

EXPLORING FACTORS AFFECTING ATTRACTION AND RETENTION OF HEALTH
WORKERS IN RURAL AREAS - TANZANIA.

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Exploring factors affecting attraction and retention of health workers in rural areas - Tanzania.

A thesis submitted in partial fulfillment of the requirements for the degree of
Master of Public Health

By

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Declaration

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“Now go; I will help you speak and will teach you what to say” Exodus 4:11

ABBREVIATIONS

AMO	Assistant Medical Officer
AIDS	Acquired Immuno Deficiency Syndrome
BMAF	Benjamin Mkapa AIDS Foundation
CO	Clinical Officer
CHAG	Christian Association of Ghana
CHAM	Christian Association of Malawi
DCE	Discrete Choice Experiment
EHP	Emergency Hiring Project
FBO	Faith Based Organization
HRH	Human Resources for Health Workers
HESLB	Higher Education Student's Loan Board
NSSF	National Social Security Fund
HIV	Human Immune Virus
LGA	Local Government Authority
MOF	Ministry of Finance

MOHSW	Ministry of Health and Social Welfare
MDG	Millennium Development Goals
NBS	National Bureau of Statistics
NCHS	National Catholic Health Service
OPRAS	Open Performance Appraisal System
POPSM	President's Officer, Public Service Management
PMO-RALG	Prime Minister Office's Regional Administration and Local Government
PHSDP	Primary Health service Development Programme
TGHS	Tanzania Government Health Scale
Tsh	Tanzania shilling
SSA	Sub Saharan Africa
UYD	Umthombo Youth Development
URT	United Republic of Tanzania
WHO	World Health Organization World Bank
ZHWRS	Zambian Health Workers Retention Scheme

DEFINITION OF TERMS

Retention: The ability to keep employees within an organization; usually from one to five years (Lehmann,2008)

Attraction: Pull toward or to get attention or admiration of a job or work due to specific reason as such salary, working conditions (Lehmann, 2008).

Rural areas: Those areas which are not urban in nature. An urban agglomeration refers to de facto population contained within the contours of a contiguous territory inhabited at urban density level without regard to administrative boundaries. They usually incorporate the population in a city or towns plus suburban areas lying outside of – but adjacent to – city boundaries (WHO, 2010).

Remote areas: Geographical areas where relatively poorer population reside; areas that have limited access to qualified health care providers and health services of adequate quality. It may include remote rural areas, small or remote islands, urban areas that are in conflict or post-conflict, refugee camps, or areas inhabited by minorities or indigenous group (WHO, 2010).

Clinical Officer (CO) : have three years education in clinical medicine like nurses but are more oriented in clinical work (Kolstad, 2013).

Assistant Medical officer (AMO): A clinical officer who has attended for three years course, with an additional two years training. AMO and CO form a 9.5% share of the health workforce in Tanzania compared to doctors who form 1.1%, and are mostly found in rural areas (Kolstad, 2013).

Allied health college: A college providing non-degree courses such as diplomas attended from two to three years. Allied Health Colleges produce cadres like clinical officers, nursing associate professionals, laboratory technicians, pharmaceutical technicians, etc. These colleges are managed by the Ministry of Health and Social Welfare in Tanzania (MoHSW, 2012b).

Intervention: a set of action to be taken that address a solution of a particular problem or disease(MoHSW,2011b)

Strategies: Is broad statement about how something is done or a plan of action designed to achieve a particular goal (MoHSW, 2011b).

ABSTRACT

Background and problem: Tanzania is facing difficulties in attraction and retention of health workers in rural areas and as a consequence, experiencing an acute shortage of doctors and nurses in rural areas where 70% of population resides. Currently only 30.66% of doctors and 63.53% midwives work in rural areas

Methodology and Objective: A literature review was done to explore the existing interventions and the factors influencing the attraction and retention of health workers in rural areas in Tanzania. A systematic review was done using published and grey literature on HRH policy, systematic reviews and Interventions from Tanzania and Sub-Saharan Africa, retention conceptual framework was used to analyse the findings.

Results: In the Tanzanian context and in SSA countries health workers' decisions to practice in rural areas are influenced by the six inter-related factors; personal origin and values, family and community aspects, working and living conditions, career-related factors, financial aspects and mandatory services. The study found similarities of factors between Tanzania and SSA countries. Tanzania does not have a specific retention policy for rural health workers. It was found that most of interventions are provided in bundle approach.

Conclusion and recommendations: The attraction and retention of health workers is a complex issue, no single factor which is more influential than the other. Therefore, government should take immediate action to develop the rural retention policy for health workers and strategies taking into account the above-mentioned six influencing factors.

Key words: attraction and retention, Health workers retention, retention interventions, Tanzania and incentives

Word count: 125556

INTRODUCTION

Attraction and retention of health workers is a global agenda of reducing health workforce imbalance between urban and rural areas in order to meet the Kampala Declaration and WHO (WHA59.23) initiative of improving retention of health workers in remote and rural areas (WHO,2011).

Attraction and retention of health workers in rural areas is important for maintaining adequate numbers of health workforce in order to achieve health equity. In developing countries attraction and retention of health workers has proven to be difficult due to the following reasons: poor working and living conditions, lack of career progression, poor infrastructure, lack of medicine, equipment, recognition, and poor management support.

Currently Tanzania lacks retention and human resource for health (HRH) policy which also affects attraction and retention of health workers in rural areas. The public service Act no.8 of 2002 and its regulation of 2003; a standing order of 2009 guides the provision of incentives. All these are provided equally among urban and rural areas, but the way incentives are provided does not reflect attraction and retention. Tanzania allow private practice which reduces willingness of health workers to take rural job

The objective of this study is to explore factors influencing attraction and retention of health workers in rural areas in Tanzania and current HRH interventions in order to provide evidence-based recommendations for improvement in retaining health workers in rural areas. The study gives details about the different factors related to health workers' decision to relocate to, stay in, or leave rural areas, policy and interventions.

The above mentioned factors affecting retention and attraction of health workers in rural areas are challenges facing the implementation of HRH activities at Local Government Authorities (LGA) in Tanzania. I am responsible for the coordination of administrative works including human resources for health in the health department. The motive of choosing this topic is based on my past experience while working with LGA. I observed that, health workers are overwhelmed with heavy workloads, poor working and living environments, and some health facilities were running with one or two health workers due to severe shortages of health workers. The study is in line with my country's objective of increasing the number of health workers by improving the attraction and retention of health workforce in rural and remote areas.

CHAPTER ONE: BACKGROUND INFORMATION

This chapter gives a summary of geographic and demographic information of Tanzania, socio economic status, the policy context, status of health facilities, and the health workforce situation.

1.1 COUNTRY PROFILE AND ADMINISTRATION

The United Republic of Tanzania (commonly known as Tanzania) is a union of two countries Tanganyika (on the mainland) and Zanzibar (an island). It is among the poorest countries in the world, located in the eastern part of Africa with 945,087 square kilometers. It is estimated to have 44.9 million populations of which 70% live in rural areas (NBS, 2012). Life expectancy at birth is 59 for male and 62 for female (NBS, 2012). Its growth rate is 2.9%per annum and the Gross Domestic Product is \$33.23 billion in 2014 (WB, 2014).

Tanzania comprises 31 regions divided into two groups: 26 regions on the mainland and five on islands. Each region is subdivided into districts making a total of 169 districts (see annex 1).

1.2 POLITICAL AND SOCIO-ECONOMIC SITUATION

Since independence Tanzania has enjoyed a stable political environment. The main economic activities in Tanzania are: mining, livestock, trade, agriculture, tourism, manufacturing industries, transport, trade, and communications and fishing. 95% of the populations is self employed while 5% is employed in the formal sector. The proportion of population living below the poverty line is 28.2%. Please see Annex 2 (NBS, 2012).

1.3 HEALTH INDICATORS

Tanzania faces a rapid population growth and is facing a high burden of diseases: high HIV/AIDS prevalence rate at 5.1%, tuberculosis prevalence at 176/100,000 population coupled poor health indicators; Maternal mortality ratio is 410/100,000 live births, Under-5 mortality rate is 54/1000 live births, (WHO, 2012; URT, 2013).

1.4 HEALTH SYSTEM

The model of health services delivery in Tanzania is pyramidal in shape, it starts from the primary level and progresses to the secondary to tertiary levels (For more details please see box 1 in the annex).

Tanzania has 6,518 health facilities. 264 (4%) are hospitals, 684 (10.5%) health centers and 5,607(86.02%) dispensaries (URT, 2012). The ownership of facilities is public and private: 75.5% public, 15.1% FBO and 9.4% private for profit. Approximately 94% of health facilities are located in rural areas see table 3 (MoHSW, 2011a, URT, 2013).

1.4.1 POLICY AND DECENTRALIZATION

Tanzania is implementing several policies and strategies in order to attract and retain health workers such as: National Health Policy, Decentralization Policy, Pay and Incentive Policy, and the Recruitment and Employment Policy. The 2007 National Health Policy focuses on having healthy communities which can engage in individual and national development. Implementation of the policy is through the human resource strategic plan which focuses on having adequate and competent health workers and ensures their equitable distribution in all parts of the country.

Under the decentralization policy, Tanzania shifted power from the Ministry of Health and Social Welfare (MOHSW) to Local Government Authorities (LGAs). The MOHSW retains formulation of policy and regulatory functions. LGA's are responsible for implementation of technical aspects and Human Resource for Health (HRH) plans at the district level with the support from regional secretariat through regional health management team.

1.4.2 PUBLIC SERVICE PAY AND INCENTIVE POLICY 2010.

Tanzania formulated a pay and incentive policy in 2010 to fill the gaps of the 2008 public service management and employment policy which mostly focused on employment. The purpose of a pay and incentive policy goes beyond salaries to focus on attraction and retention of all qualified technical, professional and managerial staff in Tanzania (URT, 2010). The policy needs to be promoted and to start to be operationalized (MoHSW, 2014).

1.5 GOVERNMENT TOTAL EXPENDITURE ON HEALTH

The Abuja declaration (2005) recommends an allocation of minimum 15% of government total expenditure on health. See table three on the trends of health expenditure in Tanzania.

Table: 1 Trends of Government expenditure on health

Year	Budget (Billions)	Total Health Expenditure as % of national government budget
2012/2013	1,288.8	10%
2011/2012	1,209.1	10%
2010/2011	1,206	12%

Source: MoHSW, 2014

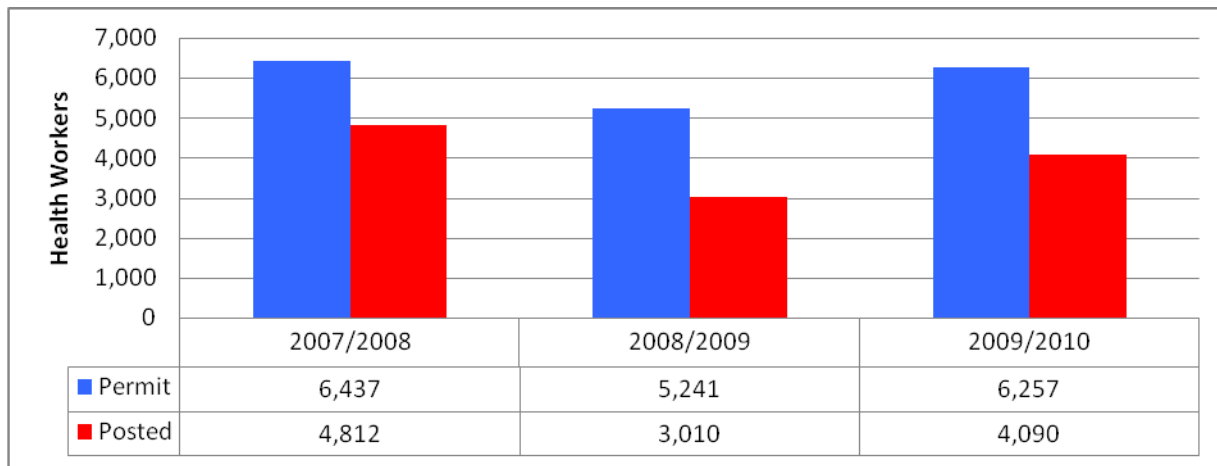
Table 1 shows that the allocation of the Tanzanian government expenditure on health decreased from 12% in year 2010/11 to 10.4% in year 2012/13 (MoHSW, 2014). This indicates that the sector is underfunded which also affects the performance of health system, attraction and retention strategies.

1.6 THE SITUATION OF THE HEALTH WORKFORCE

The current number of health workers in Tanzania is low compared to international and national standards. The available data indicates a shortage of 64% of the required 177,215 health workers for both public and private facilities (MoHSW, 2013). The available health workforces are expected to serve 44.9 million people. The distribution of available doctors and nurses between public and private is: 83.70% of doctors are employed by public 16.30 % by private and FBOs (see Annex 4. Urban/rural distribution of selected health workers in public and private).

The recruitment process in Tanzania is complicated and difficult to coordinate, since the decision about the number of staff to be recruited and distributed are determined by four ministries: MOHSW, Presidents Office-Public Service Management (PO-PSM), Ministry Of Finance, and Prime Minister Officer's Regional Administration and Local Government (PMO-RALG). The numbers of approved posts for employment were 17,935 and posted to the new station were 11,912 (66%) from 2007 to 2010(See figure 1 below).

Figure: 1 Trends of employment permit and post



Source: MoHSW, 2014

Out of health workers posted, 61% reported to a new station (MoHSW and BMAF, 2011c). The trends shows there is a slight decrease in number of permitted posts but also the posts were not occupied.

However, among 632 doctors graduated in 2010/11, 55.7% did not get job. Similarly, 828 nursing officers graduated and only 34% were employed (BMAF 2011, 2012).

CHAPTER 2. PROBLEM STATEMENT, JUSTIFICATION, OBJECTIVES AND METHODOLOGY

2.1 PROBLEM STATEMENT

The shortage of health workers in rural area is a global issue. Globally the shortage is estimated to be approximately 4.3 million health workers. According to WHO (2006) half of the world population live in rural and estimated 1 billion people do not have access to health workers (WHO, 2010). 57 countries reported to have critical shortage of health workers and 36 of them are from SSA countries. Rural dwellers are facing more critical shortage of health workforce than urban.

Tanzania is facing difficulties in attraction and retention of health workers to work in rural areas (Munga, 2008) and as a consequence, experiencing an acute shortage of doctors and nurses in rural areas (MoHSW, 2014). This affects the provision of health services to the rural population in Tanzania. Although two-third of population is living in rural areas, they are served by only 30.66% of doctors, 29.28% of nursing officers and 63.53% of midwives (MoHSW, 2013; WHO, 2010). The ratio of health workers is 4.9 nurses per 10,000 population, and 0.5 doctors per 10,000 population, which is far from the WHO standard of 23/10,000 professional per population (WHO 2006; Sirili et al, 2014).

Lack of attraction and retention contribute to internal migration of health workers from rural to urban areas as they look for a more supportive living environment (Munga et al, 2008; MoHSW and BMAF, 2011c; Kolstad, 2009). Furthermore, there is increase demand of health workers due to, population growth, trade liberalization and legalization of private sector practices which lead to high competition in health care labour marketing (Munga, 2008; Carmen, 2014).

The shortage of health workforce became more severe because of the policy and employment freezes which occurred in 1993 and 1999. The implementation affected much of the health system when the health posts were frozen (Munga et al, 2008). There is evidence that in rural and remote areas one can find a clinical officer or medical attendant running a dispensary because of shortage of respective staffs, for which the standard norm of staffing is a minimum of nine health workers to cater for 10,000 people (MoHSW, 2011a).

The shortage of doctors and nurses has negative impact on the country's poor economic growth because the work of doctors and nurses saves the lives of people (Dolea ,2014). Furthermore, the shortage deprives rights of people to access to quality health care which results in high morbidity and mortality (WHO, 2006). It also leads to inequitable distribution of health services which is against equity in health.

The government tried to come up with different strategies as a way of attracting and retaining health workers in rural areas such as: increasing salaries annually since 2006, supporting, upgrading, and providing allowances for both rural and urban areas, yet health workers are unwilling to practice in rural areas (Munga et al, 2008; MoHSW, 2013). To be able to address this problem, there is a need to carry out a study to explore the factors affecting attraction and retention of health workers in rural areas in Tanzania.

2.2 JUSTIFICATION

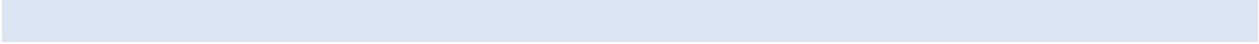
Human resources for health is at the heart of health care system in Tanzania. Effective recruitment and retention policy, process and procedures are inevitable for meeting the expected results.

In Tanzania the strategies of attraction and retention do not match with the demand of health workforce which in turn affects the rural population (MoHSW, 2008; Munga, 2008). Some health facilities in rural areas are not operating due to lack of health workers. Nkya (2012) reported that in the Tabora Region (a remote and rural Region) 59 newly constructed health facilities in 2010 were not operating due to lack of health staff. In addition, BMAF (2014) recently reported that one dispensary in remote area in Rukwa Region which was not operated for 10 years due to shortage of health workers, started running in 2013 after construction of a staff house.

The magnitude of problems of attraction and retention of health workers in rural areas is not well known (MoHSW, 2013; 2014). Very little is known about factors and proper interventions which attract and retain health workers to practice in rural areas. Additionally, Tanzania has no specific retention policy to attract and retain health workers in rural areas. However, the presence of policy is very crucial if Tanzania wants to try to have adequate number of health workers in rural areas. The policy will also guide in formulation and implementation of retention interventions.

Attraction and retention of health workers is a global agenda of reducing inequitable distribution of health workforce between urban and rural areas. In Kampala Declaration meeting of 2008, members of the states agreed to focus on retention of health workforce specifically for remote and rural areas. Moreover, WHO initiated on improving retention of health workers in remote and rural area by launching a programme “Increasing access to health workers in remote and rural areas through improved intervention” (WHO, 2010).

This study will help policy makers, training institutions, LGAs, the donors, community and private health sector to understand the factors influencing health workers’ decision to relocate to, stay in and leave rural areas. In particular this study will contribute to the existing knowledge on the subject. Evidence-base information retrieved from different studies will be used to provide recommendation to the government on how to address attraction and retention of health workers in rural areas.



2.2 OBJECTIVE

General Objective

To explore factors influencing attraction and retention of health workers in rural areas in Tanzania and current HRH interventions in order to provide evidence-based recommendations to the MOH for improvement in retaining health workers in rural areas.

Specific Objectives:

- To explore the factors influencing the willingness of health workers to practice in rural areas in Tanzania and SSA.
- To identify the existing HRH attraction and retention interventions in rural areas in Tanzania.
- To explore experiences in SSA on retention interventions of health workers in rural areas.
- To make recommendations on improvement of attraction and retention of health workers in rural areas Tanzania that will help to reduce the shortage of health workforce to MOH.

2.3 METHODOLOGY

A literature review was conducted using published and grey literature on HRH strategies, plans, lessons learnt, systematic reviews and best practices from Tanzania and Sub-Saharan Africa.

Inclusion: Tanzania and SSA studies published in English from 2004-2014. In 2004 the issue of retention of health workers started to be discussed in international meetings such as the World Health Assembly in 2004 and in 2006 after the WHO world health workforce report this become a world agenda subject. Health professionals includes: doctors, assistant medical officers, clinical officer and nurses midwives in both public and private health facilities.

Exclusion: The study excluded health workers from urban areas in both public and private health facilities. The studies before 2004 were excluded.

Search strategy: Information was gathered using Pubmed, Medline, and Google scholar search engines. Articles, peer reviewed journals such as Human resource for health journal, South Africa Medical Journal, Tanzania Journal of Health Research, HRH Global resource center, as well as grey articles on rural and remote health were retrieved in order to search for different information relating to attraction and retention in rural areas. The search was not limited to electronic database and published materials. Other

techniques were used for search of citation in both grey and published materials in websites such as: WHO, KIT, Ministry of Health and Social Welfare, and Tanzania National Bureau of Statistics databases. The citations were screened to exclude irrelevant materials such as informal payment.

Key Words: retention, attraction, SSA, developing countries, health worker, human resources for health, rural areas, remote, allowances, retention policy, incentives, mandatory services, low income, bonding, career development, training, doctors, nurses, clinical officers, Assistant Medical Officers. Subheadings used for citation were "Health workers retention" "retention in rural areas" "retention intervention".

CONCEPTUAL FRAMEWORK

The retention framework was developed by Henderson and Tulloch in 2008, to explore motivation and retention factors for health workers in Pacific Asia. Later on, WHO (2010) adapted the framework and broadly consisting of three major factors: personal/family reasons, policy reasons and organization or work reasons. The three major factors also divided into six small components and are comprehensively covered by this framework.

(i) Personal origin and values includes:

- Rural background; this is a drive of personal feelings of coming back home because belongs to that community, they want to serve people like parents, relatives, family and friends. Also want to show appreciation to the society that supported them to go for study (Couper, 2007).
- Values and altruism: to consider people as important, with high worth, to be responsible to take care of other people's wellbeing and to serve the community based on religious beliefs and humanitarian reasons (Couper, 2007).

(ii) Family and community aspects include:

- Availability of schools for children near to the community, spouse employment and dependants.
- Community spirit aspects such as: support, respect, closeness, appreciation and recognition of health workers job.
- Community facility includes: shops, recreation centre, phone services and entertainment centers.

(iii) Financial aspects comprise:

- Salary and payment system through availability of bank services close to the community which is important for security and reduces travelling cost to the health workers.
- Allowances consist of: hardship or rural allowances, responsibility, extra duty and on call allowances.
- Other benefits such as: pension, gratuity, burial expenses and free medical services.

(iv) Career related contains:

- Access to continuing education opportunities such as distance learning, on job training.
- Supervision includes support from senior health workers and management.
- Professional development consists: workshop ,seminar, post graduate, specialties and telehealth.
- Senior post such as promotion.

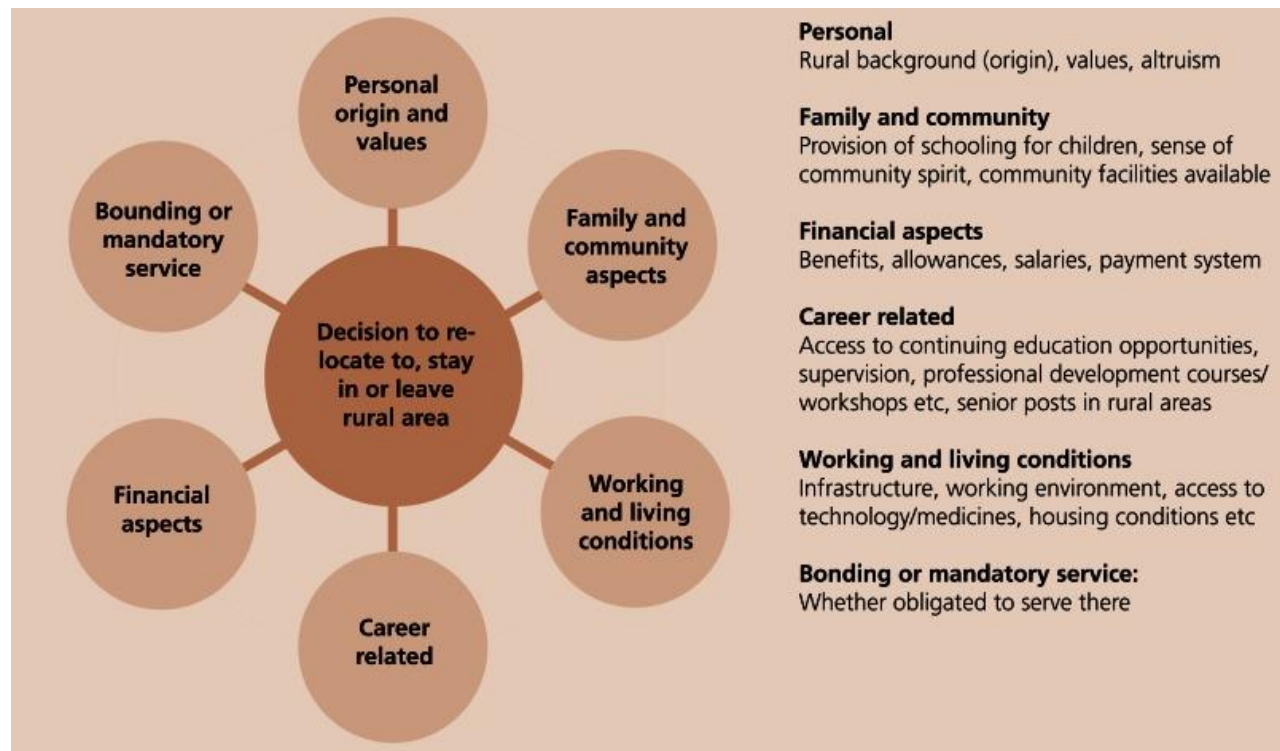
(v) Working and living condition includes:

- Infrastructure such as roads, transportation and communications.
- Working environment means condition of health facility building, water and sanitation.
- Technology medicine consists: equipment, medicine and medical supplies.
- Housing condition includes: connection to water, sanitation, electricity/solar power, internet services for professional networking.

(vi) Bounding or mandatory services means to make service obligated to serve there.

This framework was adopted because it can help in answering research question comprehensively. It also helps to organize the ideas and the analysis of factors influencing health workers decision to relocate to, stay in or leave rural areas. Additionally, the framework assisted to answer specific objectives. Based on the above explanation see figure 2 below for more details:

Figure 2: Conceptual Framework on the factors related to health workers decisions to relocate to, stay in or leave rural areas.



Source: adopted from WHO, 2010.

The framework allows analysis of the factors related to health workers' decisions to relocate to, stay in or leave rural areas. It shows the link between six factors which influence health workers' decision to take rural jobs. These factors are complex and related to each other (WHO, 2010).

STUDY LIMITATION

Since the focus of this study is in SSA countries, factors from middle income countries in other parts of Africa will not be included. Because of language barrier, literature reviewed is limited to English language and those studies in French language were left out. Some information from MoHSW website was not available since permission is required to get access to its database.

CHAPTER THREE: STUDY FINDINGS/RESULTS

Factors influencing willingness of health workers practice in rural areas in Tanzania and SSA

The analysis of the research results was guided by the analytical framework. The study findings will be presented in six subheadings. Under each subheading, analysis will be conducted for SSA area followed by that of Tanzania.

3.1 PERSONAL ORIGIN AND VALUES:

Rural background

The decision of health workers to practice in rural areas depends on their background, if they grew up or studied in rural areas they are more likely to accept a rural job than their urban colleagues (Lehmann et al, 2008). A study conducted in South Africa for 15 health professional found students who have rural background want to serve rural community because they “want to stay with community and give something to them”. The study also observed that, previous experience of living in rural areas make health workers understand the rural working environment. At the same time, it increases the likelihood of the preference of those health workers to practice in rural areas (Couper et al, 2007;WHO, 2010). Another study in Malawi with 59 nurses who originally were from rural areas, reported that they stay longer (more than five years) in rural areas since they like to work near their homes. Furthermore, the study found that there is a link between the age of nurses and their decision to practice in rural areas. In Malawi nurses aged 45 years and above, are more likely to stay in rural areas due to family reasons (Kayimba, 2011).

Spouses or dependents influence the decision of health workers to practice in rural areas. Adjei’s (2009) study in Ghana revealed that one of the reasons for doctors to practice in rural areas was that they wanted to stay close to their spouse who worked in National Catholic Health Services (NCHS). The study did not reflect whether the spouse was female or male. The study implies that health workers’ decision to stay or leave rural areas significantly depend on their spouse .

A study conducted in Tanzania revealed that doctors who grew up in the rural areas of Tanzania, whose parents and relatives live there have a 50% higher probability of accepting a rural posting than those born in urban areas. In addition the study found that doctors who plan to study public health studies are 50% more likely to accept a rural posting (Smith and Tamara's ,2010). Similar findings reported by Kolstad (2013) study in Tanzania with 300 COs and 120 AMO, 20% of all participants were willing to practice in rural areas. It implies mid-level health professionals can stay longer in rural areas and save lives of people in rural.

In Tanzania marital status also influences on the decision of health workers to stay or leave in rural areas. Health workers employed by FBOs reported that, the reason of working in rural areas was to join their spouses who are working with FBOs (Songstad et al, 2012). It is a common practice that the family follows if a health worker is decides to relocate in to a rural area.

Value and Altruism

Willingness of health workers to serve in a rural area is also related to their attitude and good will to work for the poor. A study conducted in Ghana with a sample of 238 final year nursing students observed that their willingness to serve the rural communities mainly depend on humanitarian reasons as well as their desire to save lives of poor people (Lori et al ,2012). Similar findings were observed in a study of 60 nurses at Makerere University in Uganda (Kaye et al, 2010).

Religious or ideological belief towards serving the poor, influence the decision of health workers to practice in rural areas. A survey conducted in Ghana among 84 doctors observed the willingness of doctors to work in remote and rural areas because of religious belief. "Christians spoke passionately about service to poor while socialist ideology of those who trained in Cuba expressed their strong commitment to work in rural areas to bring equity in health" (Snow et al, 2011). The implication is that health workers' decisions to practice in rural can be influenced by different beliefs which aim to improve health status of the poor.

A study conducted in Kenya, South Africa and Thailand indicated 30% of the a sample of 1,064 final year nursing students showed a greater generosity to patients and poor people in rural areas, and they were likely to remain in rural areas. But, the results varied between the three countries: Thailand indicated harmony to be the core value while in the other two countries

nurses showed less solidarity, the reasons for variation were not presented but may be because of difference in settings or educational background (Smith et al, 2012).

Prytherch (2013) conducted study in Tanzania; reported health workers expressed their main drive for joining the medical field were not for salaries but to serve poor people. The implication is that health workers are willing and committed to practice in remote and rural areas if their expectations are met.

3.2 FAMILY AND COMMUNITY ASPECTS

Provision of schooling for children

According to Couper (2007) the availability of school close to the community increased likelihood of health workers to stay in rural areas. In a cross-sectional study of 200 health workers in rural Nigeria, their preferences were payment of school fees for their children as the most important factor for them to work in rural areas (Ebuehi et al, 2011). Similar findings were observed in a survey of 10 hospitals in Limpopo district in South Africa (Kotzee et al, 2006). Paying tuition fees for children can be another mean of attraction and retention of health workers in rural areas . (Gow et al, 2013).

Studies conducted by Nkya (2012) and Munga (2008) in Tanzania observed availability of school for children in rural areas increases the likelihood of health workers to accept rural job. Health workers were concerned about education of their children. HRH strategic plan 2008 also indicated that the issue of school for children is an important factor for health workers to accept job in rural areas (MoHSW, 2008).

Sense of community spirit and community facility available

Community trust and appreciation toward health workers can play a significant role in influencing health workers to stay in rural areas. A study conducted in South Africa with a sample of (15) health workers, observed that having community recognition and a close patient-provider relationship makes health workers feel a sense of acceptance and appreciation in their work (Couper et al, 2007). Similar findings were found in Ghana and Nigeria (Ebuehi et al, 2011; Lori et al, 2012). One of the implications of this study is

the positive relationship between health workers and the community increases responsiveness to health services.

A study was conducted in five rural districts in Tanzania with a sample of 152 health workers. 90% reported that they were satisfied with their community and supervisors who value and recognize their contribution in provision of health services in their areas (Munga et al, 2008). Similar finding was observed by Shattuck (2008) in a systematic review. Having a Positive relationship with community increases the likelihood of health workers staying in rural areas.

3.3 WORKING AND LIVING CONDITIONS:

Access to technology/medicine;

Doctor's ability to work depends notably on the availability of medical equipment and facilities, without which, doctors are unable to practice what they were trained (WHO, 2010). A survey of doctors sampled from 10 hospitals in the Limpopo district in South Africa demonstrated that the availability of equipment which assisted them to save peoples' lives was an important factor for attraction and retention of doctors in rural areas (Kotzee et al, 2006). Similar findings reports from four Discrete Choice Experiment (DCE) studies in Liberia, Ethiopia , Ghana and (Arujo et al, 2013; Hanson et al, 2008; Kruk et al, 2010;Rockers et al,2012) and a survey in Ghana(Lori et al, 2012). Availability of equipments attracts and retains health workers at the same time increase the community responsiveness to health services.

Kolstad (2008) conducted a DCE study of 300 COs finalist in rural Tanzania which reported that, availability of equipment and supplies in health facility was among the factors influencing COs to take job in rural areas. Another study conducted by Songstad (2012) in FBO rural areas in Tanzania revealed availability of equipment and medicine supported health workers to serve the poor in rural areas.

Infrastructure, working environment and housing condition;

The availability of an operating theatre, water, electricity or solar power system, sanitation, roads and communication can make health facility to be more attractive (WHO, 2010). A study conducted by Ditlopo (2011) among 302 medical students in South Africa observed that doctors who have poor hospital accommodation leave rural areas as soon as they completed mandatory services, but for those who have good accommodation stay longer". Another study in Ghana reported the types of house preferred by doctors to be "a free housing with three bedrooms and internet access"

(Kruk et al, 2010). Two DCEs studies of 107 nurses in Malawi (Mangham, 2008) and a sample of 642 Ethiopian nurses have similar findings (Hanson et al, 2010). The availability of house in rural area can change the mindset of health workers to attract and retain in rural. Moreover, availability of housing for health workers near the health facilities reduces costs and make provision of health services easier.

Rockers (2012) conducted a DCE study of 665 health workers in Uganda, the findings observed 426 doctors out of all participants reported good quality of health facility to be important determinant for them to accept rural job.

Kolstad, (2011) conducted a DCE study of 320 COs in Tanzania, reported provision of decent housing was among the factors for attraction of clinical officers working in rural areas. Furthermore, MoHSW and BMAF (2012) tracking of new health workers posted and reported in a new station in Tanzania found that provision of house in rural and remote areas increased likelihood of health workers to take job and stay in rural areas.

3.4 CAREER RELATED:

Access to continue education opportunities:

Health workers values continue education which provides them with updated knowledge and helps in providing appropriate health service. Wafula, (2011) conducted a DCE study of a sample of 250 nurse students in Kenya and doctors in South Africa which mentioned a specialist training after four years of rural service to be among the top three factors for nurses preference to stay in rural areas). Similar results were reported by Lori (2012) in Ghana. In a DCE conducted study in Uganda for 665 health workers, the findings observed doctors had high preference of tuition fees for further studies (Rockers et al, 2012). The implication is that advanced training has an impact on decision of nurses to practice in rural.

Kolstad (2008) conducted a DCE study among 300 final year clinical office students in Tanzania which observed willingness to give up Tshs.306, 166 per month in order to increase their opportunity for education, after two year of working in rural areas. This implies that clinical officer is willing to stay in rural area, if there is opportunity for further study. Findings were observed in a study conducted in Tanzania reported by Munga (2013) and Schwerzel (2007). While health workers in public were willing to practice in rural areas, a study found health workers in FBOs stayed longer in rural

areas because of the opportunities for further training (Songstad et al, 2012).

Professional development courses/workshop

Professional development is important for health workers to sustain their ability to take responsibility (WHO, 2010). A study in Ghana among 128 nurses observed nurses are willing to stay in rural areas if they make progress in career development or are provided funds for training. Health workers expressed how they wanted to be updated with the advancements in the field (Kwansah et al, 2011). More studies from South Africa, Malawi and Ghana (Marais et al, 2007; Mangham et al, 2008; Adjei et al, 2009; Snow et al, 2011) showed similar results. It implies that giving health workers opportunities for training increases their likelihood of accepting jobs in rural areas. Career development with relevant learning contents, improve the competence of health workers and quality of service in rural areas. However, availability of equipments, medical supplies and infrastructure are also important.

A Study conducted in Tanzania, Ghana and Burkina Faso found that health workers in rural areas valued opportunities for workshop and seminars in order to acquire new knowledge and skills (Prytherch et al, 2013). Similar findings reported by Kolstad (2011b). The implication is that opportunities for upgrading also increase likelihood of health workers to accept rural job.

Supervision

Rural settings can make health workers feel isolated; Supportive supervision needs to be conducted in friendly and supportive manner to encourage them to practice in rural areas. A study conducted in Ghana for 302 medical students observed that management support and senior staff with fair communication and constructive feedback which support them to grow professionally can influence them to stay in rural (Kruk et al, 2010). Similar studies were found in a DCE study and nursing students from Makerere University in Uganda (Mwanika et al, 2011).The study observed that supervision is a cost effective means of training for health workers in rural areas, because it allows supervisor to demonstrate and observe if the procedure is done properly which helps to improve the competency of the staff.

Manongi's (2006) study in Tanzania observed health workers felt being valued, part of the organization and not forgotten if supervisors support them in rural areas. In addition, supportive supervision provides opportunity for early problem identification and looking for solution and encourages

participatory decision making (MoHSW, 2011c). Furthermore, health workers feel happy rather than isolated when supervisors visit them in rural areas (Munga et al, 2008).

Senior Post in rural areas

The availability of senior posts in rural areas may influence health workers to relocate in rural areas. Doctors from Limpopo province in South Africa reported that creation of senior posts in rural areas to be among the factors of attraction and retention of them there (Kotzee et al, 2006). Some doctors working in NCHS in Ghana wants managerial position like their counterpart in urban in order to stay in rural areas (Adjei et al, 2009). It implies doctors believed that they have the same capacity as their colleagues in urban areas, so they can hold managerial positions and stay in rural areas

Kolstad, (2013) conducted a study for more than 300 COs and 120 AMOs in rural Tanzania. The findings observed that COs are willing to work in rural areas in order to be in charge of a health facility. The study could not find the reasons of COs choosing to be in charge; it may be because they usually practice in rural areas so they feel prestigious holding such positions.

3.5 FINANCIAL ASPECTS:

Salaries Payment system and other benefit

Difference salaries scale based on the settings can influence health workers to practice in rural areas. Hanson (2010) conducted a DCE study for 219 doctors and 642 nurses in Ethiopia, the finding observed doctors need high salaries in order to take job in rural areas. There is also similar studies reported the same from SSA countries such as: in Liberia, Rwanda and Ghana (Vujic et al, 2010; Serneels et al, 2010; Snow et al, 2011). In Ghana a study of 84 doctors in rural areas reported to deserve high salaries than their fellows in urban areas because "they lost opportunity to supplement their income moonlighting" (Snow et al, 2011). The preferences to work in rural areas is also influenced by availability of bank services and reduce transport cost. The preference of health workers to practice in rural areas, to a large extent depends much on their salary expectations. The payment system of salaries if cash or cheque plus availability of banking services within the community, increase chance of health workers to practice in rural area.

Health workers also value social support in order to practice in rural areas. A study conducted in Malawi by Kayimba (2011) observed a sample of 59 nurses in Chikwawa Diocese mention free medical services to themselves, their spouses, up to four children, plus death arrangements of member of family have a positive influence on health workers decision to work in rural areas.

Health workers also are struggling to meet their socio economic needs; Changes in financial status affect their decision to stay in rural areas. Kolstad's (2011a) study in Tanzania rural for Cos, nurses and AMOs preferred higher salaries than other factors, in order for them to accept rural job. In additional Munga's (2013) study of a sample of 362 Nurses students in rural Tanzania were more specific about the amount of salary to increase, they suggested top up of 80%to 100% of their basic salaries in order to practice in rural areas

MoHSW and BMAF (2012) reported a timely inclusion of health workers in payrolls and being paid quickly is also important factor; if it is shorter the chance of them to stay in rural areas is high.

Allowances

Availability of allowances in rural also are significant in order for health workers to accept rural job. Blaauw (2010) conducted a DCE study three countries: Kenya (645) final year nursing students, Thailand (345) health workers and South Africa (300) health workers mentioned that rural allowances or incentives attracted and retained them to practice in rural areas. Similar findings observed in Nigeria, Kenya (Ebuehi et al, 2011; Mullei et al, 2010).

MoHSW and BMAF (2012) in Tanzania found employees posted in 2010/11 stayed in a new station because of timely payment of personal effects and subsistence allowances. While new employees retained by allowance health workers in FBO reported that the pension scheme attracted them to accept rural jobs in the public sector (Songstad et al, 2012). This implies that Equal treatment based on qualifications is vital; if there is a double standard it also affects attraction and retention in rural areas.

3.6 BOUNDING AND MANDATORY SERVICES:

Compulsory scheme is among the means of increasing number of health workers in rural. A study in Ghana, Burkina Faso and Tanzania observed that health workers were assigned to work in rural areas, in relative to Rwanda Adventist students participate in a bonding scheme were willing to work in rural areas (Prytherch et al, 2013; Serneel et al, 2010). Sometime governments as a custodian of provision of health service in country need to enforce laws to increase access to health services for poor in rural to ensure equity (source)

Smith and Tamara (2010) reported that young medical students aged under 26 years in Tanzania were 30% more likely to accept rural posting than medical doctors above that age. This can be done through clinical rotation, internships and changes of curriculum. The orientation of health workers to rural environments before posting is important. This can be done through clinical rotation, internships and changes of curriculum.

In summary, a study found multiple factors interact at the same time which implies intervention can be provided in a bundled system. Moreover DCE studies show the order of preferences of health workers in different cadres. The preferences of factors influencing decision of health worker to relocate to, stay in and leave in rural areas also differ between cadres which indicate that, the choices of intervention need to be conducted carefully because of sensitivity. Very little information was found about the availability of senior posts in rural areas in SSA while in Tanzania mandatory services and senior post were also scarce. As these are important factors for attraction and retention of health workers in rural areas, more study is needed in this area.

CHAPTER FOUR: HUMAN RESOURCE FOR HEALTH RETENTION INTERVENTIONS IN RURAL AREAS IN TANZANIA AND EXPERIENCES FROM SSA COUNTRIES ON RETENTION OF HEALTH WORKERS

In the previous chapter, several factors that influence the decision of health workers to relocate to, stay in or leave rural areas emerged. Based on those factors, different strategies are required to address the factors in Tanzania that attract and retain health workers in rural areas. The focus of this chapter will be on HRH retention interventions in Tanzania and SSA.

4.1 POLICY AND STRATEGIES

As presented in the background chapter, Tanzania lacks retention and HRH policies so the issues of HRH have been addressed through the HRH strategic plan which is among the components of the National Health Policy 2007.

4.1.1 HUMAN RESOURCE STRATEGIC PLAN

The HRH strategic plan focuses on proper planning, development, management, effective utilization of human resource for health, retention, strengthen health information system, setting standards, norms monitoring and distribution of health workers. The strategic plan highlighted that specific attention is required for attraction and retention of health workers in rural areas (URT, 2014).

The LGAs are responsible for the HRH plan at the district level where primary health care service is provided. However, in Tanzania, the implementation of the decentralization policy have lead to confusion in implementation of HRH especially in responsibility and authority on decision making between PO-PSM, MoHSW and LGAs (Dominic et al, 2005). The Public Service Management and Employment Policy (2008) delegated responsibility for planning to every ministry and independent department, which leads to lack of-coordination of the HRH plan.

The HRH plan needs to involve all potential stakeholders. The LGAs are also, are expected to promote involvement of FBOs in HRH plan but that was rarely done which leads to lack of incorporation of retention activities (Itika, 2011; Munga, 2008). In addition, MoHSW have pointed out the low capacity of LGAs in the HRH plan since they focus on recruitment rather than comprehensive HRH plan which include attraction and retention activities.

Furthermore, there is lack of coordination between HR and the health department in council (BMAF, 2012)

4.1.2 DECENTRALIZATION POLICY

The decentralization process in Tanzania is well documented in papers and was expected to allow LGAs to be autonomous. However, "The control of central government to LGAs is strongly felt" (Itika et al, 2011). There is evidence that LGAs depend greatly on central government especially in personal emolument funds, which also affects decision making on the deployment of health workers (Frumence et al, 2013).

The district councils are responsible for implementation of primary health services, HRH planning and submission of personnel emolument budgets to PO-PSM for validation and approval, also this organ is responsible for employment policy and staffing in the country. Administratively LGAs report to Regional Secretariat.

The regional level has a role of supervising the district by providing technical support. The MoHSW retains the task of policy formulation, regulation, and distribution of health workers. The Ministry of Finance (MOF) is responsible for financing salaries and allowances for new employees.

In addition, the Public Service Act of 2003, sections 146(2) and regulation no. 8 of 2002 mandate LGAs to formulate retention interventions to attract and retain workers. Some districts have used this opportunity to come up with initiatives of attraction and retention of health workers in remote and rural areas such as Mbinga and Uyui districts.

Implementation of policies

The HRH strategic plan focuses on implementation of National Health policy through difference ways such as:

Salary, allowances and other benefits

Tanzania developed a specific salary scale for the health sector – the Tanzania Government Health salary Scale (TGHS) which is among the highest salary scale than other public servant salary scale for both rural and urban areas. Government determines the salary scale for the private sector

and also supports payment of salaries and some health workers to work in FBOs. Since 2006 government has made an effort to increase the salary of workers such as: salary of doctors increased by 37% of the basic salary and nurses by 31% (Munga et al, 2008).

Moreover, Tanzania provides several incentives for both urban and rural areas such as: paid annual and 84 days of maternity leave for female, four days paternity leave for males, secondment and sabbatical leave without affecting retirement benefits

In addition, several allowances such as on-call allowances for doctors, extra duty, subsistence, uniform and per diem for employees reporting to a new station, transferred and working outside the station are provided.

Other incentives are injury compensation, burial support for employee and family, tax exemption for import of car and use of the Open Performance Review Appraisal system (OPRAS) for promotion, though yet in practice. Tanzania, still use seniority and experience in job for promotion (Munga et al, 2008; URT 2002, 2003, 2009). However, allowances and other benefits mentioned in government circulars expected to be provided, seldom to be provided as documented.

Free housing or allowance

Currently there is no circular for housing allowances for health workers. Previously housing allowance was provided based on the entitlement and eligibility to doctors and other senior health workers Housing allowance was among the incentive which retained health workers (URT, 2009; MoHSW, 2013). Moreover, Health workers are provided with few available free houses This issue needs to be addressed because it will add the attraction and retention effort for health workers in general and specifically in rural areas.

Training

The Public Service Act 2002 and its 2003 regulations gave instructions about employer's responsibility on HRH development. All health workers, both urban and rural, are allowed to attend further full or part-time studies and distance learning. Midwifery professionals and both public and private clinical officers can upgrade to higher levels while doctors, nurses and other staffs have tuition fee support and scholarships in post graduate studies within and outside the country(MoHSW,2013). Health workers attending long and short term training also earn salaries, and still retain their job which is a kind of incentive because in other organizations they are required to

terminate their contract or take leave without pay (Munga et al, 2008). Besides, the government provides loans for medical students who cannot afford to pay the cost of training and priority is given to health science studies (HESLB, 2012).

Primary health service development programme (PHSDP) 2007-2017

The PHSDP programme 2007-2017 commenced in 2007. The objective is to accelerate provision of health services, specifically at the primary level, the programme focus on increasing number of health workforce through improving living and working condition; construction, upgrading and rehabilitation of health facilities and staff houses in rural and urban areas. In addition, the program allows procurement of equipment. PHSDP programmes can help to improve working and living condition of health workers in rural areas by improving the status of health facilities, staff houses, and to ensure availability of medical equipment.

Guideline for new health workers to choose posts

The MOHSW introduced a guideline for new health workers to choose from three possible districts to be posted after graduation (MoHSW, 2012). This is a strategy to reduce the rate of new health workers not reporting to the new station, since the posting is based on their choice. Still, there is evidence that remote and rural are less selected (MoHSW, 2014).

Summary

Tanzania has implemented HRH strategies such as the provision of incentives, training, and improved working and living conditions to attract and retain health workers in rural areas. Therefore, the government has shown commitment in supporting HRH strategies however the lack of any specific HRH retention policy for rural health workers affects implementation

4.2 INTERVENTIONS IN REMOTE AND RURAL AREAS

To address the factors influencing the willingness of health workers to practice in rural areas requires a comprehensive set of interventions. The factors discussed in chapter three require interventions which will lead to improved attraction and retention of health workers in rural areas. This section presents interventions which have been implemented in Tanzania.

4.2.1 EMERGENCY HIRING PROJECT (EHP)

EHP was a four year project commenced in 2007 to 2010 in 19 selected rural districts in Tanzania where there are severe shortages of health workers. The focus was on improving the health workforce in Tanzania through deployment, utilization, management and retention of health workers. Staffs were hired on a three year contractual base with EHP, and cadres were doctors, nurses, AMOs, COs, pharmacists and laboratory technologists. Health workers provides with a combination of incentive see table 2.

Table 2: Combined incentives provides to health workers in rural areas

Non-Monetary incentives	Monetary incentives
<ul style="list-style-type: none">• Induction course of comprehensive HIV/AIDS management• Job guarantee for three years• Possibility of being integrated into the Government payroll at end of three year contract• Issuance of Certificate of Service on successful completion of three years of service	<ul style="list-style-type: none">• Enhanced Basic salary• Housing allowance 10% of the enhanced basic salary.• Installation grant consisting of subsistence, luggage and transport allowances.• National Social Security Fund: 20% of gross package contributed by the employer.• Performance Gratuity: 5% of the three years basic salary, paid at the end of the three year contract.

Source: Emergency Hiring Plan <http://www.mkapahivfoundation.org>

The project managed to hire 176 health workers and all reported to the new stations. In July 2009, 145 of the employed health workers retained which in districts and 68% of those retained were automatically absorbed into the government employment system. In addition, there was a reduction of the vacancy rate by 5% in districts, increase in enrolment of HIV clients from 18,951 (2007) to 202,700 (2009), and expansion of services due to availability of health workers in rural areas.

4.2.2 MKAPA FELLOWS

The programme started in 2006 and operates in 35 rural selected districts with high HIV prevalence and critical shortages of health workers. The project focuses on providing treatment for HIV patients in rural areas by hiring staff on three year contract. At the end of the contract staffs are automatically deployed by the government in the same district. The types of cadre hired were doctors, nurses, laboratory technologists and pharmacists. The program provided reallocation allowance, enhanced salary, housing, gratuity of 5% of the three years basic salary at the end of contract, intensive induction training on management of HIV/AIDS, and refresher course in other related fields twice a year, National Social Security Fund (NSSF) including Social Health Insurance, a laptop computer, and a mobile phone with monthly airtime amounting to \$30. After the three years the benefit of the laptop and mobile phone are maintained by health workers. (BMAF, 2014).

The program had several achievements such as employment of 690 (100%) of health workers, who reported at the new station in rural areas. The programme managed to retain 99% of staff, which implies that health workers are willing to practice in rural areas if there is an attraction and retention strategy. Additional 10 doctors under the program were appointed to be District Medical Officers and others reported to hold different district level positions such as an in-charge of a pharmacy or laboratory.

Mkapa Foundation under health system strengthen project

The program also constructed and handed over 100 out of 310 staff houses in remote districts including (30) houses in Singida, (50) Mtwara and (20) houses and five operating theatres with equipment in Rukwa. This intervention helps the poor to access to health services. The Chief Executive Officer of BMAF reported that construction of staff house in rural areas “contributed to having one of the dispensaries which was non-operational for 10 years to become functional, now a clinical officer is in place 24 hours within the facility compound to give service to the community”. Furthermore, 10 laboratories in 10 regions in remote districts are under construction, and after completion will be equipped (BMAF, 2014).

Retention Initiative by Local Government Authorities

LGAs such as: Masasi, Meatu, Namtumbo, Monduli, Uyui and Mbinga tried to establish incentive schemes.

4.2.3 (A) MBINGA INCENTIVE SCHEME

Mbinga district council is among the remote areas in Tanzania that initiated an incentive scheme for public servants who work in remote areas. All staff serving in rural areas are beneficiaries of the scheme. It provides all allowances and other benefits stipulated in the public service Act of 2002 and 2003 regulation. Specifically, the scheme provides a 50% loan for personnel to buy means of transport, (Nkya, 2012). There is no evidence whether the incentive scheme is sustainable but there is evidence that majority of health workers posted reported to their new station. For example, of 104 health staffs posted, 80% reported to the new station, 20% reported and left. For details see table 3 below:

Table.3 summary of number of health workers posted in Mbinga district Council

Posted staff tracking results	2007 /8	2008 /9	2009/10	Total posted	Number of staff who reported and available	Number of staff who reported and left	Number of staff who didn't report at all
Ruvuma Region-Mbinga District	42	42	20	104	71	18	15
Reported, left and available in %	-	-	-	-	68%	17%	14%

Source: MoHSW and BMAF, 2012

The data show more health workers (68%) report in Mbinga District than the average of other districts in remote areas. In the same year, MoHSW and BMAF (2012) reported that in Mafia district, of all 41 posted health workers, no one reported. The table shows number of health workers posted in the district suddenly decreased in 2009/10. Assumption was, perhaps there was

poor planning as MOHSW pointed out the low ability of LGAs in HRH planning or the ceiling of budget on recruitment decreased.

4.2.3 (B).Uyui district council - one of the most remote districts in Tanzania - faced challenges in attraction and retention of health workers. Nkya (2012) reported that Uyui district council is providing some allowances and benefits as per government circulars. Specifically it provides accommodation when new employees report to headquarters in town and support for transport to the new station. At the new station the supervisor arranges temporary accommodation and later on assists them to find permanent accommodation. All workers who are working in rural areas benefit from the scheme. There is no evidence if this intervention is sustainable as more evaluation needs to be done to determine the effectiveness. However, these efforts of attraction can increase number of health workers in rural areas.

4.2.4 SOLIDARMED PROJECT

This is a four year project started in 2013 to 2016, focusing on attraction and retention of health workers in the remote Ulanga district of Tanzania. The project put effort into hiring of staffs AMO, providing equipment, rehabilitation, and training of health workers and community health workers (CHW). CHWs have been provided with bicycles, IEC materials and first aid kits. The project supports the Lugala nursing school to reduce shortage of nurses in Ulanga district. In additional, the project constructed a hostel, lecture room, expansion dining, and rehabilitated the administration block and library. SolidarMed have made effort to increase access of services to poor people in rural areas.

In summary the study found different interventions with a combination of incentives such as: top up salary, housing, reallocation allowance gratuity, training , Social Health Insurance, laptop , mobile phone with monthly airtime, equipment, rehabilitation and construction of facility or staff houses. All interventions focus on attraction and retention to increasing number of health workers in rural areas. Also there some strategies which do not directly provide incentives to health workers like SolidarMed but which improve working conditions which is also important factor for attraction and retention of health workers in rural areas.

4.3 EXPERIENCES IN SSA COUNTRIES ON RETENTION INTERVENTIONS OF HEALTH WORKERS IN RURAL AREAS

This section presents findings of experience on retention interventions from SSA countries which have similar settings like Tanzania. Not all interventions were evaluated, also there is no evidence if these were successful and how was implemented. Several countries in SSA put initiative to establish different interventions to attract and retain health workers in rural such as:

Zambia with support from donors designed the Zambian Health Workers Retention Scheme (ZHWRs) which began in 2003. The project cost was € 2.3 million per year. Government was responsible to ensure improved infrastructures, availability of operating theatres, imaging services and laboratories (Gow et al, 2013; Kooz et al, 2005). The objective was to attract and retain doctors and later on, the scheme was expanded for nurses, COs and laboratory technicians with a contract of service for three years. Health workers were provided with a housing allowance, hardship allowances, a loan for car or house and 90% of the three year rural hardship allowance, scholarship for post graduate study and tuition fees for up to four children. Gow (2013) provided evidence that the scheme manage to attract 657 health workers including of 94 doctors, 204 nurses, 27 medical licentiates, and 196 tutors who are working in rural areas, and more doctors want to join. This implies that the scheme made progress in attraction and retention of health workers in rural areas.

The government of Malawi introduced a six year programme of work in 2004. The Emergency HRH plan funded by donors and other stakeholders was among the six components on the programme which focused on increasing the number of health workers such as doctors, cost, medical assistants, laboratory technicians, radiographers, physiotherapists, dentists, medical engineers, environmental health and nurse midwives in rural areas. The package consists of professional development, transport; free housing, utility, taxable top-up allowance and responsibility allowances of around 400 Euros for medical officers in charge. In 2010, the Department for International Development evaluated the programme and reported a 53% increase in number of health workers from 2004 (5,453) to 2009 (8,369), and improved workload. For example the density of health workers per population in 2004 was 0.87/1,000 and rose to 1.44/1,000 in 2009, increased by 75% the number of registered nurses in rural areas, improved housing, infrastructure, drugs, and equipment (O'Neil et al, 2010).

Similar intervention implemented in Kenya with support from donors, introduced an EHP strategy in 2005 to 2009 by hiring nurses to work in

HIV/AIDS programs in rural areas. EHP supported professional development, training opportunities and salary subsidies. The programme managed to hire 1,836 nurses since 2005, during a distribution of nurse remote and rural area given first priority (Gross et al, 2010). The number of patients and deliveries increased. There was a 9% increase of functioning health facilities in rural areas which implies attraction of health workers in rural areas can reduce preventable deaths.

Mali introduced medicalization of rural areas program (meaning the installation of doctors in rural areas) in the 1990s as result of government failure to absorb doctors in the public system, hence decided to authorize private practice. Doctors contracted by Heavily Indebted poor country initiatives, Centres de service communautaire and local fund. The program focused to influence doctors to work in rural areas. They are provided with installation of kits which consists of a solar panel, electricity generator, housing, library, professional support, training, research, mentorship, transportation, social and professional support. Also the program ensures availability of drugs and equipment. The evaluation of program took place in 2009 and results revealed that the program was able to increase number of doctors from none when the project started to 120 and retained 87% of doctors with maximum of 21 years stay in rural areas. In addition, the availability of doctors in rural areas was reported to improve the quality of services, the quality of management and the confidence of the population in their health services (Codjia et al, 2009).

Scholarship success: The Umthombo youth development (UYD) foundation in the Ingwavuna area in South Africa began in 1999. The focus was on supporting youth with rural background with the assumption that local students are more likely to return to rural areas after their graduation (Ross et al, 2004). Identification of suitable candidates was done through outreach at schools in rural areas by informing the students' health science career opportunity. Interested students apply for the scholarship and before being considered for support they needed to work on voluntary basis at hospital. After being member are provided with tuition fees, books, accommodation fees, meal allowances and social mentorship in return for an agreement to work in a rural area for five years. After graduation the student get a position in a local hospital to serve the community, the scheme supported them with professional development. The project managed to produce and retain 185 health science graduates and currently continues to support 205 students.

South Africa introduced a rural allowance policy in order to attract and retain indigenous doctors in rural areas. The policy began in 2004 for doctors,

pharmacists, nurse professionals (with a diploma or degree, excluding junior nurses), therapists, psychologists and radiographers. Health workers were provided with a non-pensionable rural allowance linked to the annual salary (Ditlopo, 2011). Ditlopo analysed implementation of this policy in North West province and reported weaknesses in policy formulation and implementation which also lead to poor interpretation of policy. Some health departments excluded a number of rural institutions in rural allowance because of outdated data. No documented evidence about the impact of rural allowance policy is available.

Uganda introduce a motivation and retention strategy in 2008 which focused on salary enhancement and benefits, improve leadership and management, developing conducive and safe working environments, professional value and ethical practice and health workers incentives. Government consolidated housing and lunch or dinner allowances with salary, and provided salary top-up. In some rural areas such as Karamoja it provides 30% top-up salary, housing, free transport, and scholarships for masters' degrees. The region succeeded to retain doctors for at least four years and more are moving in that region(Matsiko,2010).

Lesson learnt from the implementation of attraction and retention interventions from SSA countries is that a combination of interventions can attracts and retains health workers in rural areas. However, the design of policies and interventions requires involvement of all stakeholders.

CHAPTER FIVE: DISCUSSION AND CONCLUSION

Study findings arise from the literature review will be analysed and presented in this session. It will be followed by conclusion and recommendations

5.1 DISCUSSION

The study findings have shown that there is a link between all six factors influencing health workers decision to relocate to, stay in and leave rural areas and implementation of retention policy and interventions in both Tanzania and SSA countries. The study found the factors are inter-related and complex, some time was difficult to separate it, but the retention conceptual framework was very useful in analysis and arrangement of factors. The main focus was to analyse evaluated interventions in order to know the impact however, as stated earlier not all interventions were evaluated, also there is no evidence if these were successful and how was implemented. Also found most of interest goes to increase of salaries; on the other hand also all interventions concentrate on increase of salaries.

Since the study settings was in Tanzania and SSA countries perhaps missed useful information from middle income countries. Use of English Language was also a limitation, possibly missed some useful articles written in French.

The focus of discussion section starts with findings of factors influencing health workers decision to relocated to and stay in rural areas, Policy and intervention.

Firstly, the study found that there is a similarity in influencing factors for health workers' decision to practice in rural areas between SSA countries and Tanzania. In chronological order, the most mentioned factors are: Salary top-up was the most important factor influencing health workers to work in rural areas for SSA countries and Tanzania. A study found that salary increase has any impact in the decision of health workers to take job in rural areas. The decision of majority of health workers was influenced by this factor as demonstrated it was an opportunity cost of taking rural job. The findings also found provision of allowances, timely inclusion of health workers in the payroll system, availability of banking services, pension and gratuities also to be among the important factors.

The availability of equipment and medicine is significant for health workers' decision to work in rural areas both Tanzania and SSA countries. Availability of equipment helps health workers more confident and ability to do what there were trained to do - save life of people (WHO, 2010).The finding

showed health workers preference was high in this factor valued equipments and medical supplies

While access to continuing education is vital also personal development is another important factor for health workers to take jobs in rural areas. The opportunity for education and professional development maintain health workers competence. It is also a means of connecting them with their colleagues in urban areas. The health system environment is dynamic, so health workers also need to adapt changes and this can be done through continuous education. However more study is needed to determine whether competence can be among the factors influencing health worker to relocate to, stay in or leave rural areas.

The findings found community support and management to be significant for health workers to accept rural job. Positive relationship between community and health workers found to increase likelihood of retention of health workers in rural areas. Not only community support but also schools for children, support burial expenses, supervision and promotion are vital. On the other hand the availability of houses with proper water, electricity, or solar power and internet attracts and retains health workers in rural areas and at the same time reduces living expense to health workers.

All this factors have a great impact on improving life of poor people in rural areas. By providing the above mentioned factor health status of poor people in rural areas can be improve hence achieve equity health.

Furthermore the findings found multiple factors found to work together at the same time, which implies a combination approach of multiple factors is much more effective. To make it clear there is no evidence that providing incentive is the best way of attracting or retaining health staffs. However, findings found a bundle approach was successfully in several countries in SSA and one project in Tanzania.

A study found different types of cadres such as medical doctors, AMOs, COs and nurses. In both Tanzania and SSA, health workers' choices were different, for instance doctors' choices were training and career development while nurses preference was allowance and salaries. Also the results observed there is an association between the decision of health workers to practice in rural areas and their background. Age, marital status and family are driving forces in health workers' decisions to practice in rural areas. Besides, a study found that different religious and socialist ideologies were among the factors influenced health workers to practice in rural areas. The study suggests more to be done to assess the religious factor. It is not always clear if health workers were asked what was important to them.

Secondly, the findings show that Tanzania lack a specific policy for retention of health workers in rural areas. In addition country the findings found one country (South Africa) tried implementation rural retention policy but affected by weaknesses in design and implementation. As discussed earlier in chapter four, Tanzania is guided by circulars such as the public service Act no. 8 of 2002, regulation of 2003, and a standing order of 2009 in provision of incentives and salaries based on cadres. These allowances and benefits are not always provided and some rural health workers complain about missing them. In addition, in Tanzania, there is a gap in provision of housing allowance; according to circulars only executives are entitled (Munga, 2008).

Allowances are equally provided between urban and rural areas; however the provision of allowances does not reflect attraction and retention of health workers in rural areas. Furthermore, the employer is responsible for training, career development of employee, and provision of equipment and medicine. Government support supports in service training through upgrading for nurses, COs and AMOs at the low cost of about US\$ 294 per year (MoHSW, 2013).(check)

It is anticipated that the management of human resource be well coordinated and HR managers have enough capacity in HRH planning to consider attraction and retention activities. In spite of this, a study found that, the management of HRH in Tanzania is not clear, because of the complexity of the structure (Dominic et al, 2005). There are separate actors working at the same time to address HRH issues. The ability of LGAs in HRH planning was reported to be weak since do not take into account the aspects of retention of health workers. Also there is poor coordination of HRH planning at the district level and a lack of involvement of FBOs in HRH planning. If HRH planning incorporated attraction and retention activities, all six factors influencing health workers decision to practice in rural areas would have be addressed, resulting in increase in the number of health workers in rural areas.

Even though Tanzania lack a retention policy for rural health workers, the government have strong commitment in supporting health workers. The government has been increasing salaries since 2006 and supporting MOHSW in the formulation of a HRH strategic plan. However, due to the poor economic situation, government failed to implement some activities including attraction and retention. No best practice on formulation of rural retention policy was found in this study.

The lesson learnt from SSA studies: weaknesses in design of retention policy have lead to failures in implementation which affect the efforts of attraction and retention in rural areas hence affect poor in rural areas. Provision of similar incentives for both rural and urban does not reflect attraction and retention of attract health workers while a combination of various types of incentives attracts and retains them in rural areas. Availability of housing and health workers in rural areas contributes to re-functioning of closed health facilities.

Thirdly, a study was unable to find the evidence best retention intervention However, based on the study findings health workers seem to be attracted and retained by a combination of interventions. The study found there are few articles discussed about retention results. There were similarities and differences between interventions implemented in Tanzania and SSA countries. In summary see table 4 below:

Table 4: Types of Interventions found in Tanzania and SSA

Number	Types of Intervention	Tanzania	SSA countries
1.	Education support	Is supporting medical students through loans, allowances, Salaries	Provided in bundle approach
2	Bonding or Mandatory	Only Mkapa Fellow implement	Provided in some countries
3	Financial and non financial incentive	Provides separately	Provided in bundle approach
4	Professional and personal support	Provided by government and other stakeholders	Provided in bundle approach
5.	Bundle interventions	Only Mkapa Fellow implement	Implemented most in SSA

Source: WHO, 2010

The table above presents the types of retention interventions found to be implemented in Tanzania and SSA. Generally there were similar interventions implemented in both countries and differences as follows:

Among the four interventions in Tanzania a study found Mkapa Fellows' operation is well explained and provided in bundle approach similar to Zambia under ZHWRS, Malawi EHP, Mali medicalization of rural program, Kenya EHP and Uganda motivation strategies. Six Countries provides a bundle system which comprises different types of incentives such as: hardship allowances, provision of free house or allowances, tuition fees, pension and personal and career development supports. There is evidence that by using these interventions Zambia, Malawi, Kenya, Mali, Kenya and Uganda increased a number of health workers in rural areas.

However, scholarship success Umthombo Youth Development (UYD) and South African rural allowance policy was found to be implemented differently from other countries in SSA and Tanzania. Instead of providing bundle approach, they were supporting one specific intervention such as education support with agreement of working in rural areas (or bonding scheme). There is evidence that UYD increased number of health workers in rural area South Africa, no documented evidence for rural allowance policy in South Africa also.

Tanzania can adapt a combination of interventions which is already implemented by Mkapa Fellows, but needs to conduct feasibility study such as DCE in order to know the expectation of health workers in rural areas and the labour market analysis before designing the retention intervention (WHO, 2010). The cost of programme is not reported but might be high, so political will and government commitment is highly required because funds are in need. The challenges that need to be highlighted in bundle approach, is issue of sustainability, because the programme depended heavily on donors support. However, health sector in Tanzania is underfunded. Government total expenditure on health is 10.4% which is below the Abuja declaration of 15% allocation resulting in difficulties in managing Human resource for health issues. In order to reduce a huge budgetary expenditure, there is a need to exhaust the role played by LGAs in retention of health workers in rural areas which are less costly such as: recognition, supervision, management and community support.

Contracting doctors under medicalization of rural areas as a strategy of retention in Mali was successful. Among the opportunities for success was surplus of doctors who were looking for employment. This strategy is not

suitable in Tanzania, because it has a severe shortage of health workers and the government allows part-time practice. Therefore it will be difficult to relocate health workers in rural areas in such situation, unless government abolishes part-time practice and has a surplus in number of health workers in these areas. Even though sometimes, government fails to employ all graduates, it does not mean that there is surplus, but it is due to economic situation which hinder recruitment of all graduate.

Even though some interventions found to be different from Tanzania, still the country can learn or adapt these interventions because of similar settings as follows: Umthombo youth development (UYD) in South Africa supports youth from rural backgrounds who agree to return after graduation to serve their rural community for five years. The goal of Tanzania is to attract and retain health workers in rural areas and the strategy of supporting medical students is already in place, Tanzania can adapt the UYD project strategy and modify it by making it mandatory for AMO, CO and nurses to practice in rural areas. The training cost is less expensive - about US\$ 1,300 to US\$ 2,000 per year with a length of three years (Mullan, 2007). In addition, these cadres (AMOs and COs) are not internationally recognized so it will be possible to retain them through improving living and working condition using PHSDP, ensuring supportive working environments and provision of a combination of incentives (HESLB, 2012; WHO, 2010; Bangdiwala, 2010). However, no evidence was found on the evaluation of the impact of this project. The lessons learned from the UYD project is that supporting students with rural background increases the likelihood of retaining health workers in rural areas.

5.2 CONCLUSION

Attraction and retention of health workers in Tanzania and SSA countries is a complex issue and the most appropriate strategy depends on the country settings. Before the implementation of intervention we must first understand the health workforce in terms of factors related to choice to relocation to, remaining in, or leaving rural areas.

The factors are interrelated working together at the same time, in such situation it is complex and difficult to separate. It consists personal related issues, work related reasons and policy reason.

There is no single factor which can be used alone to attract and retain health workers in rural areas. Although Tanzania put initiatives in attraction and retention of health workforce, still more work need to be done.

Several Discrete Choice Experiments conducted and give a big picture of health workers preferences which can be used by policy maker to formulate policy and interventions. Also DCE can help HRH managers to in selection of activities to be included in HRH planning for attraction and retention in rural areas.

Different types of cadre such as doctors, nurses, clinical officers and assistant medical officers have different preferences. This information is also important during a design and implementation of interventions. Since the selection of cadre is sensitive need to be done in highly caution otherwise may distort the provision of health services.

The lack of attraction and retention policy affects the poor in rural areas, which is against human rights and health equity. Government as a custodian for provision of health services in Tanzania has a duty to ensure rural populations are served by skilled health workers. This can only be done if factors influencing health workers' choice to practice in remote and rural areas are considered through proper intervention guided by retention policy in rural areas.

The government has shown commitment in supporting HRH strategies though provision of different types of incentives. This shows there is a political.

The management of HR is very crucial if Tanzania need to make things happen. Attraction and retention activities are prepared at this organ, so having competence HR managers is inevitable.

Coordination of HRH planning and involvement of key stakeholders such as Mkapa Fellow, SolidarMed, partners on health ,FBO, other ministries and private for profit is important. Attraction and retention need a collective efforts, on the other hand if government improve living condition or infrastructure also community will benefit.

Decentralization is well documented in paper in Tanzania focus on delegation of responsibilities in order to improve service delivery; however, there are challenges in implementation which can be rectified by the Government.

Having retention interventions reflect government commitment on serving life of poor people in rural areas. By doing so, health status of community will be improved as well as improved health indicators.

Majority of Local Government Authorities are located in remote and rural areas where primary health care are provided. The role of LGA are not fully utilized, however the role of LGAs focus on provision of social services to the community so it owe to support health workers in rural areas by using less cost or non financial incentives. Government total expenditure on health is another challenges in health sector. The sector is underfunded so it is difficult to implemented some activities. The trend of allocation is decreasing from 12% in 2010/11 to 10% in 2012/13.

5.3 RECOMMENDATION

Attraction and retention of health workers means increase availability of health workers in rural areas which leads to improved health status of a community. Improved health services delivery is a function of different variables such as the decision of health workers to practice in rural areas. The following recommendations focus at improving attraction and retention of health workers in rural areas in Tanzania in order to reduce shortages of health workforce.

(a) Short term

- LGAs should enhance coordination between HRH department, health department in district council and involvement of stakeholders such as FBO's, Mkapa Fellows in the HRH plan. The plan should be comprehensive and include attraction and retention activities.
- To ensure sustainability Government through MOHSW should encourage provision of free housing rather than allowances because it is more cost beneficial and if properly maintained can be used for a decades. The construction and renovation of health facilities under PHSDP should go together with construction of staff houses.
- The MOHSW, PO-PSM, and PMO-RALG should enforce the use of OPRAS system as criteria to monitor and measure performance in order to provide incentive. The issue is not only increasing the number of health workforce but also effective use of the available human resources.

- All the existing retention interventions should be evaluated in order to know the impact.
- Health workers can be invited to participate in community events, meetings or be member of a various societal activities in a village so that may not feel isolated.
- The focus of government and other stakeholders needs to change and to pay more attention on rural areas to ensure equitable distribution and retention of health workers based on country settings. So the unavailability of a retention policy is a fundamental issue in Tanzania.

(b)Long term

- The MOHSW, PO-PSM, and PMO-RALG in collaboration with partners should consider formulation of HRH retention policy in rural areas. The policy should clearly indicate the types of allowances (a study suggest a bundle system) to be provided and eligibility criteria. The selection of cadres to be included in retention intervention should be done with high caution because is a sensitive issue. If the excluded health workers do not have clear information the interventions can distort the implementation. The existing payment and incentives packages policy 2010 should be revised to suit rural settings before implementation for example should differentiate provision of incentive between urban and rural to attract and retain health workers in rural areas.
- The MOHSW, PMO-RALG and LGAs should adapt evidence based interventions from Mkapa Fellows and ZHWRS strategy which was found successful in Zambia. A feasibility study should be conducted to find out the relevance, acceptability, affordability, and effectiveness of intervention before implementation.
- Government should provide loans for medical students based on rural background in order to increase number of health workers in rural areas. The government can start as a pilot in the remote district with critical shortage of health workers and then scale up in country based on the availability of resources. Also this effort should go together with increase career opportunities and management support to the rural health workers.

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ANNEX 1: MAP OF TANZANIA SHOWS REGIONS AND DISTRICTS



ANNEX 2. ECONOMIC INDICATORS

Number	Indicator	2010	2011	2012
1.	National debt as % in GDP	34.4%	44.4%	47.7%
2.	Proportional of health budget spend on health as % of GDP	6.5%	10.4%	10.4%
3.	Inflation rate	7.2		9.8%(as march 2013)

Source: URT, 2013(need to check)

ANNEX 3. HEALTH FACILITIES AND OWNERSHIP

Type of health facility	Ownership					Total
	Gvt	DDH	FBO/VA	Parastatals	Private	
Hospital	99	17	77	11	36	240
Health centre	417	1	103	13	44	578
Dispensary	4127	0	590	117	498	5332
Grand total	4643	18	770	141	578	6150
Percent	75.5%	0.3%	12.5%	2.3%	9.4%	

Source: MoHSW,2011(a)

The table above shows the distribution of health facilities and ownership. Public owned 75.5% of health facilities, also private play a big role in provision of services in rural areas.

ANNEX 4. URBAN /RURAL DISTRIBUTION OF SELECTED HEALTH WORKERS IN PUBLIC AND PRIVATE

No	Occupational category/cadre	Available	Urban %	Rural %
1.	Medical doctors	1135	69.34	30.66
2.	Nursing officers	2456	70.72	29.28
3.	Midwives	14096	36.47	63.53
4.	Assistant Medical Officer	1741	38.66	61.34
5.	Clinical Officer	5950	27.66	72.34

Source: URT, 2013

Table 4. above indicates the situation of health workers per facility level, the deficit is very wide specific at district level which provides primary health care and majority of it are located in rural areas.

ANNEX 5. BOX 1. THE MODEL OF HEALTH SERVICE DELIVERY IN TANZANIA

The model of health services delivery in Tanzania is pyramidal in shape, it starts from lower level dispensary to high level Tertiary Hospital:

Lower level/Primary level: This Consist of dispensaries, health centres and district hospitals and which are managed by the district councils. Both public and private provide health care services in rural and urban areas. Dispensaries catering for 10,000 populations, Health centre caters for 50,000 (provide basic health care services). District Hospital is a first referral at district level caters for 250,000 of the population. Each district supposed to have district hospitals. The district which does not have a public hospital use Faith Based Organization (FBOs) hospital as District designated hospitals and receives subsidies from the government. Staffing consists of: Medical Doctors, Pharmacist, Assistant Medical Officer (AMO), Nurses, radiology staff, health officers, medical attendants, Laboratory staff, Clinical officer /assistant.

Secondary level: Regional hospitals cater for 1,000,000 populations. This is a Referral at regional level. It has more advanced staffing in terms of specialties such as internal medicine, child health, surgery, obstetrics and gynaecology, psychiatric and public health.

Tertiary Level: This level comprises specialized and referral hospitals. This level provides most advanced and specialized services as well as OPD and IPD services. Staffing level includes specialist and super specialist.