Key Determinants of Migration among Health Professionals in Ghana

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1. INTRODUCTION

The emigration of highly skilled labour is often seen as the operation of labour market redistribution responding to market disequilibrium between demand and supply. What is known as the economic theory of maximization postulates that demand and supply of labour are always in equilibrium in a classic competitive framework, whereby real wages are allowed to fluctuate to maintain that equilibrium; following this logic, real wages are considered to be the prime determinant of labour migration. Thus, labour migration is a direct response to real wage differences and the volume of migration is positively related to wage differentials (Greenwood, 1975). The loss of skilled professionals from the health sector has been a major challenge to many sub-Saharan African countries, including Ghana. Migration out of Ghana has become an integral part of the survival strategy of many households in Ghana. Such migration has wide-ranging economic, social and cultural dimensions for Ghanaians, and the increasing exodus of health personnel is taking place at an alarming rate.

Stilwell (2003) reports that the annual registrations in the UK of doctors from Ghana, South Africa and Zimbabwe represent around 1.1 per cent, 2.0 per cent, and 0.7 per cent respectively of the total number of doctors registering in the UK. A similar pattern is reported for nurses; the number of nurses from Ghana, South Africa and Zimbabwe registering annually in the UK as a proportion of the total number of nurses registering in the UK represent 1 per cent, 0.6 per cent and 2.6 per cent respectively. DFID (2004) reports that the number of nurses entering the UK register from Ghana has increased year on year in recent years. Health worker emigration from Ghana mostly involves two types of professionals in the health sector: doctors and nurses. Whereas doctors find it easier to migrate to the USA, nurses find it more convenient to migrate to the UK because of the ease with which they are taken on by the health system. The choice of destination depends on the recruitment process and more particularly the ease of registration with the country's professional bodies. The choice of countries is evidenced in the number of professionals seeking verification from the Ghana Medical and Dental Council (see Table 1).

Table 1: Ghanaian Nurses Verification – Country Verified for and Year

Country of Destination	Year of Seeking Verification							
	1998	**1999**	**2000**	**2001**	**2002**	**2003**	**Total**	**%**
USA	50	42	44	129	81	80	**426**	**13.8**
UK	97	265	646	738	405	317	**2468**	**80.0**
Canada	12	13	26	46	33	10	**140**	**4.5**
S. Africa	9	4	3	2	6	-	**24**	**0.8**
Others	4	4	8	8	5	-	**29**	**0.9**
TOTAL	**172**	**328**	**727**	**923**	**530**	**407**	**3,087**	**100.0**

Source: Ghana National Medical Council (cited in DFID 2004); 2003 is until May only

The migration of nurses and doctors from Ghana is a worrying trend, in particular in terms of its consequences for the provision of health services to and for the well-being of many Ghanaians, including children. For instance, the 2003 Ghana Demographic and Health Survey revealed that infant mortality and under-five mortality worsened between 1998 and 2003, a period characterized by a rapid increase in the emigration of health professionals from the country. It is worth

mentioning that, although the number of nurses verified has declined continuously since 2001 as a result of a new code issued by the UK government in 2001, which requires the National Health Service (NHS) employers to not actively recruit from developing countries unless there is a government-to-government agreement, the number of nurses verified since the introduction of the code still far exceeds the 1998 levels. Most of these nurses are recruited both by private nursing homes and by some NHS Trusts, which demonstrates that the code has not adequately addressed the human resource gap caused by nurses migrating from Ghana.

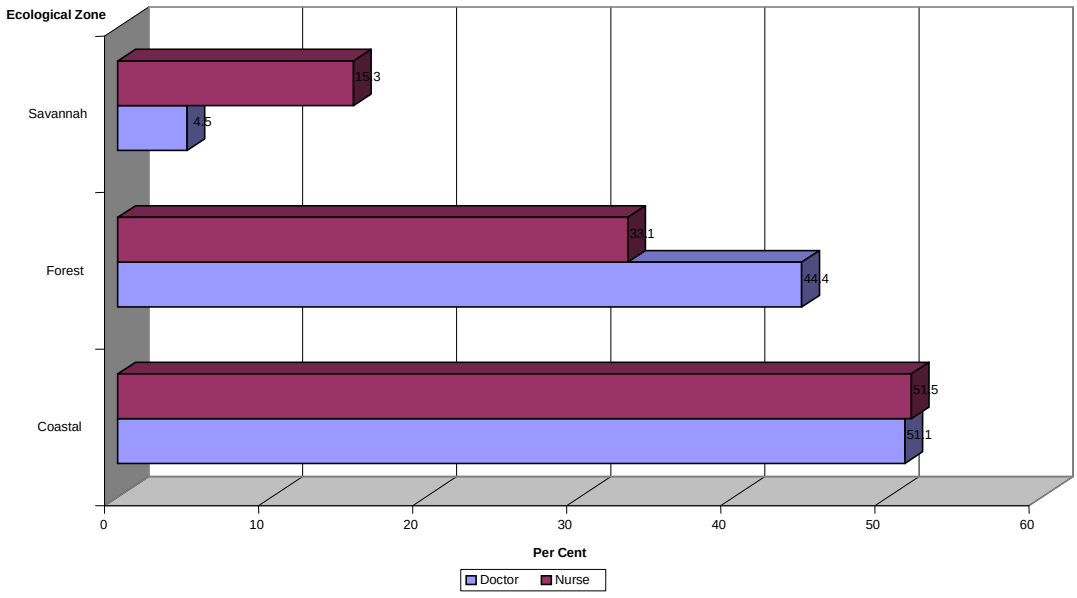
To make matters worse Ghana, like many developing countries, lacks adequate resources to motivate and retain its health workers (Sanders et al, 2003). The demand for nurses and doctors needed to meet the health care requirements is rising in both advanced and poor countries. It is doubtful that most of the sub-Saharan African countries are able to meet their own health care needs in terms of personnel, as well as those generated in Europe and America. The healthcare system in many sub-Saharan African countries, including Ghana, is in serious crisis as a result of the loss of key medical personnel. This calls for pragmatic policies to reverse the trend in developing countries. The choice of policy to address the emigration of health personnel will critically depend on which key factors are understood to be responsible for the exodus of these health professionals. The focus of this study is to assess the level of migration expectation among health care professionals and to determine some of the factors which have pushed - and are likely to continue to push - them to seek employment outside Ghana. Specifically, the study has sought to answer the following questions: What is the future outlook of the emigration of Ghanaian health professionals? Is it likely to grow or decline? What are the causes behind the emigration of healthcare professionals? On a personal level, why do these doctors and nurses leave Ghana? Does this express dissatisfaction with the situation in the home country, or the will to pursue aspirations or opportunities abroad? What are the consequences of the emigration of health professionals on training and other labour-related issues for the Ghanaian health sector? What has been done in the past to curb the situation and what are the policy options available now? What could be done more generally to minimize the risks and maximize the benefits involved, if any? These questions delineate the line of enquiry followed in this paper. The rest of the report is organized as follows: section two discusses the research methodology and is followed by a third section analyzing the survey data. Section four presents the conclusions of the study.

2. RESEARCH METHODOLOGY

The study was designed to provide a national overview of the emigration expectations of healthcare professionals currently working in Ghana. Given the limited resources available, only leading public healthcare facilities in the three ecological zones (coastal, forest and savannah) in Ghana were selected for the survey. In addition, some doctors and nurses working in private healthcare facilities in the selected localities were included to facilitate comparison. The healthcare facilities selected in the coastal zone included the University of Ghana Hospital (Legon), Narh Bita Hospital (Tema), Korle-Bu Teaching Hospital (KTH) and Pantang Psychiatric Hospital (Accra). In the forest zone, the Komfo Anokye Teaching Hospital (KATH), the Kwame Nkrumah University of Science and Technology (KNUST) Hospital in Kumasi and St Patrick Hospital (Offinso) were selected. In the Savanna zone, the survey was carried out at the Tamale Regional Hospital. Pro-Narh Bita Hospital (Tema) and St Patrick Hospital (Offinso) were the two private healthcare institutions which were included in the survey. It is worthy of note that the Korle-Bu Teaching Hospital (KTH) and Komfo Anokye Teaching Hospital (KATH) operate as referral hospitals for southern and northern Ghana respectively.

The aim of the study was to reach a total sample of 180 healthcare workers, comprising 120 nurses and 60 doctors. In view of this, the study targeted over 50 per cent of all respondents in the coastal zone, 36 per cent from the forest zone and 12 per cent from the Savannah zone. The allocation was done proportional to the size of doctor and nurse populations in the various healthcare facilities. Figure 1 presents the allocation of respondents by study area and institution.

Figure 1: Distribution of Nurses and Doctors on the Basis of Ecological Zone



The main survey instrument used to collect data was a questionnaire and, in view of the time constraints on the part of the respondents, the questionnaires were self-administered. In each of the selected facilities, assistance was sought from the hospital administrator or matron in charge to facilitate the distribution and subsequent collection of the completed questionnaires. In order to

ensure a 100 per cent response rate for both categories of respondents, more questionnaires were given out than were needed to meet the target number of respondents. Notwithstanding this strategy the survey failed to meet the target as only 90 per cent coverage rate was achieved. Comparatively, a better coverage rate was attained with nurses (98%) than with doctors (75%). In-depth interviews were also conducted with the officials of the selected facilities and institutions in order to gain further insights into some of the issues under investigation.

3. FINDINGS

Descriptive Statistics

The majority of respondents were nurses; 70 per cent of the respondents were nurses, doctors formed only 27.6 per cent. The sample comprised more women (67%) relative to men (33%). This is explained by the fact that nurses formed the majority of the respondents and that the nursing profession in Ghana is dominated by women. Table 2 presents the gender distribution of the respondents by profession.

Table 2: Distribution of Respondents According to Gender and Profession

Gender	Nurses	Doctors	Total
Men	19 (16.1%)	35 (77.8%)	54 (33.1%)
Women	99 (83.9%)	10 (22.2)	109 (66.9%)
Total	**118 (100%)**	**45 (100%)**	**163 (100%)**

Source: Survey Data, 2005.

In terms of regional distribution, Greater Accra provided for the majority of respondents (52%) as compared to the Ashanti (36%) and Northern (12%) regions. About 16 per cent of all respondents in the sample were working in private healthcare facilities relative to 84 per cent who were employed in public healthcare facilities. Categorizing by profession, 86 per cent of the nurses worked in public facilities compared with 14 per cent in private facilities. In the case of doctors, a fifth of them were working in private healthcare facilities. In terms of ecological zones, all the nurses and doctors interviewed in the Savannah zone were working in public healthcare facilities.

The ages of the respondents ranged from under 21 up to 78 years old (Table 3). The minimum age of doctors and nurses was 25 and 21 respectively. About 75 per cent of the sample was aged between 30 and 59 years, as compared to 21 per cent who were under 30 years old (see Table 3). The respondents who were over 60 years old, and therefore could be described as retirees working on contract, constituted only 4 per cent of the sample. This implies that most of the respondents were not due for retirement soon, which in turn suggests that the stock of healthcare professionals is not due to drop soon and is prima facie favourable to the sustained provision of healthcare services to Ghanaians. This is nonetheless conditional on these professionals remaining in the country and continuing to work in the health sector.

Table 3: Age Distribution of Nurses and Doctors

Age (Years)	Doctors	Nurses	Total	
Under 30	10	23	33	21.3%
30 – 45	26	45	71	45.8%
46 – 60	5	40	45	29.1%
Over 60	4	2	6	3.8%
Total	45	110	155	100.0

Source: Survey Data, 2005.

It is however interesting to note that the geographical distribution of respondents indicates that 46 per cent were born in only two regions - Greater Accra (24%) and Ashanti (22%). Although the Northern Region was selected as one of the study areas, only 7 per cent of the doctors and nurses interviewed were born in that region. Thus, the remaining 47 per cent of the medical doctors interviewed were born in one of the other seven regions. The place of birth of health workers is thus not evenly distributed regionally.

In terms of marital status, a clear majority (72%) were married as opposed to 20 per cent who had never been married. The remaining eight per cent were separated, divorced or widowed. The number of children per respondent ranged from one to five. The average number of children per respondent was 2 and only 13 per cent had more than two children. Further analysis revealed that there was no difference between the doctors and nurses in terms of family size.

Acquaintances

With regard to their family background, only 94 (80%) out of the 117 respondents who were married indicated the occupation of their spouses. Almost 70 per cent of them stated that their spouses were professionals, relative to 15 per cent and 9 per cent who indicated trade and religious leadership respectively as their spouses' occupations. Only one doctor and one nurse indicated that their spouses were unemployed.

Educational Background

The educational qualifications with which the respondents took up their profession in the healthcare system are shown in Table 4.

Table 4: Distribution of Entry Educational Qualifications of Nurses and Doctors

Entry Qualification	Nurse	Doctor	Total	
BECE[1]/MSLC[2]	8	-	**8**	**4.9%**
GCE[3]/SSSCE[4]	12	-	**12**	**7.4%**
Certificate*	56	-	**56**	**34.4%**
Diploma*	26	-	**26**	**16.0%**
Degree (Nursing)	6	-	**6**	**3.7%**
Postgraduate	2	21	**23**	**14.1%**
Mb[5] ChB[6]	-	24	**24**	**14.6%**
Other	8	-	**8**	**4.9%**
Total	**118**	**45**	**163**	**100.0%**

*nursing /midwifery

[1] BECE - Basic Education Certificate Examination
[2] MSLC – Middle School Leaving Certificate
[3] GCE - General Certificate of Education
[4] SSSCE – Senior Secondary School Certificate Examination
[5] Mb – Bachelor of Medicine
[6] ChB – Bachelor of Surgery

It is interesting to note that 17 per cent of the selected nurses entered the health service without any professional qualification. This suggests that entry into the nursing profession is relatively flexible compared to doctors. Surprisingly, all those who entered the service without any professional qualification were working in public healthcare facilities. However, the situation has changed with the introduction of `community health in Ghana. Analysis of the period in which respondents obtained their qualification shows that it ranges from 1954 to 2005. Approximately half the respondents stated that their current position was their first job placement in the medical field. Conversely, a total of 75 respondents indicated that their current position was not their first job placement in healthcare delivery (see Table 5). These included public (92%) and private (3%) healthcare institutions in Ghana. The remaining five per cent of the respondents who stated that they had previously worked for healthcare institutions outside Ghana were nurses.

Table 5: Distribution of Previous Placement in the Health Service among Doctors/Nurses

Profession	**Public Healthcare Facilities**	**Private Healthcare Facilities**	**Healthcare Facilities outside Ghana**	Total
Nurse	50	1	4	55
Doctor	19	1	-	20
Total	**69**	**2**	**4**	**75**

Source: Survey Data, 2005.

Box 1: Ghana's Healthcare System

Ghana's healthcare system comprises both private and public sector facilities. These include clinics, health centres, district hospitals, regional hospitals and referral hospitals. Currently, there are two tertiary institutions (referral hospitals) - namely the Korle-Bu Teaching Hospital (KTH) and Komfo Anokye Teaching Hospital (KATH) - strategically located in southern and central Ghana respectively.

In terms of rural and urban distribution, more facilities are located in urban areas to the detriment of the rural population. However, there are clinics and maternity homes in some rural communities which cater for the health needs of the local populations. Even across urban areas, there is an over-concentration of facilities in Accra, Tema and Kumasi. Residents of rural areas though have relatively poor geographical access to health care. In terms of logistics and equipment, healthcare facilities in rural areas are poorly resourced. As a result, many inhabitants of rural areas facing health problems have to be referred to health facilities in urban areas.

With respect to healthcare personnel, only a small proportion of skilled professionals are in rural areas. Thus, the skilled personnel remaining in the country are distributed in a way which disadvantages the rural population (Ministry of Health, 2006). This is because many health workers in Ghana refuse to be work in rural areas. Among other factors, this situation results from rural communities being deprived as a result of the uneven distribution of infrastructural facilities. For instance, a 2002 DFID-funded study of factors influencing the retention of health workers in deprived areas showed that the following were the most important: staff accommodation, water and sanitation, electricity, access to good schools and qualified teachers at the basic level of education,

transport to work, road access (good transport links to and from the district town), availability of working materials and equipment (Buchan and Dovlo 2004).

Box 2: Initiatives to incentivise healthcare professionals to work in deprived areas.

In some areas, there is no doctor to manage the district hospital. It follows from the statement above that the doctor- and nurse-population ratios are relatively low in rural areas, which means that the number of patients to one doctor and/or nurse is high in rural areas.

In order to address these problems, the Ministry of Health and the Ghanaian Health Service have instituted a number of measures in an attempt to retain health professionals in these areas. One of these measures is the allocation of Highly Indebted Poor Country (HIPC) funds for the payment of a Deprived Area Incentive Allowance (DAIA) which provides an extra allowance of 20-35 per cent of basic gross salary to health professionals and technical staff working in 55 districts that have been designated as "deprived". The funds are channelled through the respective District Assemblies (GHS, 2003).

Aspiration

An analysis of when current health professionals formulated their aspirations to join the medical profession revealed that 80 per cent of all respondents had developed an interest before they had even started secondary education. Whereas 18 per cent of them indicated that they had developed their aspirations as they climbed the educational ladder, two per cent of the respondents did not provide an answer. Of the respondents who developed their aspirations during their education, 34.7 per cent of them indicated that this occurred when they were in secondary school compared with 65.3 per cent for whom this interest only came about after completion of their secondary education. There were no significant variations between respondents who had aspirations to join the healthcare service in terms of profession. Their reasons for wanting to work in the healthcare sector were varied[7]: almost 50 per cent stated that they wanted to help save lives, whilst 26 per cent indicated interest in the profession itself. Interestingly, five per cent indicated the prestige attached to the profession as the reason they chose it. Finally, four per cent of the respondents indicated 'love for the nation' as their reason, and three per cent mentioned financial motives (figure 2).

[7] This was an open-ended question.

Figure 2: Comparison of Reasons for Joining Nursing Profession by Sex

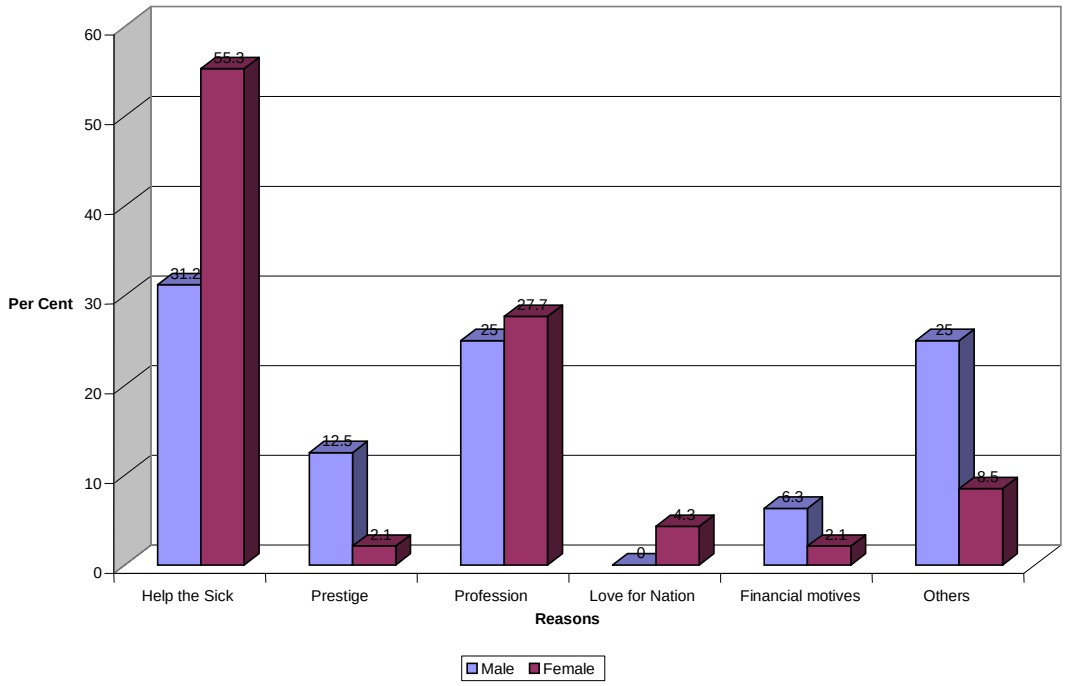


Figure 2 shows the distribution of the reasons for becoming a nurse according to gender. There are more females than males in the nursing profession because of their desire to help the sick. However, more males joined nursing profession because for prestige and financial motives.

Figure 3: Comparison of Reasons for Joining the Healthcare sector by Gender

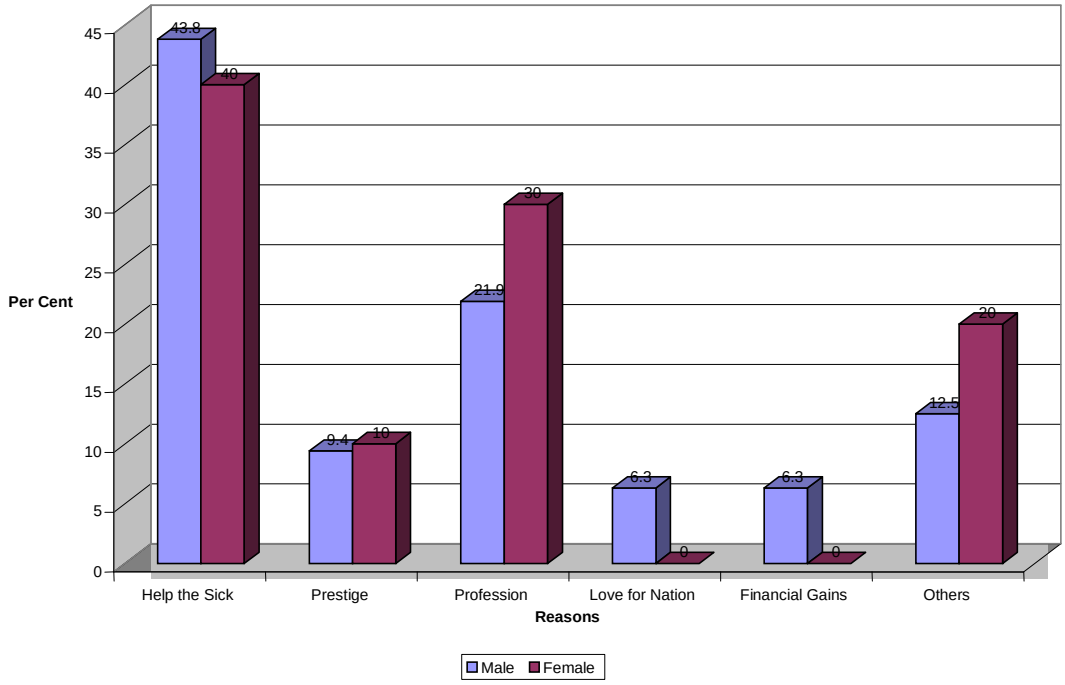


Figure 3 compares the reasons for joining the medical sector by gender of a total of 97 respondents. Whereas a higher proportion of the male doctors joined the medical profession to assist the sick, more females joined because of the profession. Surprisingly, only male doctors cited patriotism and financial motives as reasons for choosing to join the medical profession.

Analysis of the reasons and circumstances which motivated them to choose a profession in the healthcare sector does not lend support to the view that people join in order to seek greener pastures abroad. For instance, joining the healthcare sector for financial motives accounted for less than 10 per cent of the reasons mentioned (Table 6).

Table 6: Distribution of Nurses and Doctors by Circumstances which Made them Join the Healthcare Sector (%)

Circumstance	Nurses	Doctors	Total
Love for nation	28.4	62.5	34.0
Predicament of the sick	34.6	12.5	30.9
Influence from friends/relations	9.9	6.2	9.3
Financial difficulties	8.6	-	7.2
Prestige of profession	6.2	-	5.2
Need to improve health system	1.2	6.2	2.1
Others	11.1	12.5	11.3
n	**81**	**16**	**97**

Source: Study into the Emigration Expectations of Ghanaian Health Professionals, 2005.

Level of Satisfaction

The respondents were asked about their level of satisfaction with their current job. The majority of them (64%) stated that they were 'very satisfied' or 'satisfied' with their current job relative to 32 per cent who indicated that they were 'not satisfied'. Four per cent did not indicate their level of satisfaction with their current job. Even though the majority of them indicated satisfaction with their current job, a lot needs to be done since almost a third of them expressed dissatisfaction. This, coupled with the high attrition rate of health professionals, calls for measures to stem the tide.

On whether they think their current job provides opportunities for them to acquire new skills, about 80 per cent agreed. Whilst 16 per cent of them denied that there were any opportunities for upgrading their skills, four per cent did not comment on the issue. Comparison of the views of nurses and doctors revealed that more nurses (12.3%) agreed that their jobs provided opportunities for upgrading than did doctors (6.7%). In addition, 13.3 per cent of the female respondents stated that they did not have any opportunities for upgrading their skills relative to 7.7 per cent of male doctors. It was found that 24 per cent of private health sector employees (nurses and doctors) lacked opportunity for skills upgrading as compared to 16 per cent of those in the public sector.

Similarly, over 80 per cent of them accepted the view that there were opportunities to rise in rank. However, 11 per cent of the respondents did not agree with this assertion. Further analysis revealed that 22.4 per cent of the male practitioners indicated that they lacked opportunities to rise

in rank compared to less than one per cent of females. A total of 21 per cent of the doctors indicated that they did not have any opportunity to rise in rank as compared to 8.3 per cent of nurses. The remaining 9 per cent did not indicate whether there were any opportunities for them to rise in rank. A total of 18.2 per cent of the nurses and doctors in the private sector complained about the lack of opportunities to rise in rank relative to 11 per cent in public healthcare facilities.

On their relationship with superiors, an overwhelming majority (90%) stated that they had either a very good or satisfactory working relationship with their superiors. Only three per cent said that they were not in good terms with their superiors. In addition, the majority of the respondents (52%) reported that the morale of staff at their healthcare facilities was 'quite good' and 22 per cent indicated it was 'high'. On the other hand, 22 per cent of them stated that staff morale was 'low'; two per cent of them stated that they were 'not sure' and three per cent did not comment on the issue. With regard to the proportion of respondents who indicated poor staff morale, there were no notable differences between nurse and doctors, males and females or health workers in public and private sector. In terms of gender, the proportion of males (4%) who mentioned poor staff morale was higher than females (3%). Similarly, the proportion of nurses who reported poor staff morale was four per cent relative to two per cent for doctors. Interestingly, all those who mentioned low staff morale were working in public health care facilities. This finding confirms the general perception that morale among public sector healthcare workers was lower than those in the private sector.

Working Hours

It was reported that the total weekly working hours of the respondents in the selected healthcare facilities ranged from 8 to over 85 hours. A total of 87.7 per cent of the respondents declared their weekly working hours. Figure 4 compares the weekly working hours of the doctors in public and private healthcare facilities. In Ghana, the Labour Law (Act 561 of 2003) stipulates a total of 40 hours per week (eight hours per day, five days per week) as the normal working time. Figure 4 shows that more doctors in private healthcare facilities spend longer time at work than their colleagues in the public sector. In both private and public facilities, over 70 per cent of them stated that they work overtime. At least half the doctors in public healthcare facilities spent more than the stipulated weekly working hours. This situation provides justification for the introduction of Additional Duty Hours Allowance (ADHA) by the Ministry of Health.

Figure 4: Comparison of the Weekly Working Hours of Doctors in Public and Private Healthcare Facilities

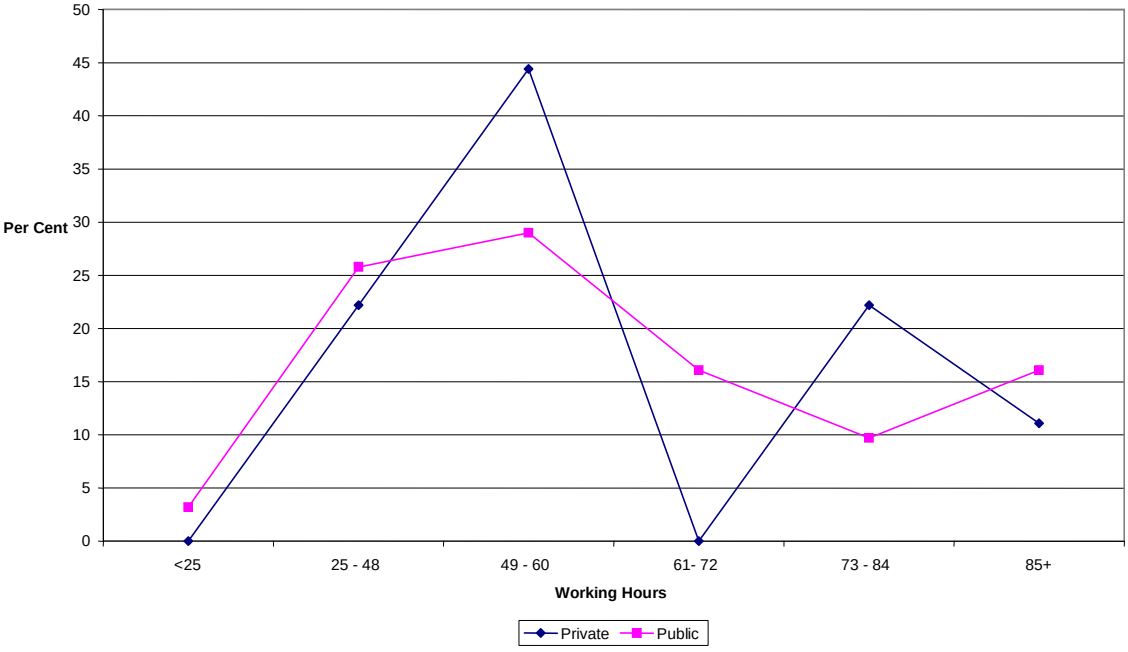
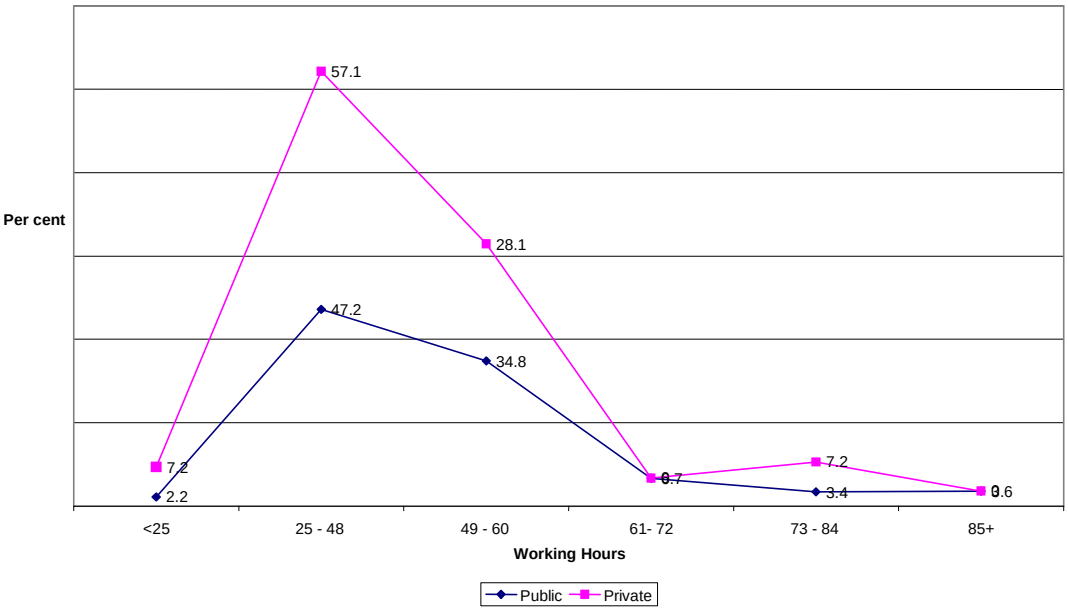


Figure 5 compares the weekly working hours of nurses in public and private healthcare facilities. Whilst only 40 per cent of the nurses in private healthcare facilities worked extra hours, over 50 per cent of their colleagues in public facilities spent more than 40 hours per week.

Figure 5: Comparison of the Weekly Working Hours of the Nurses in Public and Private Healthcare Facilities



Almost 60 per cent of them (both doctors and nurses) indicated that they were allowed to work overtime as compared to 35 per cent who stated that they were not allowed. The remaining five per cent of them did not indicate their response. In terms of the type of facility, there was no meaningful variation in the proportion of staff allowed to work overtime in the public sector (58%) and privates (59%) facilities for both nurses and doctors. However, it was revealed that 73 per cent of the doctors were allowed to work overtime compared to 59 per cent of the nurses interviewed. Eleven out of 96 respondents who indicated that they were allowed to work overtime also undertake additional part-time duties in different facilities. That group was made up of three doctors and 8 nurses, and the time they spent on extra part-time work ranged from six to 84 hours per week.

The overall average part-time working hours were 34.2 hours per week. It was found that doctors worked between 6 and 36 hours on part-time duties. On the other hand, nurses spent 6 to 84 hours per week on their part-time work. The part-time working hours include their extra duty hours at the location where they are fully employed, as doctors or nurses, and their work at other facilities (private or public). Whereas the mean hours spent on part-time work by doctors was 16.3, the mean for the nurses was 42.0. The mean hours spent on normal workplace and part-time give credence to the increased workload on health workers in Ghana.

On average, respondents earned between ¢475,000 to over ¢3 million with a mean of ¢2,793,400 per month. Comparison of the public and private sector earnings revealed that only 4 respondents from the former earned more than the average gross income as opposed to 14 in the latter. Figure 6 compares the monthly incomes of nurses in public and private health facilities. Similarly, Figures 6 and 7 respectively compare the monthly incomes of nurses and doctors in public health facilities to their counterparts in the private sector.

Figure 6: Comparison of the Monthly Incomes of Nurses in the Public and Private Sector

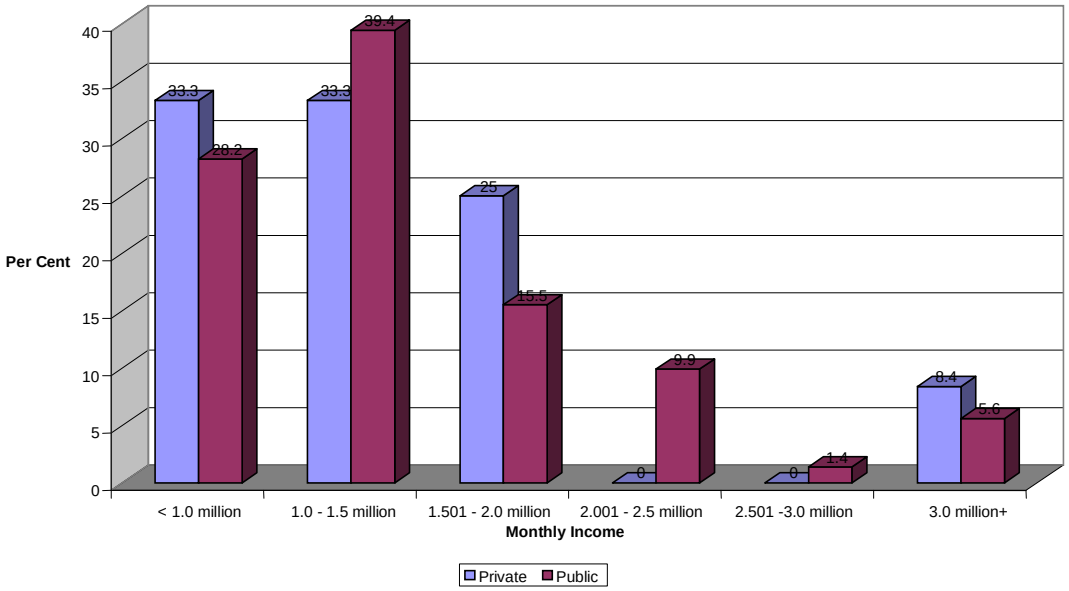
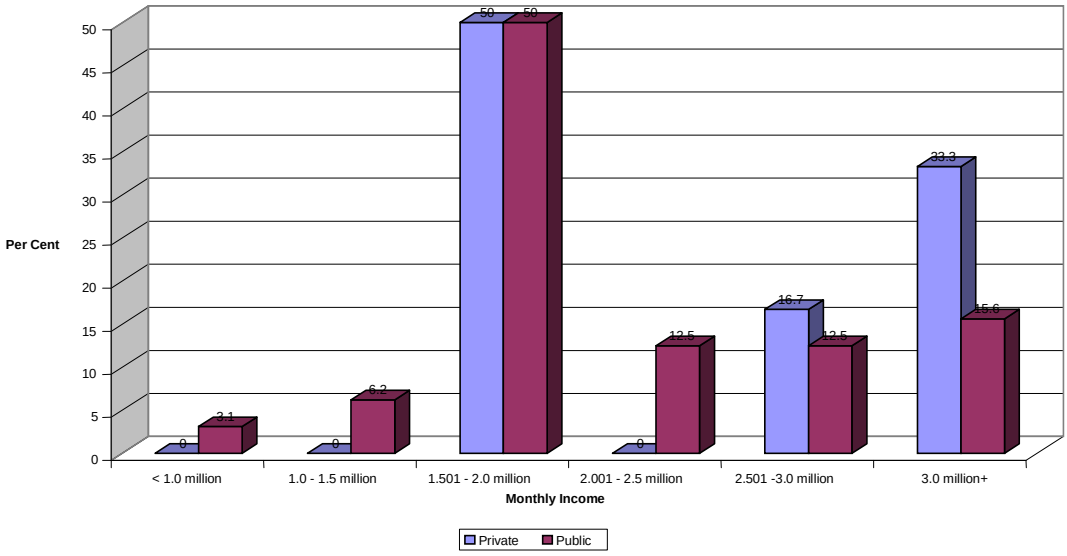


Figure 7: Comparison of Monthly Incomes of Doctors in the Public and Private Sector



A total of 61 out of 96 respondents (63.5%) who indicated that they were allowed to do overtime within their facilities declared their average monthly earnings. The amount ranged from 200,000 to 7 million cedis. Almost two-thirds (67%) of the selected nurses earned less than one million cedis relative to just 5.6 per cent of the doctors. On the other hand, part-time income ranged from six hundred thousand (¢600,000.00) to ten million cedis (¢10,000,000.00) per month (see Table 7). In the case of doctors, their part-time earnings ranged from one to 10 million cedis per month with an average of about 4.8 million Cedis. With regard to the nurses, the earnings were between 600,000 and 2.9 million Cedis with an average income of over 1.3 million Cedis

Table 7: Distribution of Income of Doctors and Nurses

Amount	Doctor	Nurse	Total
Below 1 million	1	29	**30 (49.2%)**
1,001,000 – 1,500,000	1	6	**7 (11.5%)**
1,501,000 – 2,000,000	3	6	**9 (14.8%)**
2,001,000 – 2,500,000	1	1	**2 (3.3%)**
2,501,000 – 3,000,000	4	-	**4 (6.6%)**
3,001,000 – 3,500,000	1	-	**1 (1.6%)**
3,501,000 +	7	1	**8 (13.1%)**
Total	**18**	**43**	**61 (100.0%)**

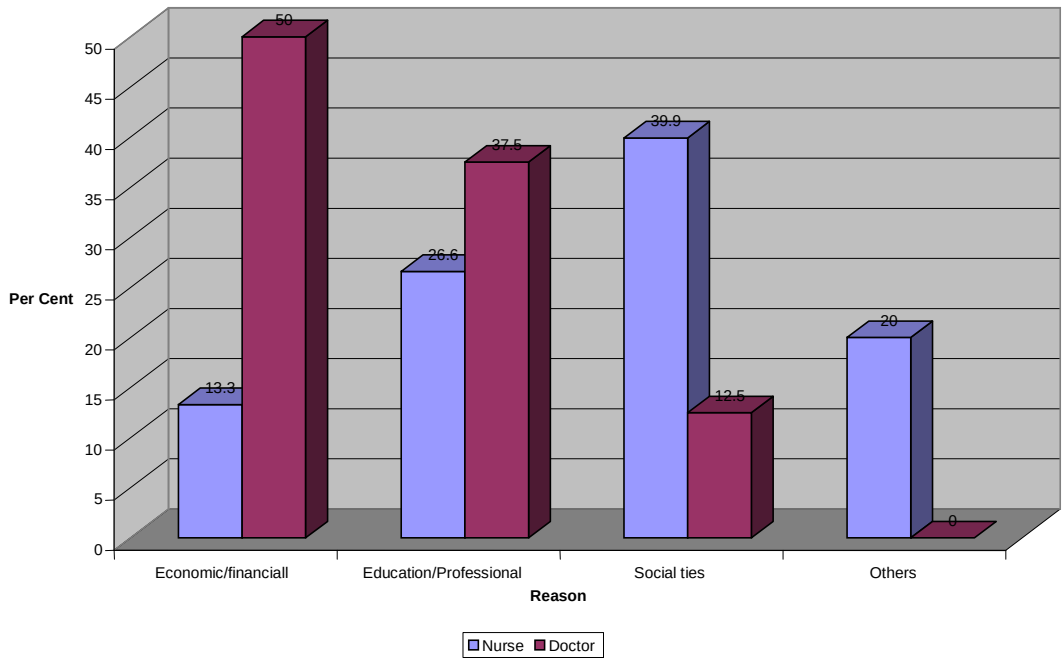
The majority of the respondents (63%) stated that they were unable to make ends meet from their monthly income, whereas 31 per cent found their income sufficient. In relative terms, doctors were financially better off than nurses. A total of 43 per cent of the doctors indicated that they were able to make ends meet compared to 30 per cent of the nurses. There was an equal proportion (29%) of male and female nurses who found their income was sufficient to make ends meet. On the other hand, more female (50%) than male (41.2%) doctors indicated their incomes were sufficient to meet their needs. 44 per cent of the doctors in the public facilities stated that their incomes were

not sufficient, against 47 per cent of their counterparts in private facilities. In the case of nurses, 59 per cent of those in public healthcare facilities stated that their incomes were not sufficient, relative to 55 per cent of their colleagues in private facilities. Whereas 68 per cent of them could not save from their remunerations, 26 per cent reported that they were able to save part of their monthly income. A larger proportion of female nurses (27%) could save part of their incomes compared to their male counterparts. However, more male doctors (37%) stated that they were able to save some of their income compared to their female colleagues (20%).

Emigration Expectations

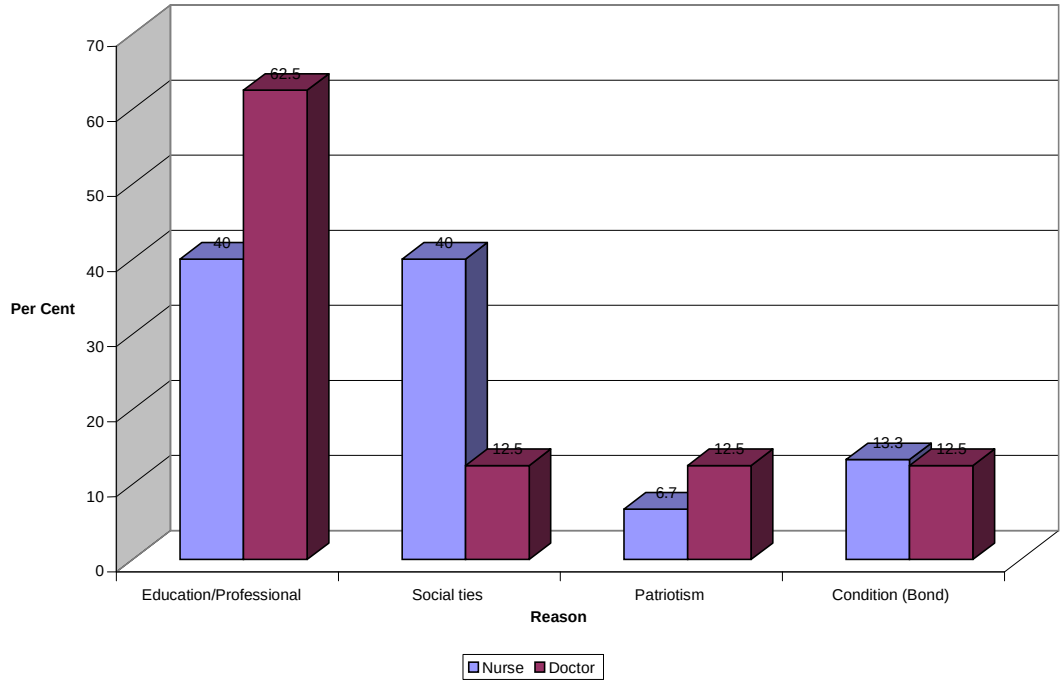
Twenty-three respondents comprising 15 nurses and 8 doctors indicated that they had already emigrated at least once. Whilst 26 per cent of them had worked in public healthcare facilities, the remaining 74 per cent had been in private healthcare facilities. Their destination countries included USA, UK and Canada. The duration of their stays ranged from under three months to over 10 years. 60 per cent of the nurses who had emigrated stayed for over 5 years compared with 25 per cent of doctors. The reasons for emigrating included financial/economic, pursuit of higher education, family consideration, visit, etc. Figure 8 compares the reasons for which nurses and doctors emigrated in the past.

Figure 8: Comparison of Doctors and Nurses on the Basis of their Reasons for Emigrating in the Past



Doctors and nurses' reasons for returning to Ghana included completion of education (47.8%), family consideration (30.4%), love for the nation (8.6) and condition or requirement (housemanship, bond, etc) – 13.2 per cent (see Figure 9).

Figure 9: Distribution of Nurses and Doctors According to their Reasons for Returning



The following deductions can be made from the analysis of reasons for having emigrated and returned in the past: first, more nurses than doctors emigrated as a result of their social or family ties than doctors. Secondly, more doctors are likely to emigrate in order to improve their skills and finances than nurses. In view of the fact that more doctors travel outside for educational purposes, the majority of them stated their reason for return as completion of their study programmes.

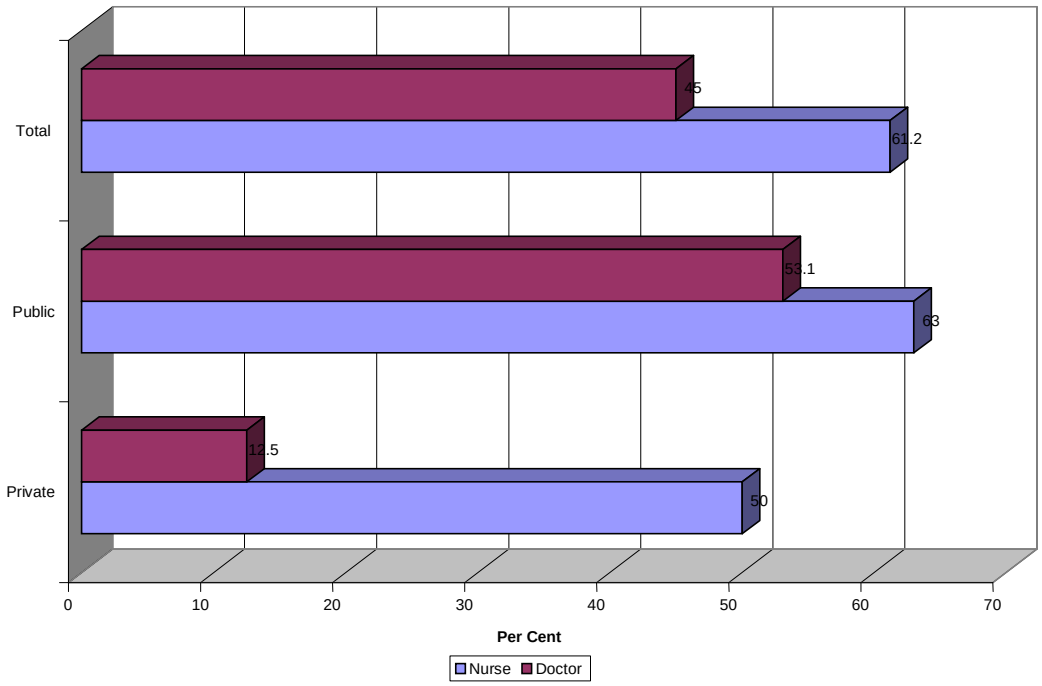
Current Emigration Expectations

A total of 98 out of 152 respondents indicated that they had considered emigrating. They comprised 68 nurses (57.6%) and 30 doctors (66.7%). In terms of gender, 72 per cent of male nurses intended to emigrate, compared to 60 per cent of their female counterparts. Similarly, 81 per cent of the male doctors expressed their intention to leave, relative to 50 per cent of their female colleagues. Thus, it can be concluded that male health care workers are more likely to emigrate than their female colleagues. In terms of the type of facility and profession, 56 per cent of the nurses in private healthcare facilities had an interest in emigrating as opposed to 63.4% of those currently working in the public sector. In the case of doctors, the proportion in private and public healthcare facilities who intend to emigrate formed 67 per cent and 45 per cent respectively. With regards to when they had decided to emigrate, it spanned from less than one year to over 10 years ago. Half of the respondents, who provided an answer on duration, indicated 1-5 years ago, relative to 6-10 years (30%). 16.7 per cent of them stated that they had formulated the idea over a decade ago, with the remaining three per cent saying it was under a year ago.

The reasons for not having emigrated included finances, education, social (family) consideration, love for the nation, processing of travel documents and still preparing. Most of them (52%) cited financial gain as the basis for their decision to emigrate as opposed to 20 per cent of them who

intended to further their education. A total of 81 respondents (49.7% of the total sample) comprising 63 nurses and 18 doctors stated that they were still interested in emigrating. Figure 10 shows that a higher proportion of nurses in both private and public healthcare facilities were keen to emigrate than doctors. Even though a higher proportion of health workers in public health facilities had an interest in emigrating than those in the private sector, the problem is not limited to the public sector. This situation poses a serious threat to the country's fragile healthcare system. Awareness of emigrant colleagues also explains the reason why health professionals wish to emigrate. Only seven per cent of the respondents stated that they were not aware of colleagues who have emigrated compared to 88 per cent who were aware. The remaining five per cent did not provide any response. A total of 86 per cent of the 143 respondents who were aware of colleagues who had emigrated stated that, in their opinion, those colleagues were better-off financially.

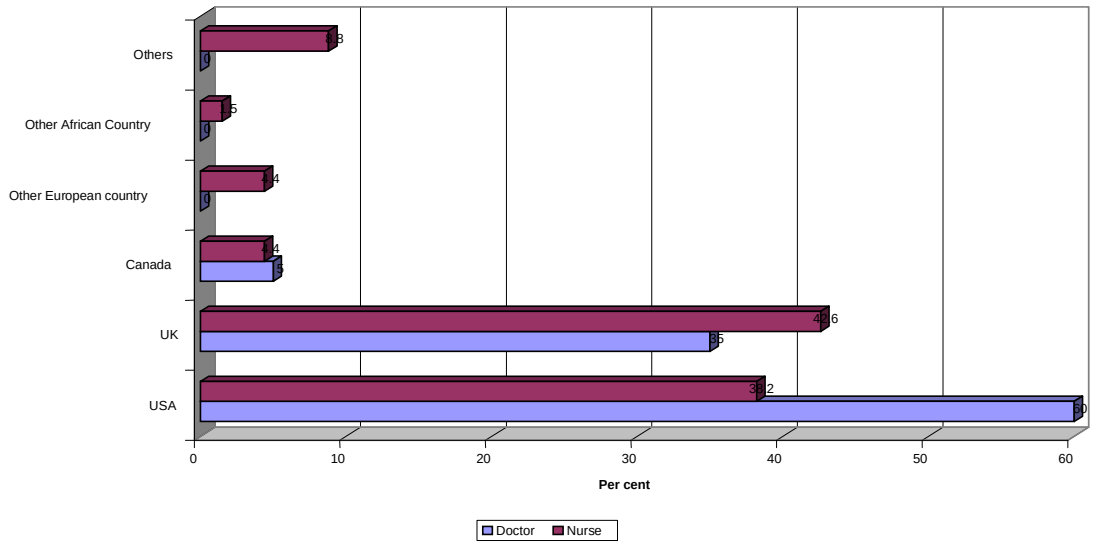
Figure 10: Health Professionals Still Interested in Emigrating by Sector



With regard to when they intend to quit the health service and embark on their adventure, 71 out of 81 respondents provided information on when they intended to emigrate. Some of them did not put a timeframe on it but rather described the conditions under which their travel plans could materialize. These included when they get adequate funds (7%) to meet travel expenses or when they'd secure a job outside the country (17%). However, 32.2 per cent of those who had plans to emigrate were undecided on when to embark on the trip. Whereas 33.8 per cent of them intended to emigrate between 2005 and 2007 (the same year and 2 years after the interview), seven per cent wished to leave in 2008 – 2009 – (3-4 years after the interview was conducted.

Preferred destination countries included USA, UK and Canada. Figure 11 shows that an overwhelming majority of healthcare workers interviewed wished to emigrate to the USA or the UK. Whilst the USA emerged as the preferred destination of doctors, the UK was the most popular choice for nurses.

Figure 11: Distribution of Destination Countries of Doctors and Nurses



With regard to what could make them change their minds, about 20.9 per cent of them stated that nothing would stop them from emigrating. An overwhelming majority of the respondents (60.5%) indicated economic gains (higher earnings) as their reason for emigrating and they formed the majority among nurses and doctors in both private and public healthcare facilities. Other factors included opportunities for further education (4.9%), essential logistics or technology (4.9%), scholarships (4.9%), etc. It is believed that the provision of such opportunities and facilities would help reduce the rate of emigration from Ghana.

Logistic Regression Analysis – Probability of Migration

As indicated earlier, nurses and doctors emigrate for economic and non-economic reasons and any attempt to address this 'brain drain' should first ascertain the importance of these factors. In order to ascertain the probability that a health worker will migrate, we estimate a linear model. The estimation technique involves a logistic regression approach. The logistic regression analysis can be used in models in which the dependent variable is a discrete outcome, that is, `Yes or No' decision. For example, `yes' when an individual intends to migrate and `no' when the individual does not intend to. In such a case, the conventional regression methods are inappropriate and therefore the method of estimation is the Maximum Likelihood which assumes that the optimality properties of the Maximum Likelihood Estimators (MLEs) are met (Amemiya, 1981; Maddala, 1983; Greene, 2000). The intention to emigrate can be formulated in terms of probabilities such that

$$\text{Prob}(Y=1) = F(\beta'X) \quad \ldots\ldots\ldots\ldots\ldots \quad (1)$$

$$\text{Prob}(Y=0) = F(\beta'X) \quad \ldots\ldots\ldots\ldots\ldots \quad (2)$$

Y=1 implies that the healthcare worker (nurse or doctor) intends to emigrate while Y=0 implies the health worker does not intend to emigrate. The set of parameters β reflect the impact of changes in X on the probability. A linear regression can be derived from equations (2) and (3) as follows

$$F(X, B) = \beta'X \quad \ldots\ldots\ldots\ldots\ldots \quad (3)$$

Take expectations (E) of equation (3) and since E(Y/X) = F(X, B), a regression model can be constructed as

$Y = E[Y/X] + (Y- E[Y/X])$ ……. (4)

$Y = \beta'X + \varepsilon$ ……. (5)

Where $X = X_1, X_2 \ldots X_n$, ε is the error term.

Our empirical model as specified in equation (5) means that the probability to emigrate to a developed country depends on economic and non-economic factors which are denoted by X. The vector X comprises of the following:

X_1: wage differential between Ghana and the UK (measured as the average earnings of a doctor or nurse working in the UK less the £ equivalent of what the individual nurse or doctor earns in Ghana. A survey of nurses in the UK (Quartey, 2005) indicated that on average, nurses earn £1500 a month. It is anticipated that doctors would earn at least 20 per cent more, but since no data was readily available, we used a uniform figure (an estimate). The following variables are measured based on discrete responses (yes=1 or no=0) from a survey of nurses and doctors currently working in Ghana

X_2: Ability to make ends meet
X_3: Ability to save
X_4: Satisfaction with current job
X_5: Opportunity to acquire skills
X_6: Opportunity to rise in rank
X_7: Relationship with supervisor
X_8: Staff morale

Table 8: Logistic Regression – Factors Influencing the Intention to Emigrate

	Nurses & Doctors		**Nurses Only**	
	Coefficient	P > |Z|	Coefficient	P > |Z|
Wage Differential	0.824	0.024	1.583	0.031
Ability to make ends meet	-2.963	0.005	-3.681	0.012
Ability to save	-0.255	0.816	-0.087	0.958
Satisfaction with current job	0.174	0.780	0.4159	0.647
Opportunity to acquire skills	1.387	0.249	0.683	0.721
Opportunity to rise in rank	0.774	0.560	4.220	0.161
Relationship with supervisor	0.574	0.400	-0.133	0.895
Staff morale	-1.069	0.072	-1.179	0.130
Know Colleagues who have emigrated	-0.5558	0.886	-	-
Number of Observations	54		40	
LR $chi^2(9)$	24.78		23.31	
Prob. > chi^2	0.0032		0.003	
Pseudo R-squared	0.332		0.421	

Table 9: Logistic Regression – Age, Marital Status and the Intention to Emigrate

	Nurses & Doctors		Nurses Only	
	Coefficient	P > |Z|	Coefficient	P > |Z|
Gender	-1.845	0.374	-	-
Age	-0.161	0.060	-0.0851	0.384
Married	6.7	0.034	1.467	0.116
Wage Differential	1.196	0.309	6.686	0.255
Ability to make ends meet	-4.464	0.050	-5.331	0.088
Ability to save	2.778	0.118	5.034	0.219
Satisfaction with current job	-1.839	0.146	-2.139	0.253
Opportunity to acquire skills	0.9148	0.672	-	-
Opportunity to a rise in rank	1.157	0.652	5.015	0.599
Relationship with supervisor	1.443	0.237	0.9068	0.588
Staff morale	-1.591	0.092	-2.2176	0.119
Know Colleagues who have emigrated	-	-	-	-
Number of Observations	40		28	
LR $chi^2(9)$	25.00		16.69	
Prob. > chi^2	0.0091		0.0538	
Pseudo R-squared	0.4541		0.4363	

Table 8 presents the logistic regression results for nurses and doctors currently working in Ghana. From columns 2 and 3, it can be inferred that a wage differential significantly increases the probability to emigrate for nurses and doctors. In the case of nurses only, the coefficient shows that a 1% increase in the wage differential will increase the probability to emigrate by 1.6 times (Table 8). A related issue is that an increase in a worker's ability to make ends meet in Ghana will significantly reduce the intention to emigrate by about 3 times for nurses and doctors but much higher (3.5 times) for nurses only. It is important though to note that wages are not the most important decision parameter in the choice of migration. Staff morale is also important and significantly reduces the intention to emigrate from Ghana to developed countries if it improves.

In Table 9, the model was extended to ascertain the effects of the age and marital status of nurses and doctors on their intention to emigrate. From columns 2-4 it appears that an increase in age significantly reduces the intention for the entire sample (nurses and doctors) to emigrate but the same cannot be said of nurses alone; that is, although age reduces the intention of nurses to migrate, its effect is not statistically significant. It can therefore be concluded that age counts as one of the reasons why the migration rate of nurses outstrips that of doctors. Contrary to expectation, being married significantly increases a healthcare worker's intention to migrate to seek greener pastures. Other factors which significantly affect the intention to emigrate include the ability to make ends meet and staff morale.

4. Conclusion and Policy Implications

The principal aim of the study is to ascertain the key determinants of emigration among healthcare workers in Ghana. The study used survey data obtained from three cities in Ghana: Accra, Kumasi and Tamale. The respondents were made up of doctors and nurses - the majority of whom are females. They were over 21 years old and mostly worked in public healthcare institutions. The reasons for joining the medical profession were varied and included the desire to save lives, professional interest, love for the nation and compassion which they felt for people suffering from ill-health. Other reasons included the influence of friends, financial gain and the prestige of the medical profession. The study also found that more females than males overall were dissatisfied with their current job. Similarly, more nurses indicated their dissatisfaction with their current jobs than doctors. In addition, more nurses than doctors indicated that they did not have any opportunities to upgrade their skills. More healthcare professionals in the private healthcare sector complained about the lack of opportunities for skills upgrading, compared to those in the public sector. However, the majority of the respondents stated that they had opportunities to rise in rank. Most of them stated that they had cordial relationship with their supervisors.

It was also evident that healthcare workers in Ghana work beyond the mandatory 40 hours per week stipulated by the Labour Law (Act 561 of 2003). This is evidence of the heavy workload which befalls healthcare professionals in Ghana. However, the long working hours have not paid off compared to their counterparts in the UK, and this has become one of the principal determinants of migration. Less than a third of the respondents have indicated that they were able to save part of their remuneration. The study revealed that one sixth of the respondents had emigrated to either one of the USA, UK or Canada at least once, and that the duration of their stay ranged from under three months to over 10 years. The reasons they gave for having emigrated included financial/economic, pursuit of higher education, family considerations, visit, etc. Similarly, the reasons given for returning included completion of education, family consideration, love for nation and condition or requirement of sponsorship. The analysis of the reasons for emigrating and returning in the past leads to the following deductions: first, more nurses emigrate as a result of their social or family ties than doctors; secondly, more doctors are likely to emigrate in order to improve their skills and finances than nurses. Also, quite a significant proportion have considered migrating before and the reasons why they haven't done so include financial, education, social (family) considerations, love for the nation, processing of travel documents, etc. Most of them cited financial gain as the basis for their decision to emigrate, as opposed to a few who intend to further their education. About half of the total respondents are still interested in emigrating and a third indicated that nothing would stop them from emigrating. However, an overwhelming majority of the nurses and doctors stated that improvement in their economic status would go a long way to help. The other factors mentioned included provision of educational opportunities locally, essential logistics and scholarships.

In conclusion, an analysis of the probability to migrate shows that the most important determinant is the wage differential between Ghana and the destination country. Staff morale is also important and will significantly reduce the intention to migrate from Ghana to developed countries if it is improved. Also age and marital status are key parameters explaining the emigration patterns of nurses and doctors from Ghana. On the basis of the above findings, the study suggests the following: first, migration of nurses and doctors from Ghana has assumed an increasing trend and

it is important to ascertain the major causes and address them. Secondly, the global shortage of health personnel implies that unless the conditions of service -- particularly for nurses - are improved, the country will continue to experience the exodus of nurses from the country. It is also suggested that government should train the adequate number of nurses and doctors needed to fill the vacancies in Ghana for free and make them to sign a bond to serve for a number of years. All others should be made to pay for the cost of their training. Host countries should also be made to contribute towards the provision of infrastructure for the training of health personnel in the country and this should be based on the number of health personnel employed in their health institutions.

REFERENCES

Amemiya, T. (1981) 'Qualitative Response Models: A Survey', Journal of Economic Literature, 19: 481-536.

Buchan, J. and Dovlo, D. (2004) International Recruitment of Health Workers to the UK: A Report for DFID, London: DFID Health Systems Resource Centre.

Ghana Health Service, 2003, Annual Report for the year 2002.

Greene, W.H. (2000) Econometric Analysis, 4th ed., Upper Saddle River, NJ: Prentice Hall.

Greenwood, M. J. (1975) 'Research on Internal Migration in the United States: A Survey', Journal of Economic Literature, 8: 397–433.

Maddala, G.S. (1983) Limited-Dependent and Qualitative Variables in Econometrics, Cambridge: Cambridge University Press.

Ministry of Health (2002) Human Resource Policies and Strategies for the Health Sector, 2002 – 2006

Quartey, P. (2007) 'The Case of Migrant Nurses from Ghana', presented at the Workshop on Human Resources for Health and Migration, 16-17 May 2007, University of Sussex, Brighton, UK.

Republic of Ghana (2002), Labour Law, 2002 (Act 561).

Sanders, D., Dovlo, D., Meeus W. and Lehmann U. (2003) 'Public Health in Africa', in: Beaglehole, R., Global Public Health: a New Era, Oxford: OUP.

Stiwell, B., Diallo, K., Zurn P., Dal Poz M., Adams O. and Buchan J., (2003) 'Developing Evidence-Based Ethical Policies on the Migration Of Health Workers: Conceptual and Practical Challenges' Human Resources for Health, 1: 8, p.6 citing Dovlo, D. (1999), 'Issues Affecting the Mobility and Retention of Health Workers/Professionals in Commonwealth African States', London: Consultancy Report for the Commonwealth Secretariat, unpublished manuscript.