

**THE INFLUENCE OF NON-FINANCIAL INCENTIVES ON
THE RETENTION OF NURSES IN TWO RURAL HOSPITALS
IN THE COPPERBELT PROVINCE OF ZAMBIA.**

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**A dissertation submitted to the Faculty of Health Sciences, University of the
Witwatersrand, in fulfilment of the requirements for the degree of Master of
Public Health (MPH).**

Johannesburg, South Africa, 28/10/2010

DECLARATION

I, Lisa Kombe Mulenga, declare that this research report is my own work. It is being submitted for the degree of Master of Public Health in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

.....Day of, 2010.

Signature.....

DEDICATION

This work is dedicated to my children, Chisha, Chama and Chabala, whom I had to leave behind in order to pursue this degree. I give my gratitude for their sacrifice and unconditional love. To my husband Francis, without whose support I would not have completed my MPH. Lastly, to my parents, Col. and Mrs Malata, for their belief in education and for looking after my children while I was away. This is to say thank you.

ABSTRACT

Poor retention rates and a lack of human resource management capacity have led to a critical shortage of nurses and serious disparities in their distribution between urban and rural areas in Zambia. The Zambian government is faced with the challenge of developing retention schemes that address the most pressing needs of nurses in rural service.

The aim of the study is to contribute to the body of work in Zambia that looks at the influence of non-financial incentives on the retention of nurses in rural areas. The study also aims to show what factors nurses think would keep them in rural posting.

The objectives of this study are to determine the perceptions of nurses in two rural hospitals in the Copperbelt province of Zambia about non-financial incentives that could influence retention in rural areas and to determine which factors nurses perceive to be the most important for retention.

The study design was a descriptive cross-sectional study. Forty nurses were conveniently sampled. Data was collected by means of structured interviews using a questionnaire and was analysed using stata10.

The majority of nurses strongly agreed that individual, institutional and local environmental factors play a significant role in retention. Factors identified as the most important for retention were motivation to work (n=26), appreciation from the community (n=33), ability to make decisions about work (n=17), satisfactory accommodation (n=32), availability of schools for children (n=26), manageable distance to work (n=13), access to continuing education and

professional development (n=26), having good relationships with colleagues (n=15) and, availability of essential equipment, tools and supplies (n=14). Factors ranked first choice according to level of importance by the majority of nurses were satisfactory accommodation (n=25), access to continuing education and professional development (n=20) and motivation to work (n=18).

There are no straight forward answers to the problem of retention in rural areas. The development of appropriate strategies requires an understanding of the interaction of factors which influence nurses' decisions to work in a rural and remote post. Successful retention strategies will require strengthening and upgrading of human resource management capacity. The response must be all inclusive, engaging relevant stakeholders, including non-health and non-governmental groups.

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ABREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
DFID	Department For International Development
ECSA-HC	East, Central And Southern African Health Community
EQUINET	Equity In Health In East And Southern Africa
GDP	Gross Domestic Product
GHWA	Global Health Workforce Alliance
GTZ	German Agency For Technical Support
HIV	Human Immunodeficiency Virus
HIV/AIDS	Human Immunodeficiency Virus/ Acquired Immune Deficiency Syndrome
HRM	Human Resource Management
ICN	International Council Of Nurses
ILO	International Labour Organization
MDGs	Millennium Development Goals
MOH	Ministry of Health
MPH	Master Of Public Health
NGOS	Non Government Organizations
NHS	National Health Service
SAPS	Structural Adjustment Programmes
SWAP	Sector-Wide Approach

UK	United Kingdom
UNAIDS	Joint United Nations Programme on HIV and AIDS
USA	United States of America
WHO	World Health Organization
ZHWRS	Zambian Health Workers Retention Scheme

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CHAPTER 1

1.0 INTRODUCTION

Health systems in many African countries face a variety of challenges, including an overall shortage and mal-distribution of healthcare workers. Zambia is no exception. This shortage presents a serious challenge for many countries in scaling up programmes aimed at achieving the Millennium Development Goals (MDGs) for health (Sudhir, 2003; Hongoro and McPake 2004; Mathauer and Imhoff, 2006; WHO 2009). Sub-Sahara African countries must nearly triple their current numbers of health workers by adding the equivalent of one million workers through retention, recruitment and training if they are to come close to approaching the MDGs for health (Chen et al, 2004). Without local access to well trained and motivated health workers, it is unlikely that communities will have access to important primary health care services that respond to priority health needs.

Retaining the right number of staff in the right places are key challenges for health policy makers in many countries around the world. Nursing/midwifery personnel form the majority of health workers in most countries and they are inequitably distributed. Although approximately one half of the global population lives in rural areas, these people are served by only 38% of the total nursing workforce (Dolea et al 2009).

Human resources for health are essential for the delivery of quality care to patients and nurses in particular are a central component of service delivery. Retention problems affecting nurses should therefore be appropriately

addressed because shortages of nursing staff are likely to have adverse affects on the delivery of health services and outcome of care.

The lack of reliable, up-to-date information on human resources for health greatly restricts the ability of policy-makers at national and international levels to develop evidence-based strategies to resolve the health workforce crisis (World Health Report, 2006). Accurate and reliable data are needed for human resource planning and management, as well as policy development that address the most pressing needs of health care workers. It is therefore the responsibility of governments to encourage and facilitate research, as well as the monitoring and evaluation of existing strategies in order to fill the knowledge gap.

1.1 BACKGROUND

Zambia is one of the poorest countries in the world and its government spends below the World Health Organisation (WHO) recommended amount per capita on health. Zambia's health work force is inadequate and poorly distributed. Retaining critical health workers in rural areas presents a major challenge for health policy makers. In response to the shortage of health staff, the Zambian government developed the Zambia Health Worker Retention Scheme in 2003 as an attempt to reduce attrition rates of critical health care workers in rural areas. The scheme provides a combination of financial and non-financial incentives. The programme has since become severely underfunded due to resource constraints following the withdrawal of its major funder. Non-financial incentives are very important in low-income countries where the use

of financial incentives is not sustainable. The study attempts to show that non-financial incentives can be effective in retaining health workers in rural areas and that even simple and relatively low-cost measures such as availability of essential drugs; supervision and mentorship have a positive effect on retention.

Zambia is classified under the poorest countries in the world with a Gross Domestic Product (GDP) estimated at US\$ 11.16 billion and a per capita GDP of US\$ 1300 (WHO, Country Cooperation Strategy 2008-2013). Total expenditure on health as a percentage of GDP was 5.2% in 2006 (World Health Statistics, 2008). The annual health spending (government and donors) increased from about US\$ 109 million (2004/05) to US\$ 234 million (2007). This was mainly due to increased flows towards HIV programmes and projects. On a per capita basis, actual health spending has increased from US\$ 10 (2004) to about US\$ 23 (2007). US\$ 33 is recommended by WHO commission on Macroeconomics and Health. Zambia has an estimated population of 11.6 million (2007) and an annual growth rate of approximately 2.9%, divided equally between males and females. Approximately 40% of the population lives in urban areas and 60% in rural areas. Sixty-four percent of the population lives in poverty (less than 1 US\$ per day). The distribution of poverty is uneven in the country, with the rural areas bearing the brunt of poverty. Zambia has poor health outcomes with life expectancy at birth estimated to have been 42 for males and 43 for females in 2006. The main causes of death for all ages are infectious diseases, with HIV/AIDS being the number one cause of death. HIV prevalence in the general population in 2007 was estimated to be 14%. Zambia is divided into nine provinces namely, Central, Copperbelt, Eastern, Luapula, Lusaka, Northern, North-western, Southern and Western provinces. Each province is

subdivided into several districts with a grand total of 73 districts. In total Zambia has 1327 health facilities, including 97 hospitals, 1210 health centres and 20 health posts. The majority of health facilities belong to the government (WHO Country Cooperation Strategy 2008-2013). Significant gaps exist in the number and distribution of health facilities required to cover the population.

The Zambian health system is extremely weak with an inadequate health work force, poor management and inefficient allocation and utilization of resources (WHO, 2005). The country faces a serious crisis in human resources for health as a result of various factors, including high attrition rates, low morale in the health workforce, low productivity and the impact of HIV/AIDS (GHWA, 2006). Zambia is more than ten times below the recommended staff-to-population ratios for nurses (1:8064 versus 1:700) (UNAIDS, 2009). In 2006 the country had only 6096 nurses in both the private and public sectors, which was far below the WHO recommended target of 16,732 (Schatz,2008). The impact of this shortage of nurses is exacerbated by the mal-distribution of nurses between the rural and urban areas and between the private and public sector.

Other factors contributing to the current shortage of health staff are the Structural Adjustment Programmes (SAPs) imposed by the International Monetary Fund and The World Bank which stipulated severe reductions of government spending on essential services. Public expenditure ceilings led to hiring freezes and restrictions on improving salaries and working conditions for public servants. This resulted in health professionals changing jobs or migrating (WHO, 2001).

It has been estimated that at least 23 health workers (doctors, nurses or midwives) for a population of 10,000 are required to support the delivery of the

basic interventions required to achieve the MDGs related to health (World Bank, 2008). Zambia, with about 21 health workers per 10,000 population cannot guarantee to provide the basic health care package required to achieve the health-related MDGs.

Table 1 Nurses and midwives in Zambia – current versus recommended levels 2005-2007

Nurses + Midwives	Staff levels				
	2005	2006	2007	Recommended	Shortfall in 2007
	8369	8650	9190	22,332	13,142

Source: Ministry of Health and Economic Report 2007.

Resignations and deaths are the highest cause of attrition in all health cadres in Zambia and nurses are most affected. The average attrition rate in 2003 was estimated to be 4.48% (Koot & Martineau, 2005). The high attrition rates have resulted in many hospitals and health centres operating with only 35-50% of their establishment levels for most cadres of health workers and is placing a heavy burden on the few health care workers available at health facilities (Koot et al, 2003).

In addition to poor staffing levels, health professionals have to deal with increased workloads due to high burden of diseases such as HIV/AIDS, tuberculosis and malaria amongst others and this has contributed to their attrition.

The HIV/AIDS epidemic has contributed to the large number of deaths among health workers and functions as a push factor in migration. In 1999, 185 nurses in Zambia died due to HIV-related illnesses, which translated to 38% of

numbers of nurses trained in government institutions annually (Chen et al, 2004).

The human resource crisis has resulted in severe imbalances in terms of the number of staff, skill-mix and geographical distribution of the workforce (GHWA, 2006). Urban Zambia has 20 times more doctors and over five times more nurses and midwives than the rural areas (The World Bank, 2008). More than 50% of rural health centres have only one qualified staff member present and hospitals are chronically understaffed (Mwale and Smith, 2007;Schatz,2008).

The rate of production of health workers lags behind losses from the health system (Hongoro and McPake, 2004; Schatz, 2008; WHO, 2009). There is a lack of training capacity for health workers and substantial investments to upgrade the outdated medical training infrastructure that is required to train more health professionals to make up for the current shortfalls. Zambia has only one medical school and a limited number of government run training institutions for nurses and other support staff. Furthermore, training institutions are experiencing an exodus of specialist lecturers, who in many cases are providers of health services themselves.

Poor working conditions such as a lack of protective clothing and medical supplies as well as low salaries have contributed to the migration of health professionals within the region and to western countries (Chen et al, 2004; Hongoro and McPake, 2004; Dolea et al, 2009). Approximately 15-40% of all nurses trained locally leave the country every year (Asante, 2007). Between 2003 and 2004, the General Nursing Council processed 1222 applications for nurses and midwives to work abroad (GHWA, 2006). Internal brain-drain, with

new and lucrative job opportunities for nurses with NGOs and foreign aid agencies that are better funded and offer better salaries, worsens the situation especially in rural areas where many young nurses are reluctant to live.

Due to inadequate human resources information systems at all levels of the Zambian health system, human resource planning and management efforts, as well as policy development is hampered. Sparse information, fragmented data and limited research all contribute to the poor quality of data available and the weak knowledge base. Furthermore, the Zambian health system is very centralized. The lack of well functioning, facility based and district level decision-making and management systems make the implementation of effective performance appraisal and incentive systems difficult and so contribute to the poor management of retention strategies.

The way a county's health system is funded, organized, managed and regulated affects health workers' supply, retention and performance (Hongoro and McPake, 2004). The Zambian health system is highly dependent on donor funding and donor funds account for 50% of total Ministry of Health budget (WHO Country Cooperation Strategy 2008-2013). Donors tend to have a narrow focus for their health assistance. Whilst significant international resources have continued to pour into the Zambian health sector, much of these resources are earmarked to specific disease interventions, mainly HIV and AIDS, Tuberculosis and Malaria, and immunisation, with limited focus on basic health systems strengthening and national priorities such as human resources for health. This undermines the government's principle of equity of access to health services, particularly for the poor in remote areas (MoH, 2009).

Conditions attached to donor aid also play an important role in issues relating to health workers.

Despite having low domestic resources, Zambia's long-term stability and the government's willingness and attempts to decrease attrition rates of critical health workers especially in the rural areas, provides an important context both for health workforce planning and for external funding. For example, the Zambian government increased the health sector budget from 9% in 2004 to 12% in 2005 (EQUINET and ECSA-HC, 2007). The Ministry of Health has developed a comprehensive human resource plan – The Zambian National Human Resources for Health Strategic Plan, 2006-2010 (MoH, 2005) which constitutes a summary chapter of Vision 2030 and the Fifth National Development Plan (IMF 2007). The targets to be achieved under Vision 2030 include increased availability of health workers. The plan provides a framework for the implementation of all efforts aimed at resolving the human resources crisis and is designed to improve collaboration in the initiative (GHWA, 2006). However, mobilization of adequate resources to implement the plan remains a major challenge.

In 2003 the Zambian government developed the Zambian Health Workers Retention Scheme (ZHWRs) targeting key health worker cadres primarily in rural districts. The aim of the scheme was to reduce attrition rates of current critical service providers especially in rural areas and therefore improve service delivery. The incentive programme piloted in 2003, was initially targeted at 80 doctors contracted to work in rural and remote areas for three years and contained a mix of financial and non-financial incentives. The pilot phase was financially supported by the Netherlands Embassy and later the

scheme became part of basket funding¹. The programme was implemented by the Central Board of Health (Koot & Martineau, 2005). Since then, the ZHWRS has expanded to include tutors and pharmaceutical staff serving in rural and remote districts and plans to include nurses are underway. The scheme provides various retention incentives, including career development and housing. This resulted in an increase in the health work force in the public sector from 23,000 in 2003 to 51,000 in 2006 alone (Miti, 2006). The programme has since become severely underfunded due to resource constraints following the withdrawal of the Netherlands Embassy.

Little is known about the long term impact of the ZHWRS, A study to qualitatively and quantitatively evaluate the ZHWRS scheme revealed that physicians who had been on the scheme for at least 12 months were unsatisfied and de-motivated by the incentives provided (Mwale and Smith, 2007). Though the ZHWRS was seemingly successful in attracting doctors to rural districts (Mitti, 2006; Anyangwe and Mtonga, 2007), the poor ratings in the evaluation of the scheme by Mwale and Smith suggest that key stakeholders including health workers were not involved in the design and development of the scheme and that proper preparation and comprehensive support systems at all levels were not put in place to ensure proper implementation and management of the scheme. Though doctors were present in the rural areas, their productivity, competency and responsiveness towards patients' needs have been questioned because they were de-motivated by the offered incentives. Although it is compulsory for all doctors in Zambia to work in a

¹Basket funds are monies from both donors and the government that are pooled to finance earmarked programmes within a sector. Basket funds improve predictability of long term financing, promotes transparency and flexibility (Merrick, 2004).

rural setting for at least two years after completing internship, doctors who joined the scheme were contracted to work for a three year period. Some doctors found ways of getting out of the scheme before completing the three year requirement and many did not remain in the rural areas once completing their tenure. Doctors were able to evade the system mainly because of an absence of punitive action or capacity to enforce penalties. All these factors affect the credibility of the programme and raise questions about the scheme's sustainability, both from a financial and a time perspective. The ZHWRS, like many similar interventions, started as a pilot driven by a specific donor initiative with little capacity for scaling up or for sustainability over a long period of time.

There is a small but growing body of qualitative studies looking at motivation, performance and retention of health workers in developing countries that indicate the limitations of financial incentives and that reveal the importance of non-financial incentives for staff motivation and retention (Mutizwa-Mangiza, 1998; Agyepong et al, 2004; WHO, 2003; Kingma, 2003; Zurn et al, 2004; Furth, 2006). Non-financial incentives are important in motivating health care workers both to do a good job and to continue working in public health services. These incentives include training, study leave, the opportunity to work in a team, and support and feedback from supervisors. Incentives that were found to work well to retain staff in rural areas included providing housing and transport, agreeing the number of years that will be spent in a rural location, offering further training and offering financial incentives.

There is additional evidence in the literature that suggests that non-financial incentives such as availability of essential drugs, supervision and mentorship

are equally if not more important than financial incentives for motivation, job satisfaction and retention of health workers. At the regional meeting of the Regional Network for EQUINET held in Arusha, Tanzania in March 2007, all the member countries came to the conclusion that a focus on financial incentives alone in African countries is not sustainable because health workers themselves seek wider rewards such as electrification, housing and decent working conditions (EQUINET, 2007). A study that involved the use of both financial and non-financial incentives done by Furth (2006) also supports these findings. The study examined performance-based incentives that were integrated into the Zambian government's health care reforms in the mid-1990s. Two models of incentives were tested in the pilot: financial incentives and non-financial awards in the form of trophies. The pilot ran over a period of 12 months. The study found that non-financial awards were as motivating, if not more motivating for staff than financial rewards. The study resulted in the recommendation that performance-based incentives continue to be piloted in Zambia. Kingma (2003) reported that nurses tend to respond negatively or indifferently to economic incentives. In her research, Kingma found that nurse respondents did not recognize financial incentives as being positive. On the other hand, non-monetary incentives such as professional development opportunities and continuing education were positively perceived and motivating. These findings indicate that even simple, relatively low-cost measures may have a positive effect on retention.

1.2 PROBLEM STATEMENT

Although implementation of the retention scheme for nurses has not yet been rolled out countrywide, recruitment for the programme is underway and the

programme aims to recruit 600 nurses (Mwale and Smith, 2007). The incentive package for nurses comprises of a monthly stipend (hardship allowance) of US\$200, upgrading of existing housing available in rural areas, the provision of one motor bike per health centre and the provision of solar panels, medical equipment and water reticulation systems for the health facility.

A review of the ZHWRS carried out by Dielemann and Harnmeijer (2006) revealed that working conditions in some areas were not sufficient for doctors to provide adequate quality care, which was a reason for some to leave. Most doctors also indicated the need to receive professional support while working in isolated areas. Doctors were opting to leave their posts despite getting financial incentives in addition to other non-financial incentives. This implies that money alone was not enough to retain the doctors in rural areas. Poor working conditions and a lack of professional supervision clearly influenced the doctors' decision to leave their rural posts.

Therefore, before embarking on a country-wide roll-out of the scheme for nurses, policy makers, planners and health managers need to recognize the inter-relatedness of factors influencing retention and the need for a combined or “bundled” approach that addresses the multiple aspects of working and living conditions, education, recruitment, retention and management (Dolea et al, 2009; Lehman et al, 2008) because often retention schemes are proposed without a baseline study to understand these factors and this results in the failure of such strategies.

1.3 SIGNIFICANCE OF THE STUDY

Little research has been done in Zambia to determine the most pressing needs of rural nurses or to establish which incentives would encourage them to stay on and work in rural areas. Results from this study may provide policy makers and human resource managers in the Ministry of Health with some insight into how nurses view non-financial incentives and how these are prioritized. The study may assist managers to take an evidence-based and holistic approach in the design, preparation and administration of retention schemes for nurses and in the management of their performance. This approach may improve the likelihood of acceptance, success and sustainability of future retention strategies. Furthermore, there is a gap in the current knowledge on the challenges of health worker retention in remote and rural areas (Dolea et al, 2009). It is hoped that this study will contribute to filling this gap.

1.4 RESEARCH AIM AND STUDY OBJECTIVES

1.4.1 Research Aim

The aim of the study is to contribute to the body of work in Zambia that looks at the influence of non-financial incentives on the retention of nurses in rural areas. The study also aims to show what factors nurses think would keep them in rural posting.

1.4.2 Study Objectives

1. To determine the perceptions of nurses in two rural hospitals in the Copperbelt province of Zambia about non-financial incentives that could

influence retention in rural areas between the 27th of July 2009 and the 2nd of August 2009.

2. To determine which factors nurses perceive to be the most important for retention between the 27th of July 2009 and the 2nd of August 2009.

1.5 LITERATURE REVIEW

This section will look at “push” and “pull” factors that influence retention.

These factors are presented under the following headings:

- International factors,
- National factors,
- Institutional factors,
- Individual factors and
- Local environmental factors.

To give the reader a broader understanding of the use of incentives for retention of health workers, this section also explores evidence on the use of non-financial incentives alone, as well as in combination with financial incentives. Evidence in the literature supports the findings of this study that suggest that non-financial incentives could actually retain health workers in rural areas. This section concludes by highlighting global actors that address issues affecting human resources for health.

In this study, an incentive is defined as any available means applied with the intention to influence the willingness of health care professionals to exert and

maintain an effort towards attaining organizational goals (Dambisya, 2007). Non-financial incentives are those that involve no direct transfers of monetary values or equivalents to an individual or group (Mathenauer and Imhoff, 2006). Non-financial incentives can be internal or external. Internal incentives include self-efficiency, valence and expectations while external incentives include supervision, recognition, rewards, prizes, training and career paths, working conditions and access to treatment (Regional Meeting Report 2007). Retention is defined as preservation of health workers in their allocated or posted health institutions (Zurn et al, 2004). The opposite of retention is attrition, which can be categorised into two types: economic and natural. Economic attrition refers to a worker leaving the health sector to pursue alternative opportunities for example, better working conditions, or better pay, while natural attrition refers to workforce departures for reasons of retirement, death etc. (Zurn et al, 2005).

To find out what is already known about health worker retention, a review of current literature was conducted. Though the majority of the literature originates from industrialized countries, most of the literature used was drawn from experiences from low and middle income countries. This was relevant to the location and population of the study.

The following search terms were used: health worker retention, nurse retention in rural areas, retention in low-income countries and Zambia health worker retention scheme.

Key words: nurse, human resources, retention, motivation, job satisfaction

The literature review focused on published documents in the Sub-Saharan African setting. Literature was searched by means of the Pub Med data base

and electronic journals over an 11 year period (1998-2009). Reference was also made to the WHO and World Bank web sites.

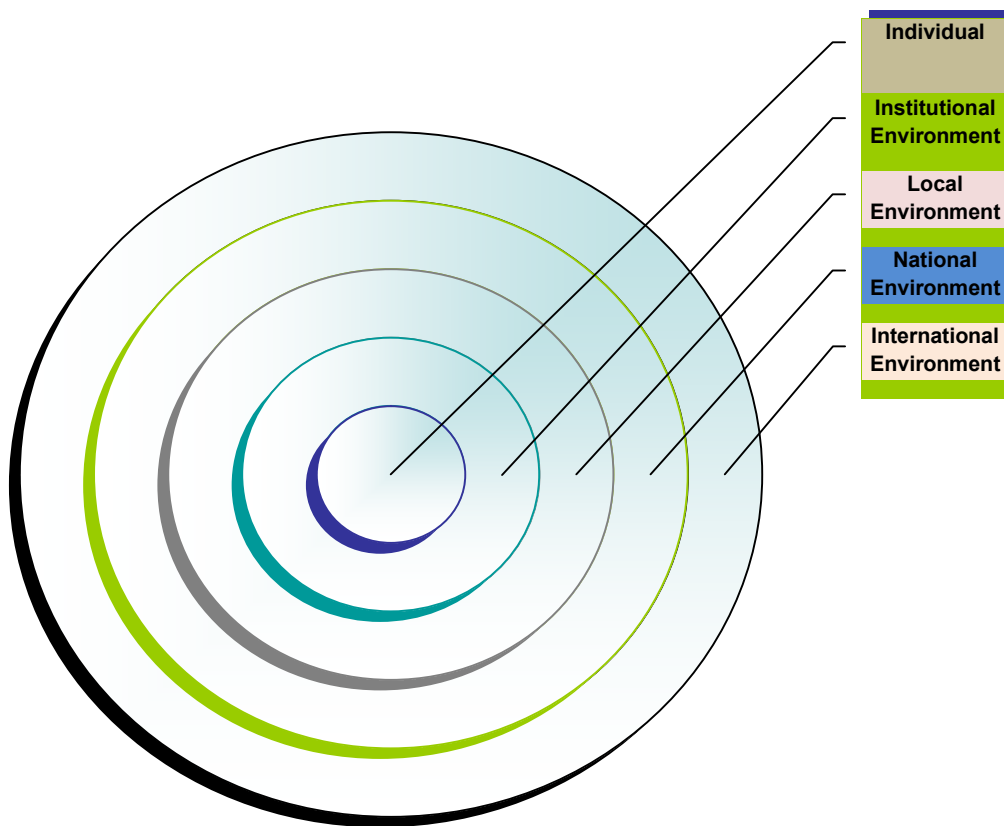
1.5.1 FACTORS THAT INFLUENCE RETENTION

1.5.1.1 “Pull” And “Push” Factors

“Pull” factors are identified as those which attract an individual to a new destination, for example improved employment opportunities, higher income, better living conditions etc. “Push” factors are those which act to repel the individual from a location, for example, loss of employment opportunity, low wages, poor living conditions etc (Lehmann et al, 2008). “Push” factors often mirror “Pull” factors and both impact on the individual who makes a decision about staying in a job in many different ways.

International, national, institutional, local environmental and individual factors play a significant role in the retention of health professionals as illustrated in figure 1. Buchan (2002) reported that with regards to nurses, there is a complex interaction of pay, job satisfaction, career prospects and non-work issues such as schools for children that influence their retention. There is no single solution to retention problems that will work in isolation. The solutions will require a combination of strategies that address the different factors that influence retention. These factors are inter-related and have an influence on each other. Recognising this complex interplay of the factors will assist decision-makers to develop retention strategies that are effective and sustainable.

Figure 1 Interplay of Factors Influencing Retention



Source: Lehmann et al, 2008

1.5.1.2 International Factors

The factors in the international environment that influence retention are mainly pull factors such as higher salaries, better working conditions and better career opportunities in other countries. The literature shows that the international environment has been and continues to be a major influence on the global shortage of health personnel which, according to the World Health Report of 2006 had reached crisis level in 57 countries, most of them in Africa

and Asia. The global shortage of human resources for health, migration and the global labour market all impact on retention.

Migration: Nurses represent a small portion of highly skilled workers who migrate to developing countries in search of better wages, better working conditions and a better quality of life. Some evidence suggests that it is unlikely that migration will stop given the advances in global communications and the development of global labour markets in the nursing field (Stilwell et al, 2004; Hongoro and McPake, 2004). These developments include new communication technologies, electronic access of jobs and education for jobs through distance learning, as well as speedy processing of visa applications that are now available internationally making it easier for skilled health care workers to move from one place to another.

Global shortage of human resources for health: The global imbalances in the health workforce is not a new issues, as nursing shortages were reported in American hospitals as early as 1915 and have also been mentioned in the United Kingdom (UK) and Canada (Zurn et al, 2002). As a result, these rich countries recruit health professionals from poorer countries that do not have the resources to offer competitive incentives to retain them. Buchan and colleagues reveal in their report on international nurse mobility that both the United States and the United Kingdom anticipate large shortfalls in the number of nurses they will require over the next 10-20 years, and that these markets see overseas recruitment as a way to compensate for these shortages (Buchan et al, 2003). Furthermore, because of the long periods of time required to train specialized health professionals, these rich countries find it easier and cheaper to recruit qualified staff from overseas to compensate quickly for

shortages. The resulting loss to developing countries of human resources in the health sector may mean that the capacity of the health system to deliver good quality care equitably is significantly compromised. Emigration of health personnel whose training was financed by these poor governments also means that the governments suffer direct financial loss.

Global labour market: Stilwell and colleagues have reported that nurses are part of the global labour market because many countries, both those that are rich and those that are low in resources, are reporting shortages of nurses (Stilwell et al, 2004). They further report that there are recruitment drives for health workers from resource-poor countries who target nurses to fill vacancies in richer countries. When developed countries recruit health workers from developing countries to fill vacant positions in their own rural areas, the problem of retention is exacerbated.

Responsible recruitment policies: There is evidence that some richer countries have instituted responsible recruitment policies, for example, the Ethical Recruitment Code of the UK National Health Service (NHS) that lists nearly every developing country as countries in which NHS managers should not recruit (Hongoro and McPake, 2004). Nevertheless, recruitment agencies find loopholes in the system as is evident in the growing number of nurses recruited from developing countries to work in the UK.

1.5.1.3 National Factors

The national environment comprises both push and pulls factors. Contextual factors such as a country's political and social-economic situation, situation of the health system, salary levels, as well as the extent to which donor agencies

are active, influence the retention of health professionals (Sitwell et al, 2004; Dambisya, 2007; Mathenauer and Imhoff, 2006).

Donor agencies: The presence of donor agencies often creates some distortions in the health sector and cause persistent destabilisation of the more highly trained health professionals. The policy of employing national professionals by cooperating agencies has a problematic effect on the health sector and on retention of health workers in the public sector. The prospect of immediate financial gains often causes qualified health personnel to leave their posts within the national public sector to take up better paying management and consultant positions with donor agencies (Zurn et al, 2002).

Public/private imbalances: In many African countries the health sector is essentially public. Over the past years there has been a growth in private health care providers. Because the public sector in many of the African countries is affected by budget constraints and deteriorating health systems, health care personnel are leaving to join the private sector which offers better pay and better working conditions (GHWA, 2006; Anyangwe & Mtonga, 2007).

National health budget: It has been widely reported that country per capita incomes make a difference to health systems performance including human resource performance (WHO, 2006; World Bank, 2008; GHWA, 2006). This however is a function of the choices that are made as to how these resources are used. Despite many African countries signing the Abuja Declaration to increase their national budget allocation to health to up to 15 % of total Gross Domestic Product (GDP), very few have met this commitment due to resource constraints and other competing national priorities. As a result, efforts to strengthen human resources for health are being undermined despite health

workers representing the single largest cost element in providing health services in low-income countries (WHO, 2006). Because of chronic underinvestment in the health sector, many of the poorest countries in the world lack the resources, both human and financial, to fund, implement and manage retention schemes adequately. In addition to funding incentive programmes that are aimed at retaining health professionals in public service, governments incur additional costs resulting from high turnover of staff. Every year, substantial numbers of health workers leave the health workforce, either temporarily or permanently. Studies show that costs associated with staff turnover are often high (Zurn et al, 2005). High turnover rates may lead to higher provider costs and affect the quality of care due to loss of work group efficiency and disruption of organisational performance. Other costs include recruitment of replacements, administrative costs such as advertising, screening and interviewing, lost productivity in the time before a replacement can be placed on the job and time that co-workers must spend away from their tasks to help a new worker (Masango S et al, 2008). Studies based in the UK and the USA show that the costs associated with retention problems can be substantial, with nurse turnover costs being the single largest contribution to total costs (Waldman et al, 2004).

Aging infrastructure and diminishing assets: The infrastructure, especially in resource-poor settings, is likely to be underdeveloped so that roads, transport, schools and housing are not adequate. These are important elements affecting staff retention and are a major cause of dissatisfaction and frustration for health care workers particularly those in rural areas (Zurn et al, 2005). Baumann (2007) reports that many of the public hospitals in developing countries are old and dilapidated and have outdated equipment increasing the

likelihood of work-related injuries to health professionals. This acts as a push factor for workers to leave their jobs.

Political will and Multi-sectoral collaboration: Some evidence suggests that finding solutions to the problem of retention will require political will and multi-sectoral collaboration involving all key decision-makers (Dambisiya 2007, GHWA,2006; WHO 2006) because many decisions-makers who play an important role in the development and implementation of strategies to address retention are located outside the health sector. These stakeholders include the Ministry of Finance, Ministry of Education and the Ministry of Housing and Development.

1.5.1.4 Institutional Factors

The institutional or work environment encompasses push and pull factors, such as local labour relations, management styles, existence or lack of leadership, opportunities for continuing education, availability of infrastructure, equipment and support (Lehman et al, 2008; Zurn et al, 2004; Dambisiya, 2007; Miti 2006). Other factors relevant to the retention of staff in the organization are interpersonal teamwork and appreciation by managers (Dielemann et al, 2003; Holmstroem and Elf, 2004). In their paper on how to develop and retain a motivated nursing workforce, Zurn and colleagues reported the importance of non-financial incentives such as promoting work autonomy, encouraging career development, adapting working time and shift work, reducing violence in the workplace, and leadership on the retention of nurses in rural areas (Zurn et al, 2004). Kingma (2003) also mentions the positive effects of professional development opportunities on retention.

Hospitals with supportive managers that favour greater latitude in decision-making by staff have also been reported to experience lower staff turnover. To support these findings, Evidence from a six-country study in Africa, namely Cameroon, Ghana, Senegal, South Africa, Uganda and Zimbabwe showed a correlation between access to continuing education and professional advancement and retention (Awesa et al, 2004).

Poor working conditions: In developing countries, and particularly in Sub-Saharan Africa, attempts to reform the health care sector have frequently failed to respond to the aspirations of staff concerning working conditions. Poor working conditions have been cited by several reports (Dambisiya, 2007; Hongoro & McPake, 2004) to have a negative effect on retention in the public sector and have been given as reasons for a growing number of health personnel to seek opportunities in the private sector or abroad. A survey of African health workers intending to migrate or already migrated showed that issues of living conditions dominated, with 80% of health workers surveyed in Cameroon citing living conditions as reasons for wanting to leave their country (Vujicic et al, 2004). In the same survey, health workers in Cameroon stated that they might be persuaded to stay by improvements in health care systems management, and 64%, 68% and 36% of health workers in Ghana, South Africa and Uganda, respectively, stated that improvements in the work environment might persuade them to stay.

Human resource management (HRM): Lehmann and colleagues (2008) report that the key to improve retention of health workers in remote areas lies in improving on management styles and human resource policy. The discussion of retention factors and strategies falls within the broad scope of HRM as a

strategic and coherent approach to managing staff of an organisation. They further report that addressing the complex interplay of factors impacting on retention will require the use of multiple, linked and coordinated HRM interventions.

Occupational hazards: Protection of health workers from occupational hazards is another important factor that has been documented to impact on retention and is critical to having an adequate workforce of trained and healthy personnel. In their document on health worker occupational health, the World Health Organisation reported that unsafe working conditions contribute to health worker attrition in many countries due to work-related illness and injury and the resulting fear of health workers of occupational infection (WHO, 2008). Lack of basic personal protective equipment or cleaning materials and the alarming rise in the number of people living with HIV and AIDS, plus the widespread resurgence of other infectious diseases, such as tuberculosis has added a new dimension to the increase of occupational risks and acts as a push factor for migration (INC, 2000). The risk of work-related infections is compounded by staff reductions and shortages in the wake of health service restructuring in many low-income countries. The International Nurses Council further reports that a nurse has the right to expect the employer to provide a safe and healthy work environment. It is therefore incumbent upon the employer to provide a safe and supportive work environment that protects nursing/midwifery personnel from occupational hazards if staff turnover is to be minimized.

1.5.1.5 Demographic Characteristics and Individual Factors

Evidence shows that the decision for health professionals to move from one place to another is essentially a personal one and therefore susceptible to changing personal circumstances. It has been documented that individual factors which may impact on decisions to stay and work in the rural area include origin, age, gender and marital status, and may often change in a person's life and career cycle. (Lehmann et al, 2008). Stilwell et al (2004) have reported the following trends: when deciding where to work, men prioritize economic considerations while women put family and marriage considerations first. Workers who are single indicate a greater intention to leave work and have higher turnover than married workers. Spouses have influence on an individual's mobility, especially female workers. Rural upbringing increases likelihood of health workers returning to practice in rural communities. Nurses with the highest level of qualifications are more likely to migrate than associate nurses who have a lower level of qualification. High turnover rates have been documented among younger workers and workers with shorter length of service (Zurn et al, 2005). Younger, well-educated nurses are likely to want to develop their careers and this may mean changing jobs. Furthermore, it has been reported that the importance of non-financial incentives for retention differs according to levels of work experience of individual health care workers (Dambisya, 2007).

Job satisfaction: Job satisfaction should also be taken into account when examining the issue of retention. There is support in the empirical literature for the existence of a link between job satisfaction and job exit as well as job satisfaction with intent to stay (Zurn et al, 2005). Factors affecting job

satisfaction include workload, staffing, flexible scheduling, increasing nursing knowledge, promotion opportunities, work situation, salary and decision-making latitude. Some studies suggest that salary is just one of the reasons why nurses are quitting their jobs. For example, a study by Shields and Ward (2001) suggests that dissatisfaction with promotion and training opportunities have a stronger impact than workload or pay. Another study to assess nurse job satisfaction on 43,000 nurses from more than 700 hospitals in the US, Canada, England, Scotland and Germany showed that the percentage of nurses planning to leave their present job because of dissatisfaction varied from 17% in Germany to 39% in England (Aiken et al, 2001). These findings confirmed the relationship between workplace stress and nurse morale, job satisfaction, commitment to the organisation and intent to quit.

Health worker motivation: The relevance of motivation to retention has also been documented. Improvements in pay and conditions of service are important motivating factors and act as incentives for workers to remain in their posts. Motivation in the work context is defined as an individual's degree of willingness to exert and maintain an effort towards organisational goals (Bennett and Franco, 2000). Improved pensions, child care, education opportunities and recognition are also known to be important motivating factors (2001; Mutizwa-Mangiza, 1998). A study by Stilwell (2001) revealed that health workers based in remote areas of Zimbabwe, despite a lack of financial incentives and hard working conditions, frequently exhibited a high level of motivation to perform well because of good leadership and supportive management, among other factors. Her findings suggest that certain non-financial incentives can have a beneficial influence on motivation even under adverse working conditions. Furthermore, Martinez and Martineau, (1998)

reported that when workers are motivated, they are less likely to migrate to wealthier countries. To support these findings, another study (sited in Stilwell et al, 2004) on the motivation of health care workers in four developing countries in Africa, Korte et al, 2003 observed that low job satisfaction and motivation affects the performance of health workers as well as act to push workers to migrate.

1.5.1.6 Local Environmental Factors

The local environment is primarily made up of general living conditions and the social environment. It is undisputed that general living environment, together with social obligations, are important elements in decisions on whether to remain in a rural area and work. Lack of housing, lack of health care and lack of schools for children are quoted internationally as reasons why staff leave health services in remote areas (Lehmann et al, 2008). A study that was carried out in Ghana, that analysed the factors influencing the retention of health workers in deprived/ hardship areas (Mensah K, 2002), revealed the importance of general living conditions, including staff accommodation, schools and qualified teachers, good drinking water, electricity, roads and transport to the retention of health staff in rural Ghana.

1.5.2 THE USE OF NON-FINANCIAL INCENTIVES FOR RETENTION

Based on evidence from a wide range of settings, there is little doubt that health workers do respond to incentives and that incentives influence worker's willingness to remain in their jobs (Hongoro and McPake, 2004; GHWA, 2008). Earlier researchers have noted a gap in the existing literature on the use of non-financial incentives and pointed out that health worker retention initiatives

were mostly concerned with financial incentives (Lehmann et al, 2005). However, there is growing evidence of the wide use of non-financial incentives to retain health workers especially in the public service and in rural and remote areas. Zurn and colleagues have reported on some successes in retention strategies. Refresher trainings were effective at increasing retention of human resource for health according to a German Agency for Technical support (GTZ) project implemented in Zambia. Whereas in Ethiopia, a mix of continued education, provision of housing and establishment of clear career paths is claimed to have resulted in improved retention (Zurn et al, 2005).

The Regional Network for Equity in Health in East and Southern Africa (EQUINET), in cooperation with the East, Central and Southern African Health Community (ECSA-HC), conducted a study on non-financial incentives for human resource management in East and Southern Africa. They categorised incentives in three areas: 1) training and career path-related incentives, which include continuing professional development scholarships and research opportunities; 2) social needs incentives such as housing, transport and child care; 3) improved working conditions incentives offering better facilities and equipment and providing security for workers. The study found that opportunities for further training, staff accommodation, and transport and education facilities for children were cited amongst the most attractive non-financial incentives in the East and Southern African region. However, the study did not find sufficient evidence on relative effectiveness of these non-financial incentives on the retention of health workers. A review of these incentives carried out by Dambisya (2007) revealed that the main reasons for the lack of evidence lay therein that incentive packages were not systemically documented in terms of their aims, design, implementation, monitoring and

evaluation, and time frames. The categories of health care workers targeted by the incentives were often not mentioned. The review showed that monitoring and evaluation of incentives programmes lacked performance appraisal at district and provincial levels as well as more developed monitoring and evaluation in strategic plans. Dambisiya further reports that the successful application of non-financial incentives is associated with proper consultative planning, long-term strategic planning within the framework of health sector planning, sustainable financing mechanisms, e.g. national budget and donor funding through sector-wide approach (SWAP), the use of human resource planning based on sound human resource information systems data and the development of country-owned programmes rather than those that are donor driven (Dambisiya, 2007). Sector-wide approach is defined as all significant funding for the sector, supporting a single sector policy and expenditure programme, under government leadership, adopting common approaches across the sector and progressing towards relying on government procedures to disburse and account for all funds (International Health Partnership website).

A survey, of health care workers in six African countries who intended to leave their home country demonstrates that the relative importance of factors affecting migration varies from person to person and that there are common patterns within countries. The same can be applied for factors affecting retention. In Cameroon for example, a lack of promotion opportunities, poor living conditions and a desire to gain experience ranked above poor wages as reasons why health care professionals chose to migrate. On the other hand, in Uganda and Zimbabwe wages were the most important factor (Awases, 2003). These findings indicate that policies designed to deter health professionals

from leaving their posts should be based on the needs of specific health care cadres and should be country specific.

1.5.3 THE USE OF A COMBINATION OF FINANCIAL AND NON-FINANCIAL INCENTIVES FOR RETENTION

Although less information is documented on the use of non-financial incentives to improve retention especially in under-served areas (Dambisiya, 2007), the use of a combination of financial and non-financial incentives to motivate staff, improve performance and attract them to rural and remote areas has been more widely documented (Mitti, 2006 Dambisiya, 2007; Stilwell, 2001; Mutizwa-Mangiza, 1998). An example of retention success using schemes that combined financial and non-financial incentives is the Emergency Human Resource Programme in Malawi which started in 2004. This programme is supported by DFID and the Global Fund. The programme has the following components: salary top-ups, training opportunities, use of international staff for technical assistance in human resource for health planning and management, and improved monitoring and evaluation. The programme was rolled out in rural areas. An assessment of progress carried out one year into implementation found that the package has had a positive impact on in-country attrition: nurse outflows from public sector decreased, 591 new health workers were recruited and 700 who had dropped out of government service returned (Palmer, 2006). Another example is the Zambian Health Workers Retention Scheme which provides various retention incentives, including money, career development and housing. Implementation of the scheme resulted in an increase in the health work force in the public sector from 23,000 in 2003 to 51,000 in 2006 (Miti, 2006). Though the programme was

successful in attracting health workers back into the public sector, retaining them in the rural and remote areas presented a challenge for policy makers in the Ministry of Health.

1.5.4 GLOBAL ACTORS

There are many actors that are working to achieve time-bound targets such as the Millennium Development Goals for health. Their work includes addressing issues affecting human resources for health. For example, development institutions, donors and international health experts have created a consortium - the Global Health Workforce Alliance (GHWA) - whose purpose is to promote greater insight and effective action on health workforce challenges. These challenges include scope and nature of shortages, implications for training of more health workers, brain-drain and other issues. The GHWA also serves as a catalyst and a global convener to bring together different stakeholders for learning, dialogue, advocacy and joint action.

In 2006, the World Health Organisation identified the global health workforce crisis, including the critical shortage of nurses as a priority item for action. In the 2006 World Health Report: Working Together for Health, WHO called for support and protection of the health workforce and committed to providing financial and technical support, as well as policy guidelines to governments, especially of developing countries, to find innovative ways to improve retention and distribution of their health workforce. Furthermore, the WHO committed to accelerate negotiations for a code of practice on the international recruitment of health workers.

The International Labour Organisation (ILO) is another global actor that is active in addressing problems concerning nurses. It developed the Nursing Personnel Convention and its associated recommendations. The convention provides guidance on strengthening nursing services by addressing core requirements for safe practices and decent working conditions.

The International Council of Nurses (ICN) is also active in addressing nurse-related issues. For example, in the area of continuing education, the ICN has supported the establishment of mobile libraries in 16 developing countries thus helping to increase nurses' access to the latest information. ICN in partnership with ILO and WHO has developed guidelines for addressing workplace-related problems (GHWA, 2006).

Although the literature review revealed that there are many push and pull factors that have an impact on retention, the study focused only on those factors that were relevant to the ZHWRS.

CHAPTER 2

2.0 METHODOLOGY

2.1 STUDY DESIGN:

The study utilised a descriptive cross-sectional design. Cross sectional studies are useful to health planners in that they provide information at that point in time that will help them develop appropriate services, allocate resources, decide on priorities and target certain populations.

2.2 STUDY SITES:

The Copperbelt province is the copper mining area of Zambia, around the towns of Ndola, Kitwe, Chingola, Luanshya and Mufulira. The study was conducted in two rural hospitals, namely Mpongwe Mission Hospital and St Theresa Mission Hospital, both located in Mpongwe district, formerly known as Ndola rural district. Mpongwe Mission Hospital is situated 150 km from Ndola town, while St. Theresa Mission Hospital is situated 120km from Ndola town. The number of people living in Mpongwe district is estimated to be 111,000. The district is sparsely populated with a population density of 1-10 per square kilometre and the nurse to population ratio is 35-50 per 100,000 (MoH, 2006). Mpongwe district is a poor area with most of the economic activity rooted in subsistent farming, fishing and charcoal burning. Most of the men travel to the neighbouring mining towns to work in the mines, while others are employed by the commercial farms in the area. Many of these farm workers are employed on short term contracts during the planting season and during the harvest. In the Copperbelt Province, about twenty percent of the

adults are infected with HIV and AIDS. Malaria and malnutrition are among the most common causes of death among children under the age of 5.

The two hospitals are run by the Mpongwe Baptist Association in partnership with the Zambian government through a Memorandum of Understanding between the Government and the Church Health Association of Zambia (CHAZ), where Mpongwe and St. Theresa Mission Hospitals, as well as the Mpongwe Baptist Association (MBA) are members. CHAZ offers assistance to member institutions in areas of planning and management, including human resource development, health financing, infrastructure development, health systems research, and health information management systems. The government posts staff to hospitals and other health institutions covered by the Memorandum of Understanding. Two thirds of the employees at the two health institutions are seconded by the government, while one third is employed by the hospitals. The government is contributing to their salaries through CHAZ. The Government also gives the hospital a monthly grant and provides medicines and technical support through the District Health Management Team. However, both the grants and the technical support are dependent on the availability of funds and are often not provided.

The hospitals were chosen out of three in the district because they are the largest rural hospitals and they employ more nurses than the smaller hospital. Furthermore, the main road leading to the hospitals is in good condition, making accessibility possible especially during the rainy season.

2.3 STUDY POPULATION:

The study population comprised of male and female professional and enrolled nurses, professional and enrolled midwives, as well as auxiliary nurses working at the two hospitals at the time of the study. Enrolled nurses study for a period of two years before they are allowed to practice. Professional nurses, also known as registered nurses, have a significantly expanded scope of practice, education and clinical training compared to that of enrolled nurses. They study for a period of three years and obtain a degree or diploma. Midwives can be enrolled or professional. They have an additional qualification and are specialised in giving prenatal care to expecting mothers, attending the birth of the infant and providing postpartum care to mother and infant. Midwives can have up to five years of total training. Auxiliary nurses are lay community workers, who have been employed by the hospitals and are trained to carry out specific nursing skills (ICN, 2000).

2.4 POPULATION, SAMPLE AND SAMPLING PROCEDURE

The type of sampling that was utilised for this research involved convenience sampling. This non-random sampling design was decided upon based on the availability of nurses. Both institutions were operating with less than half of recommended number of nurses, with Mpongwe hospital having a total of 26 and St. Theresa 31 nurses. When information is collected from members of the population who are most easily accessible and available to provide the required information, this refers to convenience sampling (Joubert G & Ehrlich R, 2007).

Although a total of 56 nurses worked in both hospitals, the selected sample size constitutes 40 nurses and no further interviews were carried out after the desired number was reached. The sample size was decided upon based on what was manageable for the researcher in terms of time and available financial resources. Because of the similar number of nurses in both institutions, twenty interviews were carried out at Mpongwe Mission hospital in the first week of research and twenty at St. Theresa's Mission hospital in the second week. There were no selection criteria. All the nurses that were present on the interview days and willing to participate were included in the study. The researcher has taken note of the possibility that retention issues might not have been relevant to newly appointed staff.

2.5 DATA COLLECTION METHOD:

All the interviews were administered by the researcher. Interviews were conducted from the 27th to the 30th of July 2009 at Mpongwe Mission Hospital and from the 31st of July to the 2nd of August 2009 at St Theresa Mission Hospital. An average of 4 nurses were interviewed a day. Most of the nurses preferred to be interviewed before their shifts commenced, during their lunch break or after their shift ended. Interviews took place at a location of their choice which at times included their homes. Appointments were arranged for a more convenient time where nurses were approached during working hours. The interviews were administered by the researcher on a one to one basis and the average duration of an interview was 25 minutes. Only one out of the forty questionnaires was incomplete and this was due to an error by the researcher. None the less, completed sections of the questionnaire were included in the study.

Nurses were informed in advance about the days scheduled for the researcher to visit their facility by means of a written letter to the head of the facilities and the nursing managers. Participation in the interview was voluntary and the reason for the survey was explained to them. Only the nurses that agreed to participate were included in the sample. Three nurses did not want to participate.

2.6 DATA COLLECTION INSTRUMENT:

Data was collected by means of structured interviews using a questionnaire (appendix A). The questionnaire was developed after a literature review to identify factors relevant to retention, as well as review of the conditions for nurses outlined in the **Zambian Health Worker Retention Scheme**. This review formed the basis for some of the questions.

Benefits of utilising a questionnaire (Joubert G & Ehrlich R, 2007):

- The cost per questionnaire was relatively low
- Structured information in the questionnaire and few open questions made analysing questionnaires relatively straightforward.
- The method of data collection by means of structured interviews produced quick results and the response rate was very high.
- The quality of data was good because there was only one interviewer thus limiting variation in the way the questionnaires were administered.

Disadvantages of utilising a questionnaire:

- The main disadvantage of utilising a questionnaire was that the interviewer might have influenced the respondents to answer selectively or give socially acceptable answers resulting in response bias.

2.7 QUESTIONNAIRE PRE-TESTING

The questionnaire was pre-tested for reliability and validity on five nurses employed at two hospitals in Lusaka. Pre-testing of the data collection tool was conducted in order to determine whether the questions were relevant to the problem and understood by the respondents. No changes were made to the questionnaire after piloting. Findings from the pilot study were excluded from the final analysis of the data.

2.8 DATA ANALYSIS

Data from the questionnaire were divided into six sections: demographic information, rural experience, individual factors, local environmental factors, institutional factors and the Zambian Health Workers Retention Scheme. The Lickert scale was used in sections where participants were asked to specify their level of agreement to particular statements. The responses “strongly agree” and “agree” were combined and presented as “agree”, and “strongly disagree” and “disagree” were presented as “disagree” for easier analysis and clearer presentation of the results because of the small sample size. Where participants were required to choose three factors in order of importance, the three most frequently mentioned factors per section were reported as important for retention. . Coded data were entered in Stata 10, a statistical

software programme, on a collection sheet similar to the Questionnaire for the analysis. The analysis consisted of descriptive statistics, such as frequencies of occurrences and percentages.

2.9 DATA CODING

Coding was done for the open-ended questions in the questionnaire. Responses to all the open-ended questions such as those that required the participants to explain or comment were grouped into themes by manually collecting all responses and deleting duplicate responses, and these themes were then coded. The themes were decided upon based on commonly mentioned statements or words.

2.10 DATA CLEANING

Data entry was conducted by the researcher with the help of a statistician, who provided assistance in the interpretation of responses, coding and checking and running frequencies at the end of the data entry. Given that there were only forty questionnaires, all were double-entered and checked for outliers and mistakes. To ensure clean and accurate data, constant collaboration was initiated with the statistician on all issues relating to entry, methods, codes and tabulation

2.11 STUDY VARIABLES

The aim of this study was to explore the factors that influence retention in rural areas, with a particular focus on the individual, organisational and local environmental factors. Incentives offered in the Zambia Health Worker

Retention Scheme were also explored to determine whether these were sufficient to retain nurses in rural service.

For the purpose of this study, the data gathering tool that was used included the following topics:

- I. Demographic information: sex, age, marital status, years of service in the public sector, professional qualifications and employment status,**
- II. Individual Factors: rural experience, job change considerations, reason for being in the rural area, workplace preference, and competence, motivation to work, appreciation from the community, value from employers, safety in the workplace and ability to make work-related decisions.**
- III. Institutional Factors: in-service training, continued education and professional advancement, opportunity to participate in decision-making, promotion opportunities, disciplinary procedures, performance appraisal and supervision, inter-personal relationships, workplace facilities, working hours, unsafe working conditions, access to facility transport, availability of water and electricity at facility.**
- IV. Local environmental factors: accommodation, distance from work, access to health care, education for children, access to transport for personal use, access to groceries and other household supplies, good drinking water, electricity.**
- V. Incentives offered in the Zambia Rural Health Workers Retention Scheme: transport per health facility, water reticulation system, electricity and medical equipment.**

2.12 ETHICAL ISSUES

To ensure an ethical study a written explanation about the nature of the research was provided to all participants and both a voluntary signed informed consent and confidentiality agreement written in English were obtained from all participants prior to commencing the study. Sensitive and personal questions were limited, no names were requested and the nurses were interviewed outside working hours at a location of their choice that ensured privacy. Permission to carry out the study was obtained from the relevant hospital and government officials prior to commencing the study. Ethical clearance was obtained from the Ethics Committee for research on human subjects of the University of the Witwatersrand (Ethics number M081144) and the University of Zambia prior to any data collection being carried out. Clearance was approved unconditionally.

CHAPTER 3

3.0 RESULTS

Although a number of factors that influence retention have been mentioned in this literature review, the study focused on local environmental, institutional and individual factors. This chapter will highlight pertinent results of the study as follows: the demographic characteristics of respondents are presented first, followed by answers in response to questions about rural experience. This is then followed by factors that the nurses prioritized as being important for retention in rural areas and their views on the incentives offered in the ZHWRS. Lastly comments on what other factors, not mentioned, in the questionnaire would influence their decisions to remain in a rural area are presented.

3.1 DEMOGRAPHIC CHARACTERISTICS

Demographic information of the respondents for this study is represented in Table 2 below. The majority of the nurses interviewed were female aged between 30 and 50 years. The minimum, maximum and mean age could not be presented because respondents were not asked their age in numbers but were given a range to choose from. The same applies to service years in the public sector. The majority of the respondents had served in the public sector for more than two years, were permanently employed and held the qualification of either enrolled nurses or midwife.

Table 2 Demographic characteristics of nurses

Total number of respondents (n) = 40		
Variable	Number	Percentage
Gender		
Male	11	27.5%
Female	29	72.5%

Age Distribution		
20-29	9	22.5%
30-39	12	30%
40-49	11	27.5%
>50	8	20%

Marital status		
Never married	10	25%
Married	23	57.5%
Divorced	3	7.5%
Widowed	4	10%

Service Years in the Public Sector		
<2	5	12.5%
2-10	13	32.5%
11-20	9	22.5%

21-30	11	27.5%
>30	2	5%

Qualifications		
Enrolled Nurse	15	37.5%
Registered Nurse	6	15%
Midwife	15	37.5%
Other	4	10%

The four nurses who responded to having other qualifications were all auxiliary nurses.

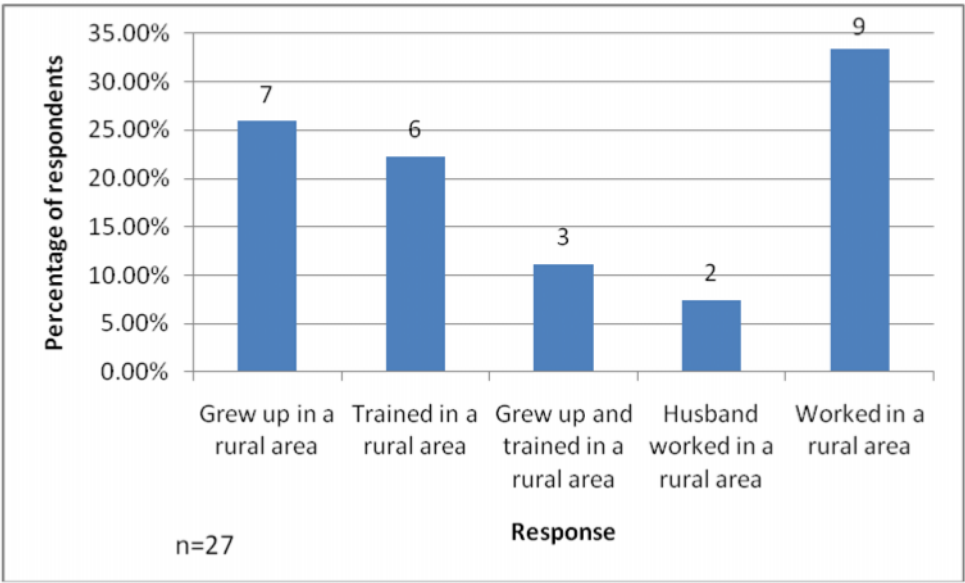
3.2 EMPLOYMENT STATUS

Ninety-five percent (n=38) of the respondents were permanent employees of the Ministry of Health, while the remaining five percent (n=2) were on long term contracts with the hospitals.

3.3 CURRENT AND PAST RURAL EXPERIENCE

Sixty-seven and a half percent (n=27) of respondents had lived in a rural area before coming to their current post. Figure 2 explains the nature of their rural experience.

Figure 2 Explanation of past rural experience



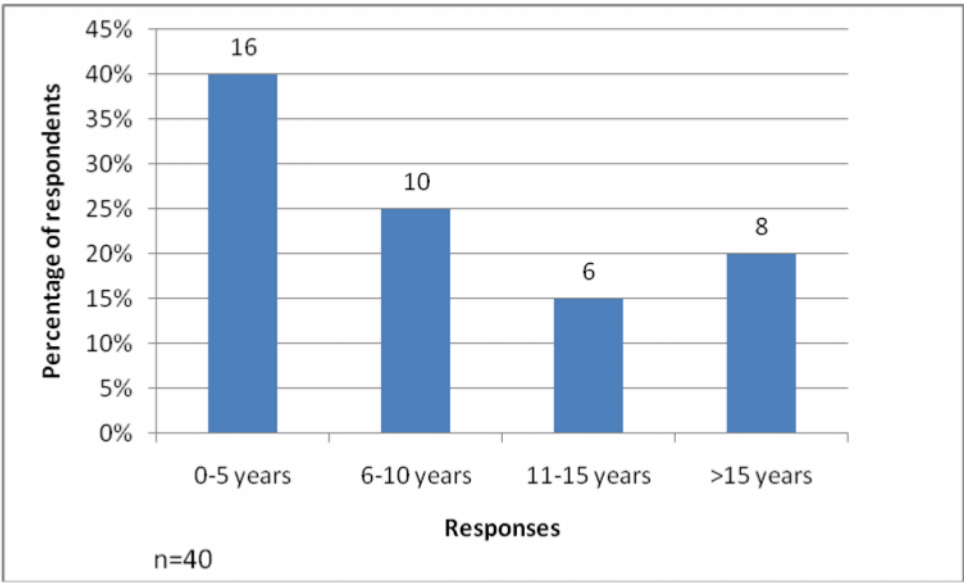
3.3.1 Total number of years working in a rural environment

- Thirty percent (n=12) of respondents had worked in a rural area for 0-5 years;
- Twenty percent (n=8) for 6-10 years and
- Fifty percent (n=20) for more than 10 years.

3.3.2 Number of years working at current institution

The minimum time that a respondent had been working at their current institution was two months and the maximum number of years working at their current institution was 29. The mean number of years that respondents had been working at their current institution was 9 years. Figure 3 displays the number of years that respondents have been working at their current post.

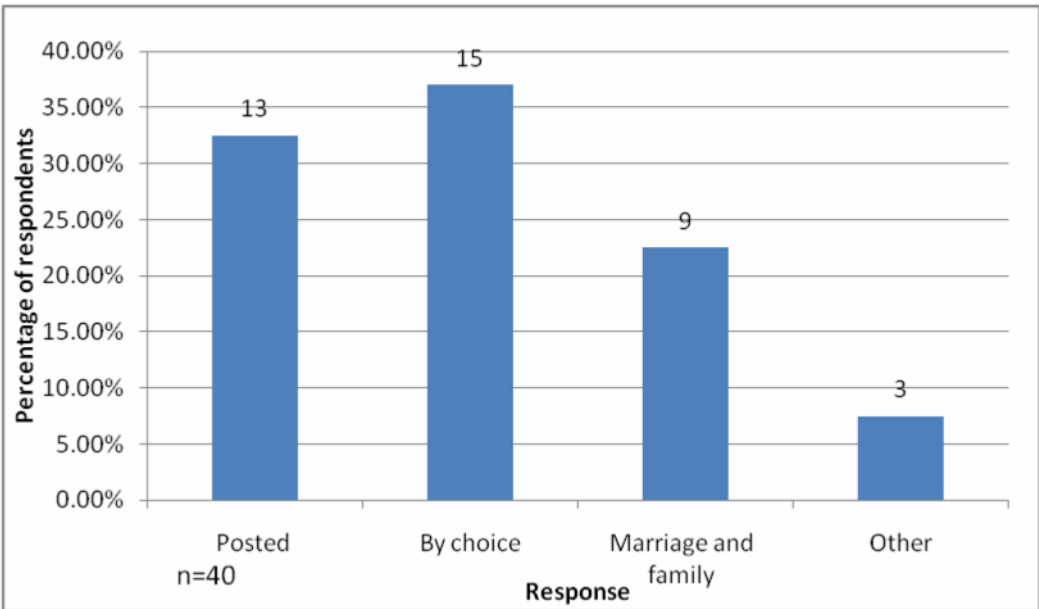
Figure 3 Number of years working at current institution



3.3.3 Reasons for going to a rural area

The main reasons for going to the rural areas were posting and choice as depicted in Figure 4.

Figure 4 Main reason for going to a rural area



In figure 4, the responses “marriage” and “Family” were combined for better presentation due to the small sample size.

3.3.4 Reasons for remaining in a rural area

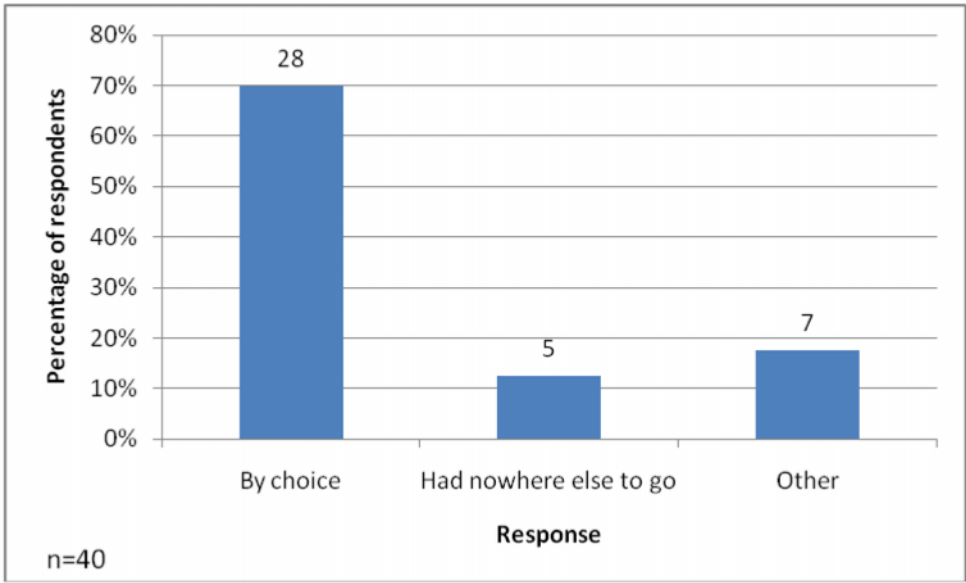
Responses to the question “why have you remained working in a rural area?” are shown in Figure 5.

The following are the responses from the seven nurses who gave other reasons for remaining in a rural area:

- Three remained because their husbands worked in the area,
- Three were posted by the government but would have preferred to work elsewhere, and
- One nurse was appointed by the Diocese.

When asked to elaborate on their preference to go to and to remain in a rural area, some of the nurses revealed that although the hospital accommodation was generally of poor quality, the houses were bigger than in urban areas where nurses’ accommodation often consists of one room apartments. In their rural homes, nurses had more space to accommodate their families as well as extended families. Another reason that was given for preferring to live in a rural area was the opportunity to engage in farming activities as a way of earning additional income.

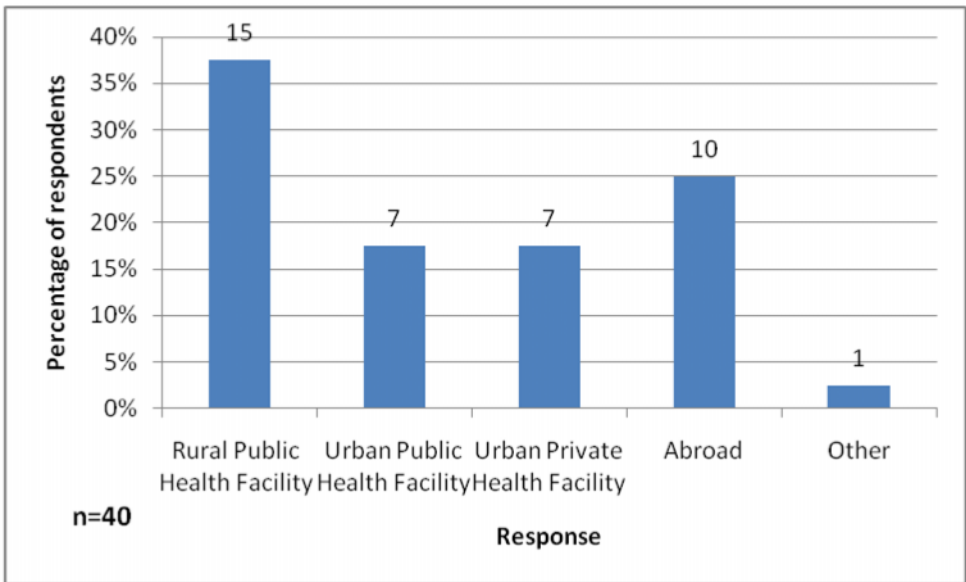
Figure 5 Main reasons for remaining in the rural area



3.4 PREFERRED WORK PLACE AND CONSIDERATION OF CHANGING JOBS

The majority of respondents preferred working in the rural area and had never considered changing jobs. Figure 6 shows responses to the question “Given a chance where would you most want to work?”

Figure 6 Preferred work place



None of the respondents preferred to work in a rural private health facility and only one gave another preference which was to work in an urban area but outside of the health sector.

When asked whether the respondents had ever considered changing jobs 77.5% (n=31) of them responded that they had never considered changing jobs while 22.5% (n=9) had considered changing jobs.

3.4.1 Reasons for considering changing jobs

- Seven out of the nine respondents who had considered changing jobs had done so because of economic reasons: they all wanted “a better paying job”. Five of the respondents who wanted a better pay wanted to change professions but remain working within the health sector, while two wished to work outside of the health sector.
- Two out of the nine respondents who had considered changing jobs said this was because they were not motivated to work and found their work boring and monotonous.

3.5 INDIVIDUAL FACTORS INFLUENCING RURAL RETENTION

The majority of respondents agreed that appreciation from the community, ability to achieve tasks easily and safety in the work place were important factors influencing their decision to remain in a rural posting, however, only a few of them ranked these factors as first choice according to level of importance. An interesting observation was that the least number of participants agreed that motivation to work had influenced their decision to remain in a rural posting but the majority ranked this factor as first according to level of importance.

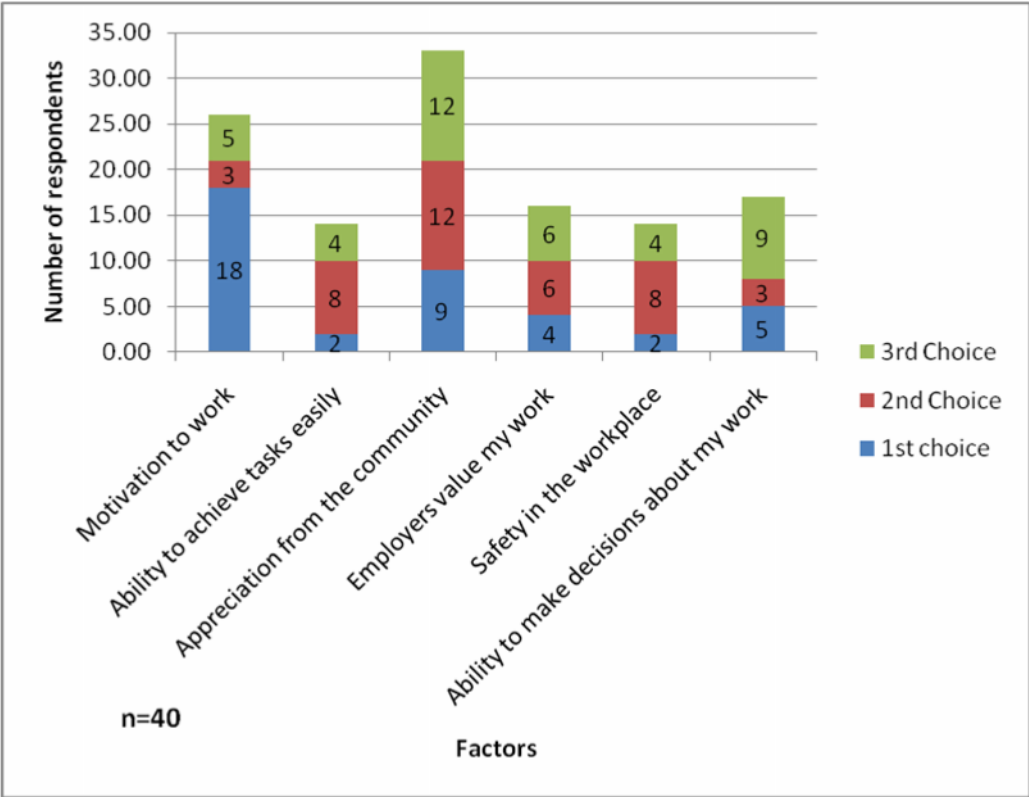
Table 3 shows responses according to the level of agreement to the statement “the following individual factors have influenced my decision to remain in a rural posting”.

Table 3 Individual factors influencing retention

Factors	Agree	Unsure	Disagree
Motivated to work	23	0	17
Ability to achieve my tasks easily	33	4	3
Appreciation from the community	36	1	3
Employers value my work	26	6	8
Safety in the workplace	32	1	7
Ability to make decisions about my work	31	4	5

Figure 7 shows the ranking of individual factors according to level of importance.

Figure 7 Ranking of individual factors according to level of importance



The three individual factors that were the most frequently prioritised as important for retention are as follows:

- **Appreciation from the community (n=33)**
- **Motivation to work (n=26) and**
- **Ability to make decisions about work (n=17).**

3.6 LOCAL ENVIRONMENTAL FACTORS INFLUENCING RETENTION

The majority of respondents agreed that having access to good health care, having electricity at home manageable distance to work had influenced their decision to remain in a rural posting. The majority disagreed that their current accommodation influenced their decision to remain in a rural posting. This finding suggests that the majority of nurses were infact not satisfied with their accommodation. The majority, however, ranked satisfactory accommodation as first choice according to level of importance for retention. Table 4 shows responses according to the level of agreement to the statement “the following local environmental factors have influenced my decision to remain in a rural posting”.

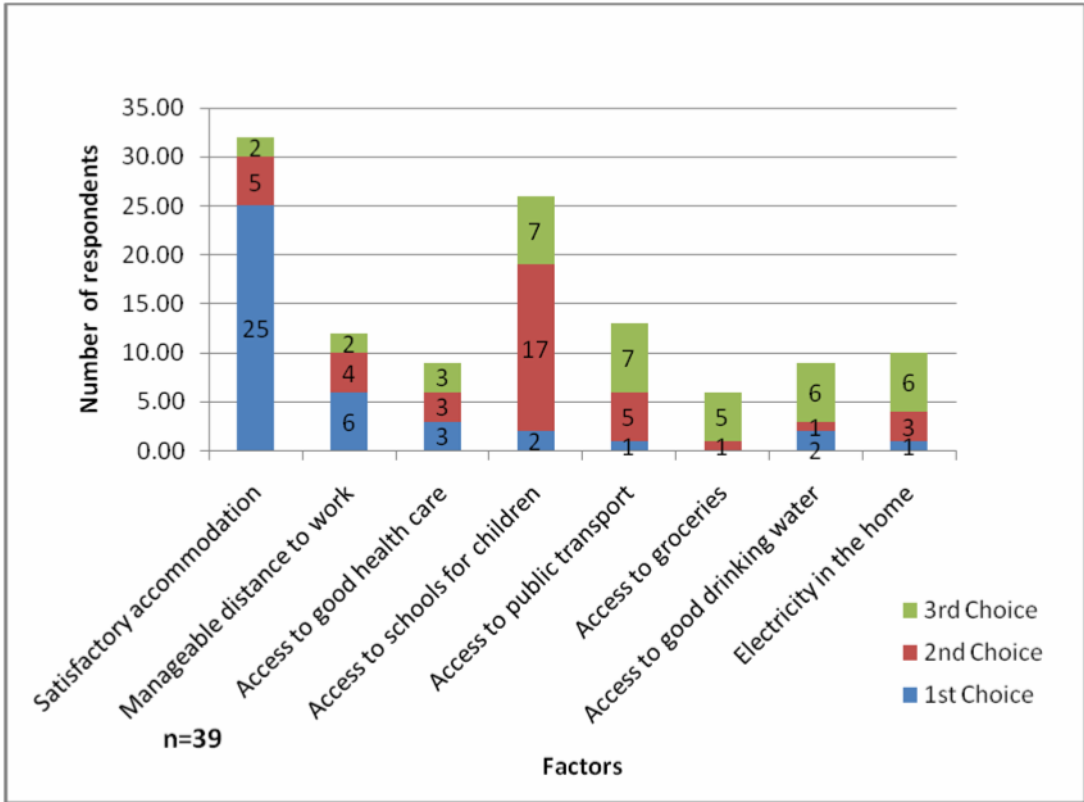
Table 4 Local environmental factors influencing retention

Factors	<i>Agree</i>	<i>Unsure</i>	<i>Disagree</i>
Satisfactory accommodation	16	0	24
Manageable distance to work	37	0	2
Access to good health care	39	0	0
Access to schools for children	25	2	11
Access to public transport	31	0	7
Access to groceries	25	1	13
Access to good drinking water	36	0	3

Electricity in the home	38	0	1
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Figure 8 shows the ranking of local environmental factors according to level of importance.

Figure 8 Ranking of local environmental factors according to level of importance



The three local environmental factors that were most frequently prioritized as important for retention are as follows:

- Satisfactory accommodation (n=32)
- Availability of schools for children (n=26) and
- Manageable distance to work (n=13).

3.7 INSTITUTIONAL FACTORS INFLUENCING RETENTION

The majority of nurses agreed that availability of electricity and water, having good relationships with colleagues and having access to continuing education and professional development had influenced their decision to remain in a rural posting. The majority of them ranked access to continuing education and professional development as first according to level of importance followed by availability of adequate in-service training. Half of the respondents disagreed that availability of essential equipment, tools and supplies, as well as opportunity for promotion had influenced their decision to remain in a rural posting. This suggests that essential equipment, tools and supplies were not available at the workplaces and that there was minimal opportunity for promotion.

Figure 11 shows responses according to the level of agreement to the statement “the following institutional factors have influenced my decision to remain in a rural posting”.

Table 5 Institutional factors influencing retention

Factors	Agree	Unsure	Disagree
Access to continuing education and professional advancement	33	0	7
Adequate in-service training	29	4	7
Availability of essential equipment, tools and supplies	15	4	21

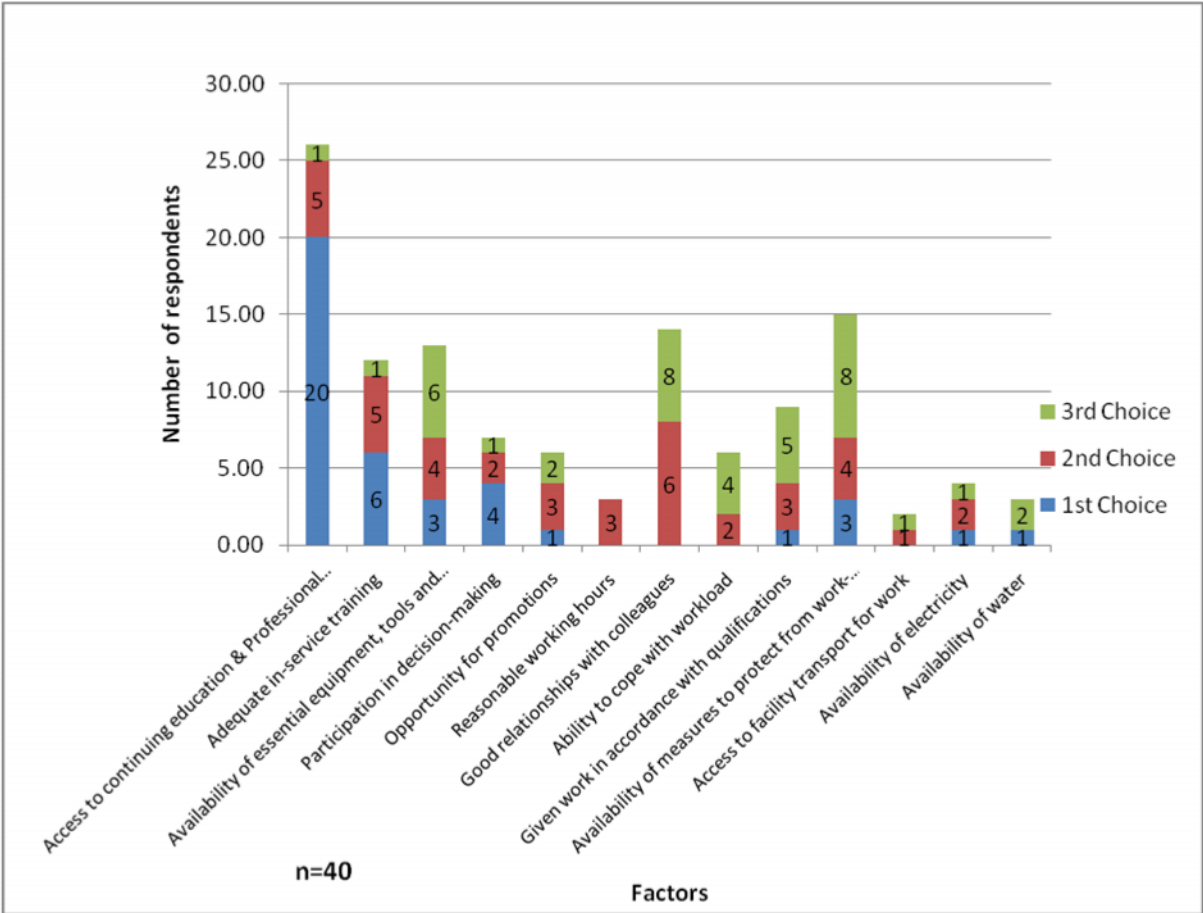
Opportunity to take part in decision making concerning my work	28	1	11
Fair disciplinary procedures	22	10	8
Opportunity for promotions	14	6	20
Reasonable working hours	38	0	2
Good relationship with colleagues	27	2	11
Ability to cope with workload	27	2	11
Given work in accordance with qualifications	24	2	14
Adequate measures put in place to protect from work-related infections	24	2	14
Access to facility transport for work	25	4	11
Availability of electricity	39	0	1
Availability of a functioning water reticulation system	37	0	3

The three institutional factors that were most frequently prioritised as important for retention are as follows:

- Access to continuing education and professional development (n=26)
- Availability of measures to protect from work-related infections (n=15) and
- Having good relationships with colleagues (n=14).

Figure 9 shows the ranking of institutional factors according to level of importance.

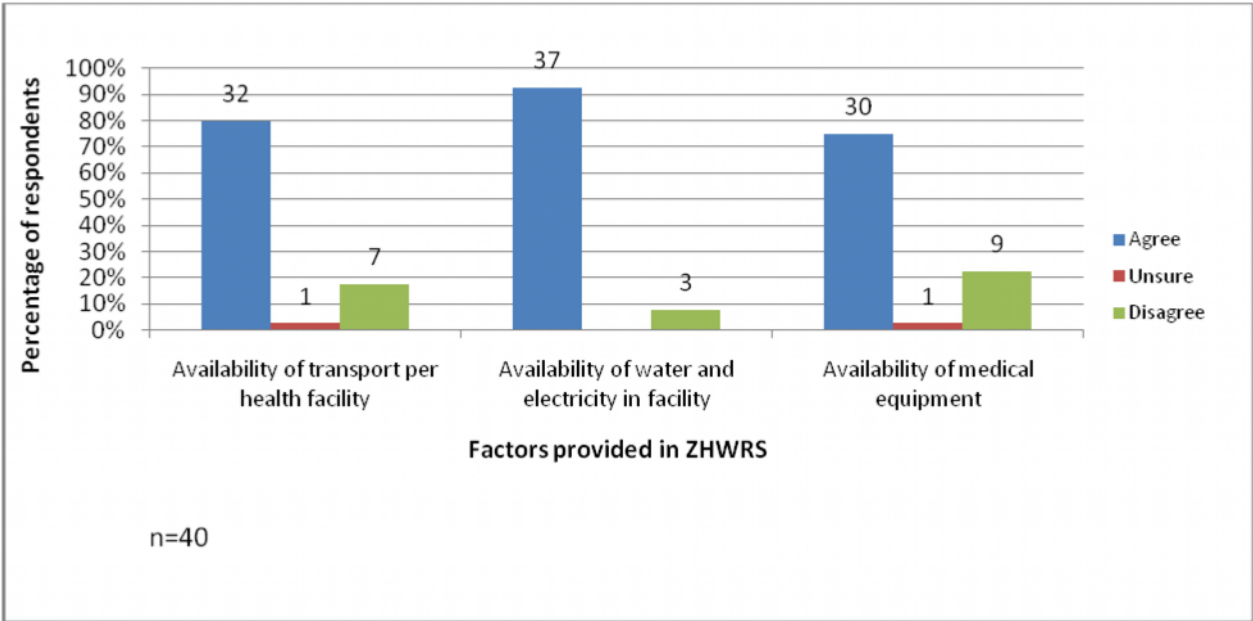
Figure 9 Ranking of institutional factors according to level of importance



3.8 INCENTIVES PROVIDED IN THE ZAMBIAN HEALTH WORKER RETENTION SCHEME FOR RURAL NURSES

Responses to the statement “the following incentives provided in the **Zambian Health Workers Retention Scheme** are important to promote the retention of nurses in rural areas” are shown in figure 10. Almost all the respondents agreed that these factors were important for retention.

Figure 10 Incentives provided in ZHWRS for nurses



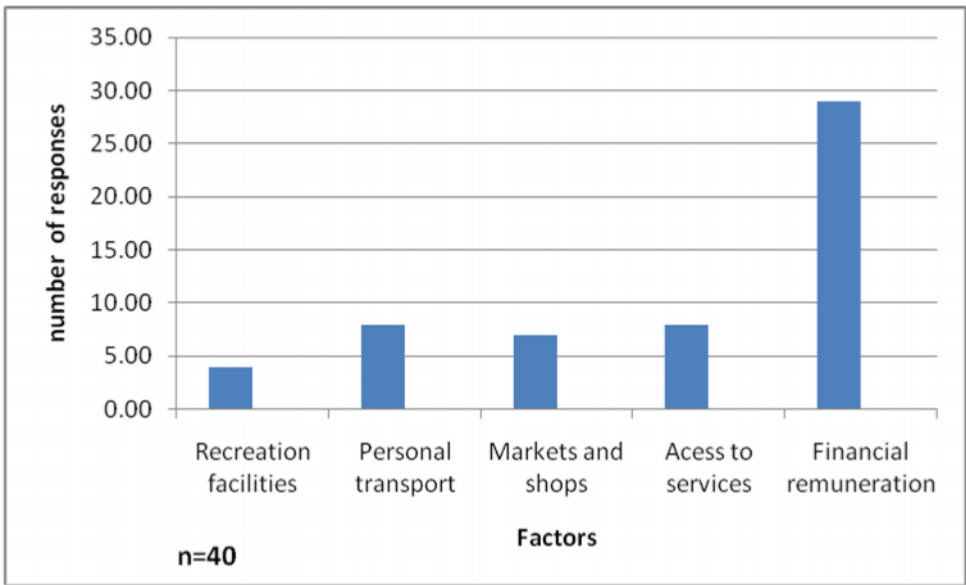
Availability of water and availability of electricity have been combined in figure 10 because respondents either agreed to both or disagreed to both.

3.9 OTHER FACTORS CONSIDERED IMPORTANT FOR RETENTION OF NURSES IN A RURAL SETTING

Responses to the question” what other factors, not mentioned in this questionnaire, are in your opinion important for retaining nurses in rural areas?” are shown in Figure 11. Respondents gave multiple answers. The commonly mentioned words and statements were put together into five themes as presented below. The themes “access to services” included responses such as banking, postal, telephone and internet services ,while “financial remuneration” included responses such as loans, allowances, bonuses and increased salary. The majority of respondents were of the

opinion that financial remuneration was another important factor that would influence retention positively.

Figure 11 Other factors considered important for rural retention



3.10 STUDY LIMITATIONS

For the purpose of this research convenience sampling was utilised. This type of sampling design will almost always introduce bias and the results are not generalisable, except to the extent of the two institutions which are represented in this research. Convenience sampling, however, is a worthwhile tool in a study such as this one, where ideas and insights are more important than scientific objectivity. This type of sampling also provides limited control to the researcher over who participates in the study. It is important to note that the nurses that refused to participate, as well as those who were on leave, off duty or for some reason not available during the duration of the research were not included and may differ from those that were available. This may introduce

bias to which non-random samples are particularly prone to. A sampling method that is more representative may yield different results and enhance the probability of generalising the findings to other nurses working in rural hospitals in the province. The study revealed some limitations of utilising questionnaires for data collection: interpersonal factors came into play as some of the nurses were suspicious of the researcher; and because the questionnaire was designed in English, some interviews took longer than average as the researcher had to explain some of the questions in the local dialect.

Several of the limitations experienced were related to the cross-sectional survey nature of the study. Firstly, whenever people are interviewed, particularly about sensitive issues such as difficulties faced in the work place, there is often some response bias. This is mainly due to fear of losing their jobs or losing favour with their supervisors, employers or colleagues. It is therefore most likely that some nurses did not answer some of the questions truthfully. Secondly, it is not possible to establish any causality among the variables studied.

CHAPTER 4

4.0 DISCUSSION

In this section, the results will be discussed in detail and where appropriate, current literature will be incorporated into the discussion as well as recommendations to improve retention through offering improved non-financial incentives.

Health workers tend to move in search of better living and working conditions, improved salaries and opportunities for professional development, be it within their own country, from rural to urban areas, from public to private sector, or from one country to another. There is no doubt that their decision to remain in rural and remote areas to work may be influenced by the availability of non-financial incentives.

Nurses in rural areas are most affected by poor working condition, inadequate living conditions and lack of facilities because of insufficient national health budgets. They are expected to work under inadequate conditions, with poor infrastructure and lacking essential equipment, tools and supplies. Human resource managers are often poorly equipped to support them or address their most pressing needs; and retention schemes do not take into consideration the interrelatedness of the different factors impacting on retention. As a result rural nurses often become frustrated, demoralised and dissatisfied with their jobs and leave. The fact that the relative importance of factors affecting retention varies from person to person cannot be overemphasized. However, there are common patterns among the nursing staff in the two hospitals where

the research was done. The majority of nurses strongly agreed that individual, organisational and local environmental factors influenced retention.

4.1 REASONS FOR GOING TO AND PREFERENCE TO WORK IN A RURAL AREA

The main reasons given by the participants for going to work in a rural area were because of choice and because of posting. Seventy percent of participants remained in the rural area by choice. Of those respondents who remained in the rural area by choice, 39% went there by choice followed by 36% who were posted there (see figure 4). Most of the respondents preferred to work in a rural public health facility and in fact would not consider changing jobs. These results suggest that some nurses prefer to live in rural areas for various reasons. Because accommodation was mentioned as one of the main reasons why nurses chose to go to rural areas and influences their decision to remain there, attempts by the Ministry of Health to rehabilitate rural housing for health workers should be prioritised as a matter of urgency. Decision-makers and key role players in the development of incentive packages for rural health staff should also consider providing land for farming as an incentive to improve retention. The selling of farm produce would be a source of additional income for the nurses.

4.2 FACTORS INFLUENCING RETENTION

4.2.1 Demographic factors

Age: Age has been documented as an important factor influencing retention of nurses in rural areas (Stilwell et al, 2004). In this study, about half of the respondents were below the age of 40 years with 22.5% being aged between 19 and 29 years and 30% between 30 and 39 years. High turnover rates have been documented among younger workers and workers with shorter length of service (Zurn et al, 2005). Furthermore, younger, well-educated nurses are likely to want to develop their careers and this may mean changing jobs. Incentive packages to improve retention should therefore be targeted at specific age groups. Incentives such as in-service programmes to teach less experienced nurses can also be a tool to gauge their coping skills as they are at a higher risk of migrating from rural areas.

Twenty percent of respondents were over the age of 50. The retirement age for health workers in Zambia is 55 years (Anyangwe and Mtonga, 2007) which is early when compared to European countries where the average retirement age is 65 years. This group presents an untapped resource pool that could make a difference. The retiring health workers are often still in good health, are highly skilled and are able to perform their duties well with little supervision. Incentives that will encourage nurses approaching the retirement age to continue working may improve retention rates. This is supported by the evidence in the literature that suggests that older nurses are less likely to move from their posts (Stilwell et al, 2004).

Rural experience: Most of the participants had some form of rural experience before coming to their current post. In fact more than half of them either grew

up or trained in a rural area. Half of the nurses interviewed had worked in a rural setting for more than 10 years and the majority of them had been at their current post for more than 5 years. These results suggest that nurses with rural experience are more likely to remain in rural areas and do not move much. There is growing evidence that health workers with previous rural experience as well as those that are locally recruited and trained are better equipped for their rural work and better prepared for living in remote areas (Lehmann et al, 2008; de Vries and Reid, 2003). Recent studies have found that nurses prefer to stay in the region where they received their education but they will leave if employment conditions do not meet their personal or professional requirements (Baumann et al, 2006). Local recruitment may be a strong predictor of long-term staff retention, thus highlighting the importance of training opportunities for people from rural communities. In addition, four out of the forty participants in the study were auxiliary nurses. Educating a group of community-based health workers to become auxiliary nurses that offer basic health advice and health care as well as simple treatments will not only contribute to improved numbers but will also increase accessibility to health services in rural areas because such workers are far less likely to migrate and tend to remain in the communities that they originate from (Anyangwe and Mtonga, 2007).

4.2.2 Institutional factors

In the study, the majority of respondents agreed that good relationships with colleagues, access to education and professional development opportunities, having a high level of influence over one's work as well as availability of essential equipment, tools and supplies to carry out their work all impact on

retention. Evidence from the field suggests that poor workplace maintenance, inadequate equipment and supply shortages increases risk of injury and infection in the workplace and is documented as reasons why nurses leave the profession (Baumann et al, 2006). The problem of lack of essential tools, equipment and supplies is perhaps more a problem of management and administration than one of absolute unavailability of resources. More participatory management, dialogue with other staff and raising awareness of training of facility, district and regional managers in equipment and supplies management and maintenance may help to address this problem. To provide short term improvements, local hospital management should also look for innovative ways to find resources outside the hospital. Community involvement may also yield positive results.

Although the majority of nurses agreed that access to continuing education and professional development is important, they complained about the difficult and long process of applying for scholarships. All applications have to be taken to the Ministry of Health in Lusaka by the applying nurse at high travel costs, the processing of applications takes a very long time and the nurses did not trust that the selection process was fair. Employers must realize that positive changes in the work environment result in higher employee retention rate (Baumann, 2007). For example, employers can develop systems that are fair and transparent and that accelerate the processing of scholarship applications. Clear training policies and plans should be formulated by institutions and the Ministry of Health and made available so that nurses can foresee prospects for their professional growth. Such training plans should be flexible in order to accommodate the personal training needs of the individual.

The majority of the nurses interviewed agreed that having good relationships with their colleagues was important. Health workers worldwide highly value recognition and appreciation from colleagues as well as good relationships with colleagues. Appreciation from clients and the community is also seen as an indicator for successful professional conduct and plays an important role of influencing staff to stay in their jobs (Mathauer and Imhoff, 2006). Hospital managers should therefore encourage functions where staff interact with one another, e.g. teambuilding activities, as well as activities that encourage interaction between hospital staff and the community, e.g. open days.

The majority of respondents in the study agreed that the ability to make decisions about their work was an important factor that influenced retention. These findings are supported by evidence which suggests that job autonomy contributes positively to retention of health care workers in the health system. The more discretion an individual enjoys in his/her job, the higher the chances for them remaining in their current institution. Equally, when employees receive support from management and feel valued by their employers, the more likely they are to remain in their posts (Masango S et al, 2008).

4.2.3 Local environmental conditions

The literature is unanimous that the general living environment, together with social obligations, is important elements in decision on where to work (Lehmann et al, 2008). Housing, health care, recreational facilities, access to good schools for children, good drinking water, electricity, roads and transport featured very prominently in a study conducted by Mensah (2002) which looked at factors affecting retention in rural Ghana. Similar results also came from this study. The majority of the respondents were not satisfied with

their accommodation, however, most of them agreed that distance to work was manageable and that they had access to good schools for their children. Some factors, such as lack of recreational facilities, lack of banking, postal and internet facilities were not covered in the questionnaire but were mentioned to have an impact on retention. Despite heavy workloads, there was nowhere for workers to go to de-stress and recover after work. Efforts by the Zambian government to improve the physical infrastructure of existing health care institutions including housing and recreational facilities have to be stepped up. More investment has to go into developing rural areas so that basic amenities such as banks and shopping centres are made available. This kind of development, however, requires massive investments of resources and can be achieved by involving other relevant stakeholders from the communities, the government and non-governmental sectors.

4.2.4 Zambia Health Worker Retention scheme

Most of the nurses interviewed agreed that the incentives offered in the ZHWRS, namely availability of transport per health facility, availability of water and electricity in the facility and availability of medical equipment and supplies, were important requirements for nurses to carry out their work effectively. However, they did not see them as incentives but necessities. It seems, from the responses given, that the nurses' understanding of incentives was perks that would motivate and encourage them to remain in rural service.

4.3 FINANCIAL INCENTIVES

When asked about other factors not mentioned in the questionnaire that the nurses felt were important for retention, the majority cited financial incentives such as loans, allowances, bonuses and increased salaries. Terms of

employment could be negotiated to provide some of these monetary incentives. If nurses had easier access to loans, they may be more likely to stay on in their jobs because they would have financial commitments to keep. Incentives such as loans do not have to involve financial commitments from the government but only require government to guarantee loans for the employees with their respective banks (Masango S et al, 2008). Financial incentives can contribute to retention of health workers, but to be sustainable, schemes must be complemented by non-financial incentives (Lehmann et al, 2005 cited in Masango S et al, 2008).

Strategies employed by the Zambian government should not just end at identifying the factors that impact on retention, but should include appropriate human resource management strategies that directly respond to such findings. Even simple, relatively low-cost measures may have a positive effect on retention of nurses. Giving nurses the support they need to practice in form of supervision and mentorship does not cost much but may motivate and encouraged them to stay in their posts. One of the contributing factors to slow progress has been the lack of engagement of nurses at all levels of policy development, programme planning and implementation. Health institutions need to show employees that they are valued and treat them with respect as professionals by involving them in decision-making. Their involvement may improve the likelihood of acceptance, success and sustainability of retention strategies and reduce turnover.

Improving data collection and record-keeping is crucial to having reliable data about the health care workforce and is key to evidence-based workforce planning. Facility-based on-going monitoring and evaluation of retention

strategies and research on workforce norms, standards and best practices should be encouraged in order to provide evidence of what really works.

Particular attention must be given to improving management of human resources. The Ministry of Health must assist rural hospitals to develop strategies for keeping employees and these should include holding managers accountable for retention. A greater understanding of the key influences on retention will assist human resource managers in devising strategies that are effective in retaining nurses. Technical approaches alone will not do because adequate financing, strong leadership and political commitment are also necessary to overcome retention obstacles. There is need to improve existing and develop appropriate management tools including supervision, feedback, staff appraisals, staff satisfaction surveys, clear leadership and guidance, clear organisational objectives and missions, and staff participation mechanisms, adequate training as well as self assessments. Successful implementation of reforms to improve retention requires much more time for planning, informing and consulting with health workers. Feedback from health workers should guide policy development and should be linked to training and provision of other incentives. Strategies should seek to promote community engagement and efforts should reach beyond the scope of government and should incorporate a multi-sectoral approach: finance, health and education ministries, academic leaders, professional associations, labour unions, educational institutions, civil society and non-governmental organisations all must be involved in setting national goals and implementing policies and programmes.

CHAPTER 5

5.0 CONCLUSION AND RECOMMENDATIONS

This Chapter provides the conclusion of the study, recommendations for future studies, recommendations for policy makers and recommendations for health managers.

5.1 CONCLUSION

The study has shown that nurses' decision to remain in rural and remote areas to work may be influenced by the availability of non-financial incentives. The majority of nurses strongly agreed that individual, institutional and local environmental factors influenced retention. The three individual factors that the nurses perceived to be the most important for retention were appreciation from the community, motivation to work and ability to make decisions about work. The three local environmental factors that were perceived to be most important for retention were satisfactory accommodation, availability of schools for children and manageable distance to work and the three most important institutional factors were access to continuing education and professional development, availability of measures to protect from work-related infections and having good relationships with colleagues.

The study shows the importance of having a comprehensive approach when addressing retention problems. Sufficient financial resources have to be set aside for such strategies and contribution and commitment of all stakeholders have to be secured. There is need for the Ministry of Health to formulate clear guidelines, mechanisms and processes to plan, implement and monitor non-

financial incentives. The findings from the study are supported by evidence from a wide range of settings that shows without a doubt that health workers respond to non-financial incentives and that these incentives provide a useful tool that human resource managers can use to retain health workers in the public sector and in rural areas (Dambisya, 2007). Policy development must recognize the importance of individual, organisational and local environmental factors for retention strategies and the role that national and international environments play. This complex interaction of factors impacting on retention requires not one but several interventions bundled together, implemented simultaneously, that pay attention to living conditions, working conditions, home and social environments as well as career development opportunities.

5.2 RECOMMENDATIONS

It is hoped that the following recommendations will assist in prioritising the many factors impacting on the retention of rural nurses. Policy-makers, health managers and other decision-makers are encouraged to develop interventions based on these and other recommendations.

5.2.1 Recommendations for Future Research

- To utilise a bigger sample size and a sampling method that is more representative of the rural nurse population.
- To carry out studies that include nurses who have left the rural areas to go to urban areas or abroad in order to determine their reasons for leaving rural service.
- To incorporate qualitative research methods of data collection, such as focus group discussions, in order to enrich the data collected and

provide clarity on the most pressing issues affecting nurse retention giving special attention to nurses in rural service who are most affected.

- More studies should be performed that combine both effectiveness and cost, in order to facilitate decision-making.

The results of such studies could reveal some interesting findings and could also significantly impact on the design, implementation, monitoring and evaluation of retention strategies for nurses.

5.2.2 Recommendations for policy makers

- Policy makers in the Ministry of Health should prioritize the rehabilitation of rural housing for health workers as a matter of urgency.
- Policy makers need consider providing land for farming as an incentive to improve retention.
- The retirement age for critical health workers should be increased from 55years to 60 years.
- Training opportunities for people from rural communities should be developed and incentivized.
- The Ministry of Health needs to raise awareness of training for health managers in equipment and supplies management and maintenance.
- Efforts by the government to improve physical infrastructure of existing health care institutions including recreational facilities have to be stepped up.

- More investments need to go into developing rural areas so that basic amenities such as banks and shopping centers are made available.
- Terms of employment should be negotiated to provide some monetary incentives for workers who require them.
- Managers in the Ministry of Health need to assist rural hospital managers to develop strategies for retaining employees and these should include holding managers accountable for retention.
- The Ministry of Health should develop scholarship awarding systems that are fair and transparent and removal of bottlenecks in the scholarship application process.
- Apart from the health sector, government should strengthen collaboration and incorporate other sectors such as finance, education, labour and civil society in setting goals and implementing policies and programmes to develop human resources for health.

5.2.3 Recommendations for health managers

- Health institutions should ensure that in-service training is offered to less experienced nurses and use these training sessions to gauge their coping skills with living and working in rural areas.
- Managers need to strengthen task-shifting strategies in order to increase the number of community-based health care workers that are trained as auxiliary nurses.
- Participatory management and dialogue with other staff should be encouraged.

- **Hospital managers must be encouraged to find resources outside the hospital e.g. community involvement in fund raising.**
- **Hospitals should have clear training policies and plans and these should be made available so that health care workers can foresee prospects for their professional growth.**
- **Hospital managers should encourage functions where staff interacts with one another, as well as with the community in order to foster teamwork and community involvement in health promoting activities.**
- **Hospital managers need training in leadership skills in order for them to inspire and motivate staff to perform better and remain in the rural areas.**
- **Human resource management strategies should respond to factors that have been identified as having a positive impact on retention.**
- **Managers should give nurses the support they need in form of supervision and mentorship.**
- **Managers need to engage nurses at all levels of policy development, programme planning and implementation.**
- **Managers should carry out facility-based monitoring and evaluation of retention strategies and research on workforce norms, standards and best practices in order to collect evidence of what really works.**
- **There is need to improve existing management tools such as supervision, feedback, staff participation mechanisms and staff appraisals amongst others.**

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APPENDIX

APPENDIX A: Study Questionnaire

1. Hospital.....

2. Participant number.....

3. Date of interview

4. Result codes.....

01 = Completed, 02 = Respondent not available, 03 = Respondent refused, 04 = partially completed, 05 = other

DEMOGRAPHIC INFORMATION

Mark the appropriate response with a cross

1	Gender	1. Female 2. Male
2	Marital status	1. Never married 2. Married 3. Divorced 4. Widowed
3	Age	≤19 20-29 30-39 40-49 ≥50
4	Years of service in the public sector	≤2 3-10 11-20 21-30 ≥31
5	Employment status	1. Contract 2. Permanent
6	Qualifications	1. EN 2. RN 3. Midwife 4. Other (please note)

RURAL EXPERIENCE

Reasons for working in the rural area

Mark the appropriate response with a cross

1. Before you came to work here, had you ever lived in a rural area?

- i. Yes**
- ii. No**

2. If yes in question 1 explain

3. How long have you been working in a rural environment? (Answer in years)

4. How long have you been in this institution? (Answer in years)

5. Why did you come here?

- i. Posted**
- ii. By choice**
- iii. Marriage**
- iv. Family reasons**
- v. Rural Hardship Allowance**
- vi. Other (Specify)**

6. Given a chance where would you most want to work?

- i. Rural private sector health facility**
- ii. Urban private sector health facility**
- iii. Another rural public health facility**
- iv. Urban public health facility**
- v. Abroad**
- vi. Other (Specify)**

7. Have you considered changing jobs?

- i. Yes**
- ii. No**

8. If Yes in question 7, why? (Specify)

Decision to remain in the rural area

9. Why have you remained working in a rural area?

- I. By choice**
- II. Because I have nowhere else to go**
- III. Other (specify)**

INDIVIDUAL FACTORS

Note to interviewer: If by choice phrase the following question as: The following factors have influenced my decision to remain in a rural posting; if other, phrase the following question as: The following factors would influence my decision to remain in a rural posting.

Respond to the following statement

The following factors have influenced/would influence your decision to remain in a rural posting?

(Mark response with a cross)

	Factors	<i>Strongly</i>	<i>Agree</i>	<i>Unsure</i>	<i>Disagree</i>	<i>Strongly</i>
10	I am motivated to work					
11	I am able to achieve my tasks easily					
12	I feel the community appreciates my work					
13	I feel my employers value my work					
14	I feel safe in my workplace					
15	I am able to make decisions about my work					

16. Choose three of the above in order of importance

1. _____
2. _____
3. _____

Any other comments.....

LOCAL ENVIRONMENT

Respond to the following statement

The following factors have influenced/would influence your decision to remain in a rural posting?

(Mark response with a cross)

	Factors	<i>Strongly agree</i>	<i>Agree</i>	<i>Unsure</i>	<i>Disagree</i>	<i>Strongly disagree</i>
17	I am satisfied with my accommodation					
18	Distance to work is manageable					
19	I have access to good health care					
20	My children have access to schools					
21	I have access to personal transport					
22	I am able to access groceries					
23	I have access to good drinking water					
24	I have electricity in my home					

What other local environmental factors would you like to have (specify)?

25. Choose three of the above in order of importance

1. _____
2. _____
3. _____

Any other comments.....

INSTITUTIONAL FACTORS

The following factors have influenced/ would influence your decision to remain in a rural posting

(Mark response with a cross)

	Factors	<i>Strongly</i>	<i>Agree</i>	<i>Unsure</i>	<i>Disagree</i>	<i>Strongly</i>
26	Access to continuing education and professional advancement					
27	Adequate in-service training					
28	Availability of essential equipment, tools and supplies					
29	I have the opportunity to take part in decision making concerning my work					
30	Fair disciplinary procedures					

31	Opportunity for promotions					
32	My work hours are reasonable					
33	I have a good relationship with my colleagues					
34	I can cope with my workload					
35	I am given work in accordance with my qualifications					
36	There are adequate measures put in place to protect me from work-related infections					
37	I have access to facility transport for my work					
38	Availability of electricity					
39	Availability of a functioning water reticulation system					

40. Choose three of the above in order of importance

1. _____
2. _____
3. _____

Any other comments.....

The following incentives have been provided in the **Zambian Health workers Retention Scheme** to promote the retention of nurses.

Respond to the following statement: the following factors are important for retention of nurses in the rural areas

(Mark response with a cross)

	Factors	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
41	Availability of transport per health facility					
42	Availability of electricity in the facility					
43	Availability of medical equipment					
44	Availability of water reticulation system					

45. What other factors in your opinion are important for retention? (Specify)

Any other comments.....

END

APPENDIX B: Ethics Clearance Certificate

APPENDIX C: Informed Consent Form

APPENDIX D: Permission Letter