Ghana’’ (0.51, 0.36) which gives a stronger score when

group 1 and group 2 are considered against considering only group 1 factors which shows ‘‘certification’’ as the most significant.

Further probing through the qualitative phase of the study confirmed the above results as students indicated that a good inhibition factor is ‘‘government policies’’ that improve conditions of service to retain doctors in the country. For instance the establishment of the College of Physicians and Surgeons where doctors can do residency programs is a good way to keep some doctors in Ghana.

Other factors that came out through the qualitative study included the role of ‘‘family and friends’’. A student noted, ‘‘*it depends on the relation I have, whether am married and whether my wife thinks it is time for me to move out or not looking at the future of our family”.*

Table 4. 11 Intervening Factors Influencing Intention to Emigrate

Intervening Factors	**Group 1**	**Group 2**
Associated Cost	0.593	0.202
Obligatory Work Commitments After Community Service	0.516	0.371
Adjusting To Working Conditions Within Healthcare System	0.618	0.105
Certification	0.801	0.075
Government Policies In Ghana	0.512	0.364
Government Policies At Destination Country	0.684	0.035
Adjusting To Culture In Destination Country	0.655	-0.245
Qualifying For Visas	0.746	-0.005
Language Differences	0.644	-0.303
Adjusting To Climatic Conditions In Destination Country	0.56	-0.513

All values are significant at P=0.000 ($p<0.05$)

4.3.3 Pull Factors Influencing Intention to Emigrate

There are four main categories illustrating pull factors that influence intention to emigrate; group1, group 2, group 3 and group 4 as shown in Table 4.12. In the group 1, ‘‘quality of life abroad’’ (0.86), ‘‘standard of living abroad’’ (0.85) and ‘‘better opportunities for family abroad’’ (0.76) are the first three pull factors.

Consistent with the above findings students explained this by comparing the salary of a junior doctor in Ghana to Germany. According to the students the remuneration in developed countries is better compared to Ghana. For instance a student mentioned that some colleagues who interned abroad came back with statistics of how much other medical practitioners were earning in Germany, according to him, ‘‘*in Germany house officers earn 2200 Euros whilst in Ghana house officers earn 1000 Ghana Cedis and an allowance of 1000 making the total 2000 cedis”* Another participant voiced out that extra salary was given to doctors who are married in Germany, he said, ‘‘*in Germany if you are married, you earn 2600 Euros but in Ghana no one recognizes that you are married”*. According to another student who interned in Germany, he said ‘‘*trust me the conditions of service are very good*’’.

Group 2 however, has the first three pull factors being ‘‘opportunities for research’’ (0.73), ‘‘ability to pay student loans and debts sooner’’ (0.52) and ‘‘positive feedback from those who have practiced abroad’’ (0.51) (See Table 4.12).

These results were not too different from the views of students who were interviewed. Respondents did not mention ‘‘the opportunities for research’’ but it was implied in their desire to have international exposure and the ability to be competitive on the global front. According to one of the students, his desire to travel abroad was to enable him recoup all investments in his education

much faster, he said ‘‘*I have been a full fee paying student, and that has been the factor but currently it might change, initially because I was spending so much in terms of fees, at least I know that it will be easier for me to make up all the money I have invested in medical school and at least reap from it*’’. The issue of recouping investment in education is especially crucial since medical students are not given any allowances during their schooling and no opportunity is given to students to raise money through part time jobs to make money for living expenses in school compared to the developed countries resounded by the student. Another student explained this by giving an example. He stressed that*, “ in developed countries students are given part time jobs like, invigilating of examinations etc. and they are planned in such a way that it does not interfere with the studies of the students”.*

Students also indicated that the intention to migrate was greatly influenced by feedback and examples of colleagues in the profession. The student voiced out that, ‘‘*definitely I will like to move out, my consultants and specialist have all migrated and they came back so obviously I will also want to move outside Ghana*’’.

In table 4.12, group 3 also has ‘‘prospects for professional advancement’’ (0.92) and ‘‘quality and variety of specialization training being offered’’ (0.62). In the qualitative study students explained that the professional advancement and quality of exposure a student gets from practising medicine in a developed world was one of the reasons that contribute to an intention to emigrate. The student mentioned that, ‘‘*there is some kind of prestige if someone says I studied at Harvard Medical School or University of Edinburgh compared to someone saying I studied at University of Ibadan or University of Ghana”* It was reiterated by another member that, ‘‘*aside prestige, there is exposure to advance ways of handling issues medically, for instance, here in Korle Bu we have a lot of items that are absent in the facility so some of us want to travel to have exposure to advance*

technology so that later we can bring this knowledge back to teach others about the standards that exist".

Finally, the fourth group represents ''stability of government of destination country'' (0.48) even though the score is weak since it is less than 0.5. It can be deduced that additional final year students who may have an intention to emigrate will have pull factors such as ''greater personal safety abroad'' (0.47, 0.33, 0.28, 0.41) and ''availability of good jobs abroad'' (0.67, 0.15, 0.30, 0.39) which gives a stronger relationship when group one, two, three and four are considered against considering only one group such as ''availability of good jobs abroad'' in group 1 (See Table 4.12).

Table 4. 12 Pull Factors Influencing Intention to Emigrate

Pull Factors	Group 1	2	3	4
Higher Salaries In Destination Countries	0.001	0.005	0	0.101
Quality And Variety Of Specialization Training Being Offered	0.289	0.028	0.624	0.033
Prospects For Professional Advancement	0.164	0.181	0.928	-0.005
Greater Personal Safety Abroad	0.469	0.333	0.276	0.409
Availability Of Good Jobs Abroad	0.667	0.154	0.297	0.392
Potential Of Earning More To Be Invested In Ghana	0.553	0.269	0.264	0.183
Quality Of Life Abroad	0.862	0.175	0.258	-0.029
Standard Of Living Abroad	0.851	0.18	0.217	-0.005
Economic Situation Of Destination Country	0.758	0.266	0.029	0.158
Better Opportunities For Family Abroad	0.764	0.259	0.103	0.199
Stability Of Government Of Destination Country	0.429	0.456	0.097	0.485
Transferability Of Qualification	0.248	0.502	0.192	0.132
Ability To Pay Student Loans and debts Sooner	0.239	0.524	-0.056	0.397
Similarities Of Health Care Training Between Home And Destination Country	0.256	0.502	-0.17	0.301
Opportunities For Research	0.085	0.733	0.247	-0.184
Positive Feed Back From Those Who Have Practiced Abroad	0.488	0.519	0.116	-0.104

All values are significant at P=0.000 ($p<0.05$)

4.4 The Strategies of GHS to the Migration Situation

Ghana Health Service (GHS) has identified the challenges the health sector goes through as a result of doctor migration. An in-depth interview with the Human Resource Manager (HRM) at the GHS highlighted some strategies to remedy the situation. Some of these strategies include; better

salaries, hire purchase vehicles, fuel allowances, free accommodation, free utility bills (water and electricity).

1. **Improved Salary**

In 2006 salaries of doctors were enhanced when the Ghana Health Service migrated to the health sector salary scheme. It was further improved when there was another transformation in salaries to the single spine salary where doctors earn higher. He said, ‘‘*a hundred percent premium is calculated on the basic salary for junior doctors and senior doctors earn one hundred and twenty percent premium on their basic salary*’’, (Human Resource Manager (HRM), GHS).

2. **Hire Purchase Vehicles**

A second strategy put in place by the GHS is hire purchase vehicles for doctors, according to the HRM, ‘‘it is a system where doctors are allowed to buy vehicles and the payment is spread over a period of seven years’’. The payments for the vehicles are deducted directly at source through the Controller and Accountant General’s Department before salaries reach doctors who have gone in for the package. This facilitates the purchase of vehicles for doctors as they do not need to make full payment on the spot for the car but payment is spread over a period of time. Normally the category of vehicles that are purchased should not have an engine capacity more than 1.8, examples of such vehicles include; the Toyota Corolla, VW Passat, just to mention but a few. This strategy has worked effectively to retain some doctors in the country since an individual will not have incentive to migrate especially if payment of the vehicle is not complete.

3. **Fuel Allowances**

Thirdly, doctors are also given fuel allowances as an incentive to better their conditions of work. The HRM pointed out, ‘‘*doctors are given fuel allowances at the institutional level*’’. The

institutional level refers to the hospital where the doctors work. However, this depends on the strength of the facility as they need to use their internally generated funds to provide this incentive.

4. **Accommodation and payment of utility**

The fourth incentive doctors benefit from is free accommodation and payment of their utility bills (water and electricity bills) at the institutional level. The HRM gave a narrative to establish this point, he said, ''*Korle- Bu for instance has gone into an agreement with the government for the payment of the accommodation and water bills of doctors*''. These incentives are only limited to house officer, thus junior doctors do not receive these benefits.

4.4.1 Challenges

Some of the challenges the GHS faces in implementing retention strategies are inadequate resources to provide doctors with other incentives like hire purchase vehicles mentioned earlier during the discussion aside their salaries. As a result, the provision of the incentive depends on the capability of the institution. In facilities that are less resourced doctors are not provided with these incentives.

The provision of incentives also places a lot of strain on the resources of the government. It leads to economic hardships, according to the HRM, ''*everybody is paying for water and electricity and they are not paying and that also contributes to the economic hardship as some few people are contributing to the running of water in the country*''.

Another challenge that was highlighted was collection of payments for hire purchase vehicles when a doctor stops receiving salary due to ill health or on occasion of death. The HRM added, ''*for example, the payment for hire purchase vehicles is through deduction from source so the challenges will be if someone is not receiving salary, deductions cannot be done*''.

The effective implementation of retention strategies depends a lot on information on doctors. Sometimes information on movement of workers is not captured. At times workers apply for annual leave with pay or study leave without pay and they vacate where they work. In such instance according to the HRM, it is captured as vacation of post. He said that, ''*so many of them were moving out and the records were not capturing it. Some will ask for leave and before you realize they have gone. These people are not properly captured. All the data says is that they have vacated post. You do not know where they have gone to whether they are in the country or they have gone outside the country*''.

4.5 Discussion of Findings

The next subheading discusses the key results into details based on the objectives of the study. The discussions highlights on the migration intentions of medical students, factors influencing their intentions and strategies and implementation challenges of GHS towards retention. Findings are compared to works of other scholars in literature and implications are drawn.

4.5.1 Migration Intentions of Medical Students

This study has provided insights into the migration intentions of final year students in the University of Ghana Medical School, where about seventy per cent (70%) are considering to migrate. The majority of the students wanted to stay in Ghana for three to five years (39.3%, n=53) after graduating from school before emigrating. These findings are not different from studies of other scholars. It is not surprising that majority of the medical students indicated an intention to migrate. This is because individuals who are highly educated are more likely to migrate considering the fact that they are probably faced with lower costs of migration as they are more

likely to find jobs with high remuneration to recoup the cost of migration (Chiswick, 1999; Boneva *et al*., 2001; Dalen & Henkens, 2008; Zaiceva and Zimmermann, 2008).

Kaushik (2008) research into the relation between the quality of physicians and migration among alumni of All India Institute of Medical Sciences (AIIMS), New Delhi, over the period 1989–2000. The study established that elite institutions contributed disproportionately to emigration of AIIMS students. This is similar to findings by Kotha *et al* (2012) who estimated that out of 228 Ghanaian medical students in their fourth year of study, 64.9% had intentions to emigrate after graduating from school. Additionally, intention to emigrate is likely to be more predominant among medical students in elite institutions or institutions in the city capital (Kotha *et al*, 2012; Kaushik, 2008). Kotha *et al* (2012) found that UGMS students had a greater intention to migrate compared to other medical schools in Ghana because they are located in Accra which is the capital of Ghana and the international hub. This location exposes them to international travelers in social and professional settings there thus facilitating the establishment of networks in destination countries.

The work of Kotha *et al* (2012) is similar to the findings in this study on ‘‘positive feedback from those who have practiced abroad’’ (0.52) being one of the contributory pull factors influencing migration intentions.

Dovlo (2003) also indicated that unpublished preliminary studies show that the level of migration of physicians and nurses after graduation is estimated to be 50% to 70%, within a period of 5 years after graduation. A similar finding was by Abuosi & Abor (2014) on student nurses’ intention to migrate where about eight out of every ten students (83%), indicated they had intention to migrate and work abroad after their studies. This result shows that the retention strategy of GHS to keep

doctors in the country at least within the first two years after their studies has proved to give promising results thus, maintaining this policy is in the right direction.

The results showed that fifty percent (50.0%) of the participants were between 24 and 26 years of age and sixty one percent (61%) of this age group showed an intention to migrate. This confirms studies showing that migration is greatly influenced by the age of an individual. Thus the younger a person is the greater the intention to migrate (Dolvo, 2003; Abor & Abuosi, 2014; Chiswick, 1999; Henkens, 2008; Zimmerman, 2008). The underlining reason is younger persons have a greater propensity to recoup investments of migrating compared to older person. The implication of this is that younger students are more likely to have the intention to emigrate compared to older students thus retention strategies are likely to be more successful when it targets meeting the needs of the younger groups.

The study showed that the most preferred destination for most final year students was USA, UK and Germany and empirical evidence establishes it. The most preferred destination for students as shown by the results are USA (98.1%; n= 51), UK (100%; n=12), Germany (100%; n=7). This is similar to the work of Mejia *et al* (1979) and Mullan (2005) that stated the most preferred destination for migrating doctors from developing countries were Australia, Canada, Germany, UK and USA. It is also estimated that eight (8) industrialized countries, including the UK, USA, France, Australia, Canada, Portugal, Belgium and Spain accounted for 94.2% of all African-born university-educated people residing in the OECD countries in 2000 (Clemens *et al*., 2006). UK still remains the second largest destination country for foreign-trained doctors after the United States (OECD, 2007). It can be inferred from this that common language may be one of the contributory reasons students prefer USA and UK. An appreciation of this was gathered from the

views of students who were interviewed during the qualitative phase of this study. During the discussion all those who had interned abroad visited USA, UK and Germany. Further inferences can be drawn from this findings that partnership with these countries with regards to migration of doctors trained in Ghana would be in the right direction so as to change the situation from brain drain to brain gain and a ‘‘win win’’ for both sending and recipient countries.

Research has shown that in the US, the number of overseas-educated doctors passing Step 3 of the United States Medical Licence Examinations (USMLE) examinations (criteria to full registration to work as a medical doctor in the US) increased by 70% from 2001 to 2008 (OECD, 2007). This study has also revealed that some students have intention to register for the USMLE and they recognized the strict requirements as an inhibiting factor. From the study, the step that recorded the highest percentage was ‘‘the establishing of contacts with other migrants’’ (24.4%, n=22) which was followed by ‘‘already spent some time abroad” (20.0%, n=18). Very few had not taken any step in preparing to emigrate (3.3%, n=3). It can be inferred that the preparatory steps students have already taken is likely to be one of the ways to determine their migration intentions.

The results supports the notion that there is a relationship between emigration intentions and the intentions to specialize. This explains the significant number of students who had intentions to specialize after graduating from UGMS (94.7%, n=126) and the number that wanted to study outside the country (72.2%, n=91). This finding is also consistent with studies by Burch *et al*. (2011) where 91.2% of students indicated intention to migrate for further studies. Chukwu-Emeka Chikezie (former senior adviser on migration to the governments of Mauritius and Mexico), made a comment that is similar to this finding, he said, *“a lot of people leave to actually come and study because there are not enough opportunities for example beyond getting a first degree, to do your*

post graduate specialism you need to leave'' (BBC, 5th April 2014). Studies by Hagopian *et al.* (2004) also indicated that home trained medical students leave to other countries because of the opportunities for further education. Findings of Landon *et al.* (2004) also suggest that improving access to training is crucial to improving retention. It can be inferred from this that even though other factors such as poor working conditions, stress in medical school among others contribute to the migration intentions of a student, the desire to further ones education seems to be paramount. In countries where in-country postgraduate training programs are limited students are more likely to emigrate to obtain specialized medical training (Kotha *et al.*, 2012). Some students explained that they wanted to pursue certain programs such as Geriatric Oncology which is absent in Ghana and Neurosurgery which is less developed in Ghana. It can be inferred that expansion of in-country specialist training is therefore a potential method of increasing physician retention.

4.5.2 Factors influencing migration intentions

The study has demonstrated statistically and qualitatively the impact of the push and pull factors on the intentions of students to emigrate. The study has reiterated that for large scale migration to take place the push factors of migration should have a stronger role compared to the pull factors even though both factors work in unison for an intention to be formed (Meija *et al.,* 1979; Naicker *et al*, 2009). From this study ''poor economic conditions'' came out as the most contributory push factor to migration intentions (0.78) with the corresponding pull factor; ''economic situation of destination country'' (0.76). These two factors as indicated from literature work together for an intention of migration to take place. This finding supports the notion that labor movement is as a result of economic failure (Borjas, 1989). In Ghana, 71% of health workers interviewed in destination countries mentioned economic decline as the reasons for leaving their home country (Vujicic et al, 2004).

Again wage differentials influence migration intention, although other factors contribute (Zaiceva and Zimmermann, 2008). During the in-depth interviews, students compared wages of colleagues in different countries. They indicated that house officers in Germany earn 2200 Euros whiles in Ghana they earn 2000 Ghana cedis which is inadequate. This is similar to finding by Dovlo (2003) who indicated that high inflation and instability of the local Cedis (US$1.00=GH¢2,000) can affect retention of doctors. According to Dovlo (2003), confidence in the economy is essential to improve retention. Consistent to the suggestions in this finding, confidence in the economy is still shaky as inflation is still high (11%) (2013 estimate by CIA) and stability of the local Cedis (US$1.00=GH¢3.35) has been shaky.

The probability to move correlates with an individual's per capita, unemployment rates and life satisfaction in their environment (Blanchflower *et al,* 2007). Consistent with the findings of Blanchflower *et al* (2007), this study has demonstrated that cost of living in Ghana (0.64), and poor quality of life (0.64) both influence intentions to emigrate.

The ''poor conditions of service'' was seen as a factor that influences migration from this study. This is similar to findings by Luck, Fernandes, and Ferrinho (2000), that indicated migration is primarily a response to globally uneven development, but usually explained in terms of factors such as low wages, few incentives or poor working conditions. Similarly, Sochalski (2004) establishes that poor working conditions are core factors motivating health workers to leave their country of origin. Again, Awases *et al*., 2004 found that the reason given by health personnel who indicated an intention to leave their country is to enjoy better working conditions and living condition to save money to buy a house (Awases *et al*., 2004). In the same way, studies of Bach (2003) found working conditions of health workers as major predictor of health workers' intention to migrate. Several studies have established this point (e.g. Buchan, Parkin, & Kingma, 2006;

Muula & Maseko, 2006; Asampong *et al*, 2013). It can be deduced that improved working conditions is very linked to improving retention of doctors.

The role of social networks could not be under estimated judging from the results of the study. According to some students the desire to join family abroad or friends abroad is a driving factor towards migration. This finding was substantiated by literature as Zaiceva and Zimmermann (2008), found that regarding labour market status, unemployed individuals may be more willing to look for a job abroad; however, they may also be attached strongly to the social networks and experience liquidity.

4.5.3 The Strategies of GHS to the Migration Situation

Discussions with the HRM at the GHS brought out retention strategies in place and some of the implementation strategies. The main aim of GHS for retention of doctors is to pursue a train and retain strategy. Retention strategies implemented are mainly provision of hire purchase vehicles, accommodation allowances, increased salaries and payment of utility bills of doctors. The implementation of improved salary levels by the GHS seems to be a promising strategy to retention. This is because studies by Vujicic *et al.*, (2004), showed that when a sample of health workers were asked what would make them remain in their home country, the majority in Cameroon (68%), Ghana (81%), South Africa (78%) and Uganda (84%) replied that an improvement in salary structures would be a good reason to stay (Vujicic et al, 2004).

Another convincing case showing a link between monetary incentives, motivation and retention is drawn from a study targeting lower-level health workers in Gongola state, Nigeria, where male community health workers (CHWs) with relatively higher remuneration stayed on average for 3.25 years compared to 2 years for male CHWs with lower pay (Bhattacharyya et al, 2001).

Again Yumkella (2005) reiterated the notion of improved salaries by indicating that junior doctors from Ghana and Zambia can expect to earn five times more if they emigrate to Lesotho, Botswana or South Africa (Yumkella, 2005). The implementation of improved salaries for health worker is a strategy that has being adopted by many countries. For instance, the South African government increased the average pay for public sector workers in the year 2000. General Doctors' were given an increase of 5% and specialist doctors received an increase of 12% (Erasmus and Hall, 2003). The government accepted the proposal of the Department of Health in South Africa to increase the allowances of physicians in priority rural areas which used to be 20 000 rand or 2500 USD (OECD, 2004).

Even though increase in salaries proves rewarding from the experiences of different countries, improvement in salaries may not always give the results expected due to the role other factors play in retention. In Ghana a variety of local and general incentives introduced, in terms of Additional Duty Hours Allowance, did not motivate nurses to stay at post as they felt there were disparities among nurses and other professionals (Dovlo, 2003). Uganda appears to have had some success with instituting special remuneration levels for health professionals within the public sector (Dovlo, 2003).

CHAPTER FIVE

SUMMARY OF FINDINGS AND RECOMMENDATIONS

5.0 Introduction

This chapter concludes the study, the previous chapter focused on the results of the study and a detailed discussion of the key findings. This section presents a summary of the study, relevance, and recommendations. It is based on the following objective; the migration intentions of medical students, the factors that influence their migration intentions and the strategies of Ghana Health Service (GHS) and the corresponding implementation challenges.

5.1 Summary

The first chapter presented the background on migration of health professionals and the challenges of the health systems of most developing countries. A lot of investment goes into the training of doctors and so the migration of doctors after their training is an issue of concern, especially for purposes of sustaining the necessary human capital to keep the health system going.

The study sought to find the migration of medical students, the factors the influence intention to emigrate and strategies of GHS to mitigate the migration problem. The objectives were addressed through the study of the particular case of the University of Ghana medical School, using a mixed method approach.

In brief, the results showed that medical students had a significant intention to emigrate. This decision was highly related to positive feedback from contacts in receiving countries. The respondents who had intention to emigrate were mainly in their youth (24-30 years). The most preferred destination countries were USA, UK and Germany.

Intention to pursue further studies was a significant deciding factor to emigrate. Particularly students preferred to study abroad to escape the stress in medical school and also gain exposure to advance ways of practicing medicine.

Certain push, pull and intervening factors influenced intentions to emigrate. These factors include poor economic conditions, wage differentials, poor quality of life and poor working conditions. Poor economic conditions such as inflation had an impact on the remuneration of doctors as it reduced the value of their incomes. Wage differentials of doctors comparing developing and developed countries served as a demotivating factor and increased intention to emigrate. Most students desired the high quality of life abroad compared to the poor quality of life in their recipient countries. Conditions of service further served as a push factor as it made the work of the doctor difficult.

Finally the results highlighted on some incentives such as increase in salaries and hire purchase vehicles put in place by GHS to motivate doctors to stay in the country. The strategies seemed promising, however, inadequate resources limited the implementation. Doctors working in less resourced facilities benefited less from these incentives because implementation was done at facility level. Another challenge highlighted was the repayment of hire purchase vehicles. The payment was deducted at source at the Controller and Account General's Department as such when doctors do not receive their salaries due to unforeseen circumstance like death, repayment became a problem. Finally inadequate information on the movement of doctors limited the implementation of retention strategies.

5.2 Recommendations

As pointed out by the students, the stress in medical school, the high cost of living as a student and huge school fees all form a component of factors that contribute to the formation of their intention to migrate. A total restructure of the training plan of medical students with the view of retention in mind will facilitate retention of a greater number of students. It is essential to learn from the experiences of developed countries by putting in a mechanism where students can work part time to subsidize their cost of living on campus and their school fees to reduce the financial burden on students and their sponsors.

The study demonstrated statistically that about 70% of the population has an intention to migrate after their study and the most preferred destination was USA, UK, and Germany. Ghana can liaise with developed worlds especially countries where trained physicians from Ghana currently work to source sponsorship to develop modern technology at the medical school to make teaching and learning easier, thereby giving students some exposure to advanced technologies in the medical field. In addition, exchange programs can be encouraged in conjunction with rural volunteering programs that will give students international exposure at the same time instill in students the spirit of patriotism.

The study brought out the desire of a greater number (95%) of medical students to pursue further studies after their program. The research work further highlighted the fact that some fields of specialty were not available or not fully developed in the country. Some of these specialty areas include; Neurosurgery, Cardiology, and Geriatrics Oncology. As part of the policies to effectively retain trained doctors, policy can be directed towards developing some of these specialty areas and putting more incentives to attract some specialist doctors especially nationals who are practitioners outside the country to return to help in developing them in Ghana. An arrangement can also be

considered where specialists from outside the country come in from time to time to offer training for students who have desire in such areas. Alternatively, sponsorship programs can be given to students who have interest in some of these areas to go outside the country to train and return to practise and also train others in their field of specialty. These students should be bonded taking consideration of the economic conditions of the country such that the penalty of breaching the bond is still effective to serve as an incentive to return.

Condition of service, was highlighted as a key factor influencing migration. It seems practical for other sectors in the country aside the health sector and other stake holders in health to come together to make the working conditions of doctors more attractive. The provision of good roads for instance by the Ministry of Transportation and Road, and portable water by Ghana Water Company as a collaborative role in many deprived districts will attract more doctors to such districts and consequently improve upon retention.

More efforts may be directed towards stabilizing of the economy to make the incentive of increased salaries effective. Disparities in salaries of health professionals may be given attention so as to prevent demotivation of other workers in the health sector. Additionally, due to inadequate resources Ghana can consider training of more physician assistants or prescribers whose certification are not international recognized thus limiting their propensity to migrate and who would also accept posting to deprived areas where services of doctors are needed most.

Information is on the migration of doctors is important for research purposes and subsequently for policy formulation. Thus as a step to improve the record keeping system through health information system in Ghana may seem useful to effectively capture data on movement of doctors.

5.3 Conclusion

Migration of doctors is a challenge that has emerged due to globalization and efforts need to be put in place to make the most of it. According to IOM (2009), ‘‘the question is no longer whether to have migration, but rather how to manage migration effectively so as to enhance its positive effects and reduce its negative impacts’’ (IOM, 2009). For health managers to feel empowered to take steps to reduce uncontrolled turnover, and in particular turnover due to emigration, it is important to understand why people make a decision to cross borders. This study has revealed some of the push and pull factors that influence migration intention so as to improve retention of medical students after the completion of their studies. Careful analysis of the causes of emigration will prevent a waste of time and scarce resources in trying out interventions with minimal chance for success. This study has demonstrated this assertion and re-emphasized the need to manage migration to the benefit of all, both sending and recipient countries.

5.4 Limitations of the Study

This study, although put together by drawing knowledge from many scholars is not without limitations. The purposive selection of students from only University of Ghana Medical School limits the study as finding cannot be generalized to all medical schools in Ghana. There may also be the need to research into details career preferences of medical students and the relationship it has on migration.

5.5 Suggestions for Future Research

The study was focused on the migration intentions of medical students and factors that influence intentions. Migration of health professional is a growing global phenomenon with implications for the health of people of every country. The study could not exhaust all the issues on migration as

far as medical students is concerned. There is a need for a more primary research employing different methodologies to explore into the characteristics, causes and consequences of movement of medical students in other medical schools in the country.

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APPENDICES

Appendix I: Survey Questionnaire (January, 2014)

MIGRATION INTENTIONS OF FINAL YEAR STUDENTS IN UNIVERSITY OF GHANA MEDICAL SCHOOL

My name is Roselyn Koffie and I am a final year student in University of Ghana Business School reading Master of Philosophy in Health Services Management. As part of the requirement for the award of the degree, I am conducting a research on the migration intentions of medical students using the University of Ghana Medical School as a case study.

As a final year medical student, I invite you to kindly take part in a short survey exercise by answering the attached questionnaire.

Your participation in this study will not affect you in any way as the study is solely for research purposes. The answers you provide will be stored securely and confidentiality will be maintained at all times. I am very grateful for making time to participate.

Signature of the Enumerator: _____ Date: _____

No	SECTION A: RESPONDENT CHARACTERISTICS *Give details on the following socio-economic characteristics. Use codes*	CODE
1	Age of Student : [ ]	
2	Gender: 1=male 2=female	
3	Marital status: 1=married; 2=divorced; 3=single; 4=widow/widower; 5=separated; 6=cohabiting	
4	Do you have children: 1=yes 2=no	
5	Ethnic: 1=Akan 2=Ewe 3=Ga Adangbe 4= Northern 5=Fanti	

No	SECTION B: MIGRATION INTENTIONS *Give details on the following intention characteristics. Use codes*	CODE
1	Do you have plans to emigrate outside the country after graduation: 1=yes 2=no	
2	Which country do you have in mind: 1=UK 2=USA 3=Germany 4=Norway 5=Cuba 6=India 7=Other, specify [ ]	
3	If yes, within how many years after graduation: 1= less than or a yr 2= within 2 yrs 3=within 3-5 yrs 5=above 5 yrs	
4	Steps taken towards plans to emigrate: 1=enrolling in intensive language course 2=browsing employment advertisements abroad 3=establishing contacts with other migrants 4=already spent time abroad (eg completing internship) 5=consulting recruiters 6=registered or taken international entrance examinations	

5	Do you have plans of specializing after graduation: 1=yes 2=No	
6	Aspect of medicine you would like to specialize: [ ]	
7	Which country is your target for further studies: : 1=Ghana 2=UK 3=USA 4=Germany 5=Norway 6=Cuba 7=India 8=Other, specify [	
8	What is the probability of returning after emigrating: 1=long term or permanent emigration 2= after 10 yrs 3= after 5 yrs 4= 3-5 yrs 5=2-3yrs 6=less than 2yrs	
9a	Do you have the desire to work in the hospital setting after graduation: 1=yes 2=No	
9b	If no, specify which setting you would like to work: [ ]	
10	Which kind of practise would you like to go into: 1=public practise 2=private practise	

No	**SECTION C: PUSH FACTORS AND MIGRATION DECISION** *To what extent will the following Push factor characteristics influence your decision to emigrate. Use codes* : 1=very likely 2=likely 3=moderately likely 4=somewhat likely 5=unlikely	**CODE**
1	Working conditions in the public sector	
2	Inadequate medicine suppliers and equipments	
3	Heavy workloads for doctors	
4	Risk of occupational exposure (eg TB, HIV)	
5	Crime and violence	

6	Low salaries	
7	Political instability in Ghana	
8	Deterioration of quality education	
9	Poor quality of life	
10	Poor economic conditions	
11	Working conditions in private sector	
12	Lack of opportunities for career advancement	
13	Cost of living in Ghana	
14	I would not find a job in Ghana	

No	**SECTION C: PULL FACTORS AND MIGRATION DECISION** *To what extent will the following Pull factor characteristics influence your decision to emigrate. Use codes* : 1=very likely 2=likely 3=moderately likely 4=somewhat likely 5=unlikely	**CODE**
1	High salaries in destination country	
2	Quality and variety of speciality training offered	
3	Prospects for professionals' advancement	
4	Greater personal safety abroad	

5	Availability of good jobs abroad	
6	Potential to earn more money abroad to put towards a private practise in Ghana	
7	The quality of life abroad	
8	The standard of living abroad	
9	The economic situation of destination country	
10	Better opportunities for family abroad	
11	Stability of the national government in destination country	
12	Transferability of qualification	
13	Ability to repay study loan or other financial commitments sooner	
14	Similarities in health care training between Ghana and destination country	
15	Opportunity for research	
16	Positive feedback from others who have practised abroad	

No	SECTION C: INTERVENING OBSTACLES AND MIGRATION DECISION *To what extent will the following perceived barrier prevent your decision to emigrate. Use codes* : 1=very likely 2=likely 3=moderately likely 4=somewhat likely 5=unlikely	CODE
1	Associated cost	
2	Obligatory work commitments after community service	
3	Adjusting to working conditions within healthcare system	
4	Certification	
5	Government policies in Ghana	
6	Government policies in destination country (eg work permit)	
7	Adjusting to culture in destination country	
8	Qualifying for visas	
9	Language differences	
10	Adjusting to climatic conditions in destination country	

Appendix II: Interview Guide For Final Year Medical Students

1. Intention to emigrate
2. Most preferred country of destination
3. Push factors
4. Pull factors
5. Specialization (role of college of physicians and surgeons)
6. Number of years to stay in Ghana after graduation before emigrating
7. Return migration
8. Migration and inhibition factors to migration
9. Suggestion to remedial migration situation

Appendix III: Interview Guide for Ghana Health Service

1. Migration situation from the past and currently
2. Migration and the most preferred destinations
3. Specialization (role of college of physicians and surgeons)
4. Collaborations of Ghana Health Service with other organizations and countries to minimize emigration
5. Retention strategies of Ghana Health Service
6. Stakeholders involved in the process and roles
7. Migration retention strategies and successes
8. Migration and implementation challenges
9. Suggestions to remedial the migration challenge of doctors