# FACTORS INFLUENCING ATTRITION INTENTIONS OF HUMAN RESOURCE FOR HEALTH IN PRIMARY HEALTH CARE FACILITIES IN MUHEZA DISTRICT COUNCIL, TANGA REGION

By

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A Dissertation Submitted in (Partial) Fulfillment of the Requirements for the Degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences

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## CERTIFICATION

The undersigned certifies that has read and hereby recommends for acceptance by Muhimbili University College of Health and Allied Sciences a dissertation entitled **Factors Influencing Attrition Intentions of Human Resource for Health in Primary Health Care Facilities in Muheza District Council,Tanga Region,** in partial fulfillment of the requirements for the Degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences.

Dr Semali I.A

(Supervisor)

Date: 15th October 2009

## DECLARATION

## AND

## COPYRIGHT

I, **Joseph Kisala**, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

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## ABSTRACT

Health sector reforms are on going within the context of acute shortage of human resource for health (HRH).At the same time there is a dearth of information on attrition pattern particularly intentions of attrition. A descriptive cross sectional study was implemented in dispensaries, health centers and a district designated hospital in Muheza district in September 2007 to determine attrition intentions among health professionals from rural primary health care facilities and the associated factors. Data collection was implemented in 31 randomly selected health facilities in Muheza district. A total of 138 trained health care providers were interviewed of whom 47.1 percent had intention to stay. Comparing between sex a higher proportion (47.4 percent ) of female reported they would not leave compared to male (46.5 percent), the difference was not statically significant ($\chi^2$ =0.29 p-value=0.8640). Age group 30-39 had the lowest proportion (40.7 percent) reporting intention to stay. Professional cadres with the highest intention to stay included public health nurse B (58.8 percent), trained nurse midwives (51.6 percent) and clinical officers (46.4 percent). The main reasons for leaving were low salary and remunerations (37.0 percent), inadequate equipment (32.9 percent), delayed promotions (30.1 percent) and heavy workload (28.8 percent).

It was concluded that there is a problem of attrition intentions and retention of health care providers in the study district due to poor remuneration and working environment. These results emphasize the need to design and implement interventions targeted to retain staff in order to remedy and minimize attritions. Interventions should include a good mix of monetary and non monetary incentives.

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## ABBREVIATIONS

| | |
|---|---|
| ACO | Assistant clinical officer |
| ALT | Assistant laboratory technician |
| ADO | Assistant dental officer |
| AIDS | Acquired Immune Deficiency Syndrome |
| AMO | Assistant medical officer |
| ARVs | Antiretroviral Drugs |
| CCSS | Christian commission for social services |
| CHMT | Council health management team |
| CO | Clinical officer |
| DT | Dental therapist |
| FBO | Faith based organization |
| FTEs | Full-time Equivalents |
| HIV | Human Immunodeficiency Virus |
| HMIS | Health management information system |
| HRH | Human resource for health |
| HWs | Health workers |
| LG | Local government |
| LT | Laboratory technician |
| MCHA | Maternal and child health aide |
| MDGs | Millennium development goals |
| MO | Medical officer |
| MOHSW | Ministry of Health and Social Welfare |

| | |
|---|---|
| NCTP | National Care and Treatment Plan |
| NGO | Non Governmental Organizations |
| NO | Nursing officer |
| PA | Pharmaceutical assistant |
| PHN A | Public health nurse A |
| PHN B | Public health nurse B |
| PLWHA | People living with HIV/AIDS |
| PT | Physiotherapist |
| RGA | Radio graphic assistant |
| RGT | Radio graphic technician |
| RHMT | Regional health management team |
| TN | Trained nurse |
| TNM | Trained nurse midwife |
| WHO | World Health Organization |

# CHAPTER ONE

# INTRODUCTION

## Background information

It is widely recognized that Africa's insufficient health workforce is a major constraint in attaining the millennium development goals (MDGs). Africa accounts for 25% of the global burden of disease though it is home to less than 10% of the world's population and has the least of health workers density (0.8 workers per 1000), compared to 10.3 per 1000 in Europe [1, 2]. In addition the quality and productivity of the existing workforce is questionable [3]. Out of 46 countries in Africa, only 6 have workforce density of 2.5 per 1000 population which is the minimum proposed requirement of work force density for attaining the millennium development goals in any developing country [2, 4].

Currently in Tanzania health worker density is estimated at less than 1 per 1000 which will reduce further as health workers are on the decline [5]. The shortage of human resource for health is more acute for higher cadres. Of the 25,000 skilled human resource for health in Tanzania fewer than one thousand are doctors[6] i.e. those who has at least a basic degree in the field of medicine including both specialists and generalists medical officers. Human resource shortage varies by cadre. Ideally according to World Health Organization (WHO) standard doctor to population ratio should be one doctor to 10,000 people [7]. However, in Tanzania mainland the doctor to population ratio is very high estimated at 138,000 people per doctor [8]. Building on this work population to doctor ratio is 14 times higher compared to WHO minimum standard in developing countries. Like wise for the other cadres of clinicians in primary health care which are assistant medical officers (AMOs) and clinical officers (COs) the ratio to

population they serve is 67,000 and 14000 people per one AMO and one clinical officer respectively which is 7 times and 1.4 times higher compared to the WHO standard [8] . The nurse per population ratio in Tanzania stands at 5,000 people per nurse [8], which is 5 times higher compared to WHO recommended standard of 1,000 people per nurse [9].

The skilled health workers are concentrated in urban areas where only 24 percent of the Tanzanians live; the city of Dar es Salaam alone has nearly 30 times as many medical officers and medical specialists than other rural districts [10]. Thus the few available skilled health workers are located in urban areas consequently increasing the urban rural inequity in health workers. Hence Tanzania is experiencing worsening shortage of health workers which is more severe for skilled health workers with serious urban rural imbalance.

Main reasons contributing to human resource for health (HRH) crisis include under investment in training, poor working conditions, and lack of incentives[11,12]. Consequently, HRH migration within country or to outside countries contributes highly to attrition of HRH. Better opportunities in urban areas or wealthier countries act as pull factors for attrition [13, 14, 15]. The causes and extent of attrition of HRH vary from one country to another; the most common causes are poor economic performance, insufficient creation of new jobs, and a limited capacity to absorb qualified personnel [11, 16]. Negative side effects of structural adjustment programs, with their associated measures to eliminate or reduce budget deficits and public expenditure, downsizing or retreat of government from economic activity, and the liquidation or privatization of

enterprises have also led to the emigration of professionals. Other de-motivating factors include a lack of opportunities for continuing education and training, mediocre quality education and training, and inadequate day care facilities for their children [17, 18].

On top of that HRH in Africa have to cope with the increasing burden of disease due to HIV AIDS epidemic, malaria, tuberculosis and other infectious diseases. The impact of attrition and increasing burden of disease on the remaining HRH include low staff morale and motivation, consequently leading to poor quality of services [14, 19, 20,]. In this regard impact of attrition is increased workload for those who remain leading to more staff being frustrated thus initiating desire to leave making it a vicious circle. In Zimbabwe, only 360 of 1200 doctors trained during the 1990s were practicing in their country in 2000; half of those trained in Ethiopia and Zambia had also emigrated and in Kenya 600 out of 6000 doctors trained locally were retained which rose to 1200 when doctors compensation was increased in 2002[17].

Other studies have found that most individuals, who do stay in the health sector, work hard and receive recognition and status from colleagues and community [21, 22].

It has been established that there is a positive correlation between health worker density and various health outcomes. Low HRH density will reduce health status and life expectancy [23, 24]. An increase in physician density results in improvement of infant mortality rate, under five mortality rate, maternal mortality rate, and life expectancy [23]. While increase in nurse density found to be significantly related to lower maternal mortality rate MMR [23]. In addition to physician and nurse density, female literacy and health expenditure also found to significantly improve health Outcome indicators [23].

Tanzania is currently implementing health sector reforms and decentralization within the context of low HRH density due to attrition. Migration of few health workers will negatively affect the benefits anticipated from the reforms. Since there is limited information on reasons of health workers attrition at district level, this study is proposed to understand health workers attrition intentions in order to have strategies in place to improve the HRH within the decentralization context.

**Problem statement**

Developing countries and especially the sub-Saharan countries are less likely to achieve the Millennium Development Goals (MDGs) because of the serious shortage of Human Resource for Health (HRH). Globally the shortage of HRH is estimated at 4.3 million [1]. Health workers in Tanzania declined by 40 percent over a period of seven years between 1994/95 and 2001/02 [5, 25]. In other words the health workers declined from 2.35 to 1.33 health workers per 1000 in the reference period.

Ideally according to World Health Organization (WHO) the minimum standard doctor to population ratio should be one doctor to 10,000 people [7]. However in Tanzania mainland the doctor to population ratio is very high estimated at 138,000 people per doctor[8]. By extrapolating from this work doctor to population ratio is 13 times higher against WHO minimum standard for developing countries. Like wise for other cadres of clinicians in primary health care one assistant medical officer (AMO) serves 67,000 people which is 6 times higher compared to the expected ratio while one clinical officer (CO) serves 14000 people which is 0.4 times in excess of the expected against the minimum WHO standard[8]. The nurse per population ratio in Tanzania

stands at 5,000 people per nurse [8], which is 5 times higher compared to WHO recommended standard of 1,000 people per nurse [9].

The growing attrition due to migration and increasing disease burden i.e. Hiv/aids, malaria, tuberculosis and other causes is a serious threat to strategies to improving of HRH. Also low morale of health workers, inadequate motivations/ incentive schemes, and inappropriately applied human resource management tools are among the associated factors to attrition of trained health staff [6, 20, 21]. Other factors include health sector reforms and growing private sector [5].These factors initiates attrition intentions while others facilitate actual attrition. Because of varying salaries, benefits, career opportunities, working and living conditions, factors like the increasing access to information about employment opportunities has enabled trained health professionals look increasingly for jobs in both local and international labour markets more efficiently thus facilitating actual attrition [6].

In Tanzania urban rural disparities favor urban migration, thus lower HRH densities in rural areas is due to urban rural disparities [5, 10] .Differences existing between public, private and non government organization initiate and facilitate attrition [6]. Currently there is no data showing the magnitude of attrition within primary health care facilities in rural areas where we have 76 percent of the population [25]. Since there is no opportunity to track all subjects of attrition the level of attrition intention among existing HRH will shed light on future attritions. This study attempted to determine the level of attrition intentions among HRH in dispensaries, health centers and hospital and some of the factors influencing the intentions.

**Rationale**

This study aimed at investigating the area of human resource for health (HRH) on attrition intentions of health professionals in rural district primary health care facilities. Among strategies of health sector reforms in Tanzania is to ensure well trained and motivated health professionals are deployed at the appropriate health service level [26]. Attrition intentions of HRH and factors influencing actual attrition in this era of health sector reforms need special attention to prevent devastating crisis of HRH professionals in rural primary health care facilities.

The findings from this study are expected to enrich knowledge and information to stake holders ; central government, local governments and non governmental organizations with regard to all efforts of developing strategies and interventions targeted to staff retention and improvement of health.

## OBJECTIVES

### Broad objective

To determine the attrition intention of health professionals from rural primary health care facilities and the associated factors in Muheza district .

### Specific objectives

1. To determine social demographic characteristics of health professionals in primary health care facilities in Muheza district.
2. To determine proportion of health professionals who intend to leave public primary health care facilities in Muheza district.
3. To determine reasons for the reported intention to leave .
4. To determine the proportion of attrition of health professionals in the past 3 years in public, faith based, and private primary health care facilities in Muheza district by cadre.
5. To explore reasons of attrition of health professionals secondary to migration as perceived by available staff in primary health care facilities in Muheza district.
6. To determine the common destinations for attrition of health professionals.

# CHAPTER TWO

# REVIEW OF LITERATURE

## Global crisis of human resource for health

The current shortage of human resource for health (HRH) in developing countries is a serious threat in achieving the Millennium Development Goals for the year 2015. Globally the World Health Organization (WHO) estimates the shortage of HRH to be 4.3 million [1]. The situation is especially acute in Africa, which has only 3% of the global health workforce yet bears 25% of the world's burden of disease [2]. In Africa shortage of HRH is estimated at 820,000 doctors, nurses and other health workers [27].

To achieve the Millennium Development Goals, the minimum level of health workforce density is estimated at 2.5 health workers per 1,000 people. Out of 46 countries in Africa, only 6 have workforce density of 2.5 per 1,000 populations or over. Other African countries have health workforce density 0.8 workers per 1000 population on the average; significantly lower compared to the world median density of 5 per 1,000 population [2].There is a wide variation in the HRH problem in Africa and Sub-Saharan Africa [4].

## Factors influencing human resource for health crisis

A complex set of factors has contributed to this crisis, some exogenous, such as strict fiscal measures introduced by structural adjustment, often resulting in cutbacks in the number of health workers. But endogenous factors are also to blame, including misdirected human resource and training policies, weak institutions, and possibly even inappropriate structures. [4].

Some authors cited that the global shortfall in the health workforce is a result of chronic underinvestment in public health and in health-worker pre-service education and in-service training [2, 11, 16]. Brayan et al [28] indicated that chronic staff shortages that persists in training institutions limits the quantity and quality of the national capacity to training health professionals. The accreditation of training institutions depends on the ratio of qualified full-time teaching staff and students. Hence, the insufficient availability of teaching staff reinforces the capacity limits of accredited training institutions. New private training institutions have resorted to measures such as the use of part-time staff, recruiting teachers from neighboring countries, especially Kenya and Uganda, or even changing to semester system to reduce the need for teachers in multiple disciplines. In the case of public training institutions, it is unknown whether plans to remedy the persistent shortage of teachers and trainers exist [28].

It is also reported that losses among HRH in the health sector in the developing counties between 1993 and 2001 were enhanced by wider public sector adjustment policies that included active retrenchment of lower skilled cadres [17].

South of Sahara Africa (SSA) bears disproportionate high burden of diseases 25 percent compared to the rest of regions, yet it has only 1.3 percent of the world's registered healthcare professionals [1].

A case study in Swaziland, to identify major factors that contribute to the HRH crisis was conducted in a period of 18 months in 2004 and 2005 in the public and mission health facilities reported unfilled positions by cadre which was 44% posts for

physicians , 19% posts for nurses and 17% of nursing assistant posts[29]. It was further reported that emigration and HIV/AIDS were major factors of HRH attrition. It was in addition estimated that the nursing workforce in the public sector in Swaziland would be reduced by more than 40% by 2010 [29].

Likewise in Tanzania, HIV/AIDS pandemic has caused a substantial increase in the demand for health services as more than 25% of services are provided to patients infected with the virus[6]. A further increase of this share is expected with the implementation of the national care and treatment plan (NCTP) for people living with HIV/AIDS (PLWHA). The plan set a target of treating 65,000 PLWHA with antiretroviral drugs (ARVs) by the end of 2005, and at least 400,000 by the year 2008. The provision of antiretroviral treatment to approximately 500,000 PLWHA in 2008 would require approximately 9,300 full time equivalents (FTEs) [6]. It is also estimated that an expansion of priority health interventions necessary to achieve the MDGs would require approximately 120,000 FTEs by 2015 [30].

The human resource for health crisis is further amplified by a human resources predicament caused by low motivation of health workers and a brain drain of trained professionals [19, 12].

**Situation of human resource for health in Tanzania**

The Human Resource for Health in Tanzania is estimated at 49,900 and attrition rate is estimated at 4.2 percent, and it is also projected that the work force will decline to 37,000 by 2015[5, 37].

**Tanzania interventions on human resource for health**

In response to the low work force to population ratio, the Tanzanian government has attempted several measures since her independence in 1961, these include opening up institutions in Tanzania for training cadres of clinical officers , assistant medical officers ,public health nurses etc. for the purpose of staffing the primary health care facilities which serves the majority rural population. In the year 2004, The government stated its intention to provide financial sponsorship to students who would undertake training in clinical and paramedical institutions . However these efforts have not yet yielded the desired equitable manning levels of the health professionals in the public primary health care facilities in the rural areas due to several factors including attritions.

With regard to retention, Tanzania has not yet embarked on a scheme of differential remuneration in favour of health professionals working in rural areas. The Tanzania Ministry of health acknowledges the fact that employment conditions and remuneration of human resources of health are unsatisfactory [31].

**Impact of attrition**

It has been reported that some developing countries especially south of the Sahara Africa suffer disproportionately from the effects of attrition and migration [12, 14]. When significant numbers of doctors and nurses emigrate, the countries that financed their education are, usually unwillingly, subsidizing the wealthier countries that receive those health professionals. If a country has a fragile health system, the loss of part of its trained workforce negatively impacts the health system. The impact is most severe in

rural and underserved areas, from where emigration of health workers is often greatest [12].

**Determinants of attrition intentions and factors influencing attrition of human resource for health**

Different authors argue that motivation, satisfaction and morale are generally low among public health workers [14, 19, 21]. A qualitative study done in Kilimanjaro by Manongi et al(2006) showed that the main factors that caused low motivation among health care workers working at primary health care facilities were heavy work load made worse by staff shortages. Others were lack of inter-professional exchange with higher referrals, lack of supportive supervision, and career goals. Additional factors were infrastructure, lack of equipment, loss of individual staff esteem, and lack of professional development [20]. Dissatisfaction was attributed to a lack of clear job descriptions, poor information flows between management and staff, low salaries and poor staff welfare [20, 36]. Low motivation would initiate attrition intention and eventual attrition.

Work motivation involves a set of psychological processes that influence the individual's allocation of personal resources toward goals that affect workplace behaviors, effectiveness, and productivity [32]. Employee adoption of, and motivation to accomplish organizational goals requires that those goals be associated with personally desired outcomes, such as a sense of achievement or monetary gain. Employees must perceive a match between their own goals and those of the organization in order for the organization goals to have a positive impact on worker behavior including minimizing migration intention and ultimately on performance [32]. Work motivation theorists have

identified seven major classes of determinants: societal / cultural values, organizational/workplace culture, personal values, personality tendencies, workplace conditions, human resource management practices, and self-efficacy of work-relevant knowledge, skills and abilities [32].

These determinants of worker motivation may also be distinguished in terms of their proximity to motivational processing [33]. Distal determinants of motivation pertain to broad, general characteristics of societies and persons. Societal/cultural values and individual differences in personality tendencies represent distal determinants of worker motivation that are generally stable and not easily altered [33]. Proximal determinants of motivation tend to be more malleable and often show larger effects on motivational processing. Human resource / management practices and worker self confidence for job performance, represent proximal determinants that may be altered either directly or as a consequence of longer-term interventions aimed at modifying distal influences for example organizational culture [33].

The attrition of skilled health workers occurs in different regions and contexts for a variety of reasons [11]. The common factors that influence attrition in various studies globally and within the region include income , better remunerations, job satisfaction, opportunity for further training ,career advancement, management and governance , working environments, new experiences and social and family motivations [14,18,22]. Some studies conducted in Africa, East Africa and the rest of the world have shown that incentives has a role in influencing migration and retention of health professionals [15,20,21]. Fore instance motivation is high in group based performance awards and

pay, effort related awards and pay, consistent application of sanctions for wrongful behavior, team building, low cost benefits that express personal appreciation (extra free time, tea during night duty), transparent and reliable promotion schemes, supportive supervision and feedback, performance management tools, horizontal and vertical communication among staff. Others are quality improvement teams and building a quality culture, participatory problems assessment and problem solving processes, benchmarking and competition among facilities [21].

Good work conditions improve recruitment and retention, workers' health and well-being, quality of care and patient safety, organizational performance as well as societal outcomes. On the other hand health workers dissatisfaction may be associated with absenteeism, high turnover, and low quality of care [19, 34, 35]. Heavy workloads, excessive overtime, inflexible scheduling, safety hazards, poor management and few opportunities for leadership and professional development are among the push factors that result in poor recruitment and retention of human resource for health , including attrition and migration [21,34,35].

In Kenya and Benin researchers examined the aspects that encourage health professional to do ones work well revealed the following motivation factors in descending order to be more dominant such as healing patients, vocation, professional conscience, professional satisfaction, recognition by supervisors, remuneration, recognition by community, means and materials available, good work environment and training [21]. While in Uganda a research on turnover of health professionals in general hospitals in West Nile region identified reasons for out migration of health professionals

from private not for profit and government hospitals to be low salary, poor relationship with managers, poor relationship with community, delayed confirmation, delayed promotion, high work load, lack of retirement benefits and fear of job insecurity. Others are unfriendly hospital rules, conflict among staff, join spouses, lack of social amenities, lack of career development opportunity, lack of additional monetary incentives and poor accommodation [22]. However no such data has been collected for facilities at lower levels of primary health care facilities especially health centers or dispensaries.

Given the fact that, most of studies had been conducted in urban hospitals; and few that had been conducted in rural district hospitals, none of the studies has documented on elements that are associated with health care providers intentions to leave rural primary health care facilities where majority of the populations live [25]. Major reasons triggering the onset of intention to leave need to be known in order to have in place effective strategies to address the problem. Such reasons could include being rural, social-demographic, motivation, workload as well as structural quality of services. Therefore it was imperative to conduct this study to highlight and contribute to an understanding of the magnitude of attrition, intention of attrition as well as factors influencing it. Such studies are important in rural areas. Thus the need to study Muheza district as a case study.

# CHAPTER THREE

# METHODOLOGY

## Study design

The study was descriptive cross sectional design to determine attrition intentions among health professionals from rural primary health care facilities and the associated factors. The study was conducted in dispensaries, health centers and a district designated hospital in Muheza district council from 3rd September to 20th September 2007.

## Selection of the study area

This study was conducted in Muheza district council, Tanga region. The region was chosen on convenience basis because of its location near to Dar es Salaam, it could be difficult to pick a region which is far due to limited financial resources and time. Muheza district council was also conveniently selected because it has a good mix of public, private and faith based facilities including a district designated hospital.

Muheza district covers an area of 1974 square kilometers and it is one of the eight districts of Tanga region which is situated in the eastern part of Tanzania. Muheza district is located between latitudes 04 15 degrees and 05 25 degrees south of Equator and longitudes 38 35 degrees and 39 00 degrees east. It boarders the Indian ocean and Tanga city on the eastern side, while Pangani district boarders the southern side. It is bordered by Korogwe district on the western side and Mkinga district on the northern part. The

district is new after the old Muheza district had been split into two i.e. Muheza and Mkinga districts in July 2006.

According to 2002 population and housing census, the district has 184,585 people. Women of child bearing age were 33,225 (17.9%), children under 5 years were 38,763 (21.0%) and children under 1 year were 7,383 (3.9%). Most of the residents are engaged in peasantry, fishing and hunting. The residents of Muheza district most belong to the Wabondei and Wasambaa tribe. Administratively the district comprises of 4 divisions, 23 Wards, and 100 villages. The district has a total of 43 health facilities; which comprise of 1 designated district hospital, 2 health centers and 40 dispensaries.

**Study populations**

It included professional health workers in selected health centers, dispensaries and a district designated hospital in Muheza district.

**Sample size and Sampling procedure**

All health centers in Muheza district council were included in the study. (The district had only two public health centers). A list of all dispensaries stratified by ownership (public, private and NGO) was compiled. From each list 50 percent of the facilities were randomly selected for inclusion in the study. It was assumed inclusion of 50 percent of the facilities will be a representative sample given limited time and financial resources. The district designated hospital was also included in the study. All trained health professionals working in the selected health facilities were included in the study, whom were: Assistant medical officers(AMOs), clinical officers(COs),assistant clinical

officers (ACOs),medical officers (MOs) , nursing officers (NOs), trained nurse midwives(TNMs); public health nurse A; public health nurse B, trained nurses (TN); assistant dental officers (ADOs), dental therapists, laboratory technicians, laboratory assistants , pharmaceutical assistants, physiotherapists and maternal and child health aides(MCHAs).

**Eligibility to participate in the study**

Study participants were all health care workers in the health facilities, those who provide services in hospital, health centers and dispensaries owned by the government, missionary or private in Muheza district.

**Consent**

The purpose of the study was explained to the research participant. The participants were then asked to give a written consent to participate. All gave consent and were included in the study.

**Recruiting and Training of research assistants**

Two research assistants were recruited and trained by the investigator for two days on how to administer the research instruments and how to facilitate easy administration of the questionnaire to the respondents.

**Pre-testing**

Pre testing of the questionnaire was conducted in four health facilities in the suburbs of Dar es Salaam for two days before commencing the research. This ensured clarity of

questions, language and questions were user friendly. It also enabled the estimation of the time required to conduct interview for a single respondent. On basis of pre test necessary changes were made to improve the questionnaire. The questionnaire was translated to Kiswahili and back to English when consistency was established the Kiswahili version was then used to conduct the interview.

**Data collection**

A letter of introduction from the Muhimbili University of Health and Allied Sciences was presented to the council medical officer of the district. A brief meeting was held with the council medical officer and the council health management team (CHMT), the study was explained to them and was requested to give it a support. The council medical officer introduced the research team members to the rest of the staff and staff of the selected health facilities. In each health facility the objectives of the study were explained to the person in charge after which permission and support to conduct the study was requested. Each person in charge was interviewed in privacy followed by interviewing staff each in privacy.

The information collected included social demographic characteristics of health professionals i.e. age, sex, marital status, cadre, duration of service. Information regarding health workers' intention to leave the facility, reasons for intention to leave and reasons for health professionals' attrition from facilities as perceived by available staff was collected. The head of health facility or acting facility in charge was asked to provide records of all those who had left the facility from January 2004 to when this study was conducted in September 2007.

**Data analysis and management**

The data was collected on daily basis with assistance of 2 research assistants. At the end of the day the investigator checked all data collected in the day for completeness and accuracy. All information obtained was coded and then entered in Epi info version 6 computer soft ware program for processing and analysis. The results were then displayed on tables.

**Study variables**

Dependent variables of the study were intention to leave job, reasons for intentions to leave, attrition and perceived reasons for attrition of health workers. Independent variables for the study included age, sex, marital status, cadre and duration of service. Other independent variables were ownership of facility (public, faith based or private), level of care, and destination for attrition of health professionals (non governmental organization, private for profit organization, government or other country).

**Ethical clearance**

Ethical clearance was obtained from the directorate of research and publication committee of the MUHAS. Permission to conduct the study was requested and obtained from the regional and district authorities in Tanga and Muheza respectively upon presentation of the letter of introduction from MUHAS. The investigator sought permission from the heads of the health facilities to conduct the study among their health workers. The written consent of the research participants was sought by the principal investigator after explaining the objectives of the study. Respondents were assured that

their participation in the study was entirely voluntary. And the respondents were not required to reveal their identity or any of their registration details.

**Definitions of key concepts**

**Attrition**: Refers to losses of health professionals through migration, temporary or permanent withdrawal from the council health work force.

**Attrition intention**: Eager, aim, purpose, desire or attention directed towards attrition.

**Duration of service**: The time in years in which the health professional spent in service at the health facility before attrition.

**Health professional**: A health care provider who had advanced or had special professional training leading to an advanced diploma, diploma or certificate in medical or paramedical fields; those are assistant medical officer(AMO), clinical officer(CO), nursing officer (NO), trained nurse midwife(TNM),public health nurse A/registered nurse; public health nurse B, trained nurse (TN),assistant dental officer (ADO), dental therapist, laboratory technician, laboratory assistant , pharmaceutical assistant, physiotherapist, physiotherapy assistant, and maternal and child health aide(MCHA).

**Health worker**: A person engaged in actions whose primary intent is to enhance health

**Incentive**: A material or non material intervention/measures given to health workers to enhance their performance to attain pre determined health sector objectives.

**Job satisfaction**: The favorableness or unfavorable ness with which employees view their work. And is measured along five dimensions; pay, promotion opportunities, supervision, co-workers, and work conditions.

**Motivation**: The psychological processes that determine the direction, intensity, and persistence of actions.

**Rural area**: An area not falling under any of the classification of an urban area according to the National statistics office.

**Rural district**: Any district which is not the headquarters of a region

**Work force**: People who work in the various professions of health care that is doctors, nurses, midwives, pharmacists, dentists, allied health workers, community health workers, pharmacists, whose goal is to improve the health of the populations they serve.

# CHAPTER FOUR

# RESULTS

## Socio-demographic information of respondents

The study was done in both public and private health facilities which included 28 dispensaries, 2 health centers and one designated district hospital. A total 138 health providers were interviewed of whom (68.8%) were female and most of them (67.4%) were in the age group 30-49 years ( see Table 1). In addition a high proportion (55.1%) was married.

**Table 1: Respondents age group, sex and marital status (n=138)**

| Age group (Years) | Male (n=43) | | Female (n=95) | | Total (n=138) | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| 20-29 | 6 | 13.9% | 12 | 12.6% | 18 | 13.0% |
| 30-39 | 20 | 46.5% | 34 | 35.8% | 54 | 39.1% |
| 40-49 | 8 | 18.6% | 30 | 31.6% | 38 | 27.5% |
| 50-59 | 7 | 16.3% | 19 | 20.0% | 26 | 18.9% |
| 60+ | 2 | 4.7% | 0 | 0.0% | 2 | 1.5% |
| **Marital status** | | | | | | |
| Single | 8 | 18.6% | 13 | 13.7% | 21 | 15.2% |
| Married | 24 | 55.8% | 52 | 54.7 % | 76 | 55.1% |
| Widow | 0 | 0.0% | 10 | 10.5% | 10 | 7.2% |
| Others | 11 | 25.6% | 20 | 21.1% | 31 | 22.5% |
| Total | 43 | 31.2% | 95 | 68.8% | 138 | 100.0% |

The median age of the respondents was 38, the mode was 32, and the mean was 40 years and ranged from 20 to 62 years.

Overall trained nurse midwife (TNM) was the leading cadre comprising (22.5 percent) followed by clinical officers (20.3 percent) see Table 2. Most (71.4 percent) of the clinical officers were males and rest were female.

**Table 2: Distribution of respondents by professional cadre and sex (n=138)**

| Cadre | Male (n=43) | | Female (n=95) | | Total (n=138) | |
|---|---|---|---|---|---|---|
| | n | % | n | % | n | % |
| MO | 3 | 75.0% | 1 | 25.0% | 4 | 2.9% |
| AMO | 6 | 85.7% | 1 | 14.3% | 7 | 5.1% |
| CO | 20 | 71.4% | 8 | 28.6% | 28 | 20.3% |
| ACO | 1 | 50.0% | 1 | 50.0% | 2 | 1.5% |
| ADO | 1 | 100.0% | 0 | 0.0 % | 1 | 0.7% |
| DT | 0 | 0.0% | 1 | 100.0% | 1 | 0.7% |
| NO | 4 | 33.3% | 8 | 66.7% | 12 | 8.7% |
| TNM | 0 | 0.0% | 31 | 100.0% | 31 | 22.5% |
| PHN A | 0 | 0.0% | 7 | 100.0% | 7 | 5.1% |
| PHN B/ and TN | 2 | 11.8% | 15 | 88.2% | 17 | 12.3% |
| MCHA | 0 | 0.0% | 16 | 100.0% | 16 | 11.5% |
| LT | 1 | 50.0% | 1 | 50.0% | 2 | 1.5% |
| ALT | 3 | 60.0% | 2 | 40.0% | 5 | 3.6% |
| PA | 0 | 0.0% | 2 | 100.0% | 2 | 1.5% |
| PT/RGT/RGA and others | 2 | 66.7% | 1 | 33.3% | 3 | 2.1% |
| Total | 43 | 31.2% | 95 | 68.8% | 138 | 100.0% |

Public health nurse B and trained nurses comprised (12.3 percent) of the respondents of whom (88.2 percent) were female. The nursing cadres were predominantly female while prescribers were predominantly males.

Respondents were asked whether after next 3 years they thought they would still be working in the facility they were currently working. A low proportion (8.7 percent) reported that they would definitely leave, while 61 (44.2 %) were not sure. (see Table 3). Thus just less than 50 percent had no intention of leaving the working place. Those who were more likely to remain were public health nurse A and B, followed by trained midwives and clinical officers, while medical officers and assistant medical officers had the highest intention of leaving.

**Table 3: Intentions of health professionals to leave health facility by professional cadre**

| Cadre | Intend to leave | | | | | | Total (n=138) | |
|---|---|---|---|---|---|---|---|---|
| | Yes (n=12) | | No (n=65) | | Undecided (n=61) | | | |
| | N | % | n | % | n | % | n | % |
| MO | 1 | 25.0% | 1 | 25.0% | 2 | 50.0% | 4 | 2.9% |
| AMO | 0 | 0.0% | 1 | 14.3% | 6 | 85.7% | 7 | 5.1% |
| CO | 3 | 10.7% | 13 | 46.4% | 12 | 42.9% | 28 | 20.3% |
| ACO | 0 | 0.0% | 1 | 50.0% | 1 | 50.0% | 2 | 1.5% |
| ADO | 0 | 0.0% | 1 | 100.0% | 0 | 0.0% | 1 | 0.7 % |
| DT | 0 | 0.0% | 1 | 100.0% | 0 | 0.0% | 1 | 0.7% |
| NO | 2 | 16.7% | 6 | 50.0% | 4 | 33.3% | 12 | 8.7% |
| TNM | 1 | 3.2% | 16 | 51.6% | 14 | 45.2% | 31 | 22.5% |
| PHN A | 0 | 0.0% | 5 | 71.4% | 2 | 28.6% | 7 | 5.1% |
| PHN B/ and TN | 2 | 11.8% | 10 | 58.8% | 5 | 29.4% | 17 | 12.3% |
| MCHA | 2 | 12.5% | 3 | 28.6% | 11 | 68.6 % | 16 | 11.6% |
| LT | 0 | 0.0% | 0 | 0.0% | 2 | 100.0% | 2 | 1.5% |
| ALT | 0 | 0.0% | 4 | 80.0% | 1 | 20.0% | 5 | 3.6% |
| PA | 0 | 0.0% | 1 | 50.0% | 1 | 50.0% | 2 | 1.5% |
| PT/RGT/RGA and others | 1 | 33.3% | 2 | 66.7% | 0 | 0.0% | 3 | 2.2% |
| Total | 12 | 8.7% | 65 | 47.1% | 61 | 44.2% | 138 | 100.0% |

The difference across cadres was not statistically significant (Chi square=1.16 p-value=0.8842 Df=4)

Comparing between sex a slightly higher proportion (47.4 percent ) of female reported they would not leave compared to male (46.5 percent) see Table 4.

**Table 4: Intentions of health professionals to leave a facility by sex**

| Sex | Intend to leave | | | | | | Total (n=138) | |
|---|---|---|---|---|---|---|---|---|
| | Yes (n=12) | | No (n=65) | | Undecided (n=61) | | | |
| | N | % | n | % | n | % | n | % |
| Male | 3 | 6.9% | 20 | 46.5% | 20 | 46.5% | 43 | 31.2% |
| Female | 9 | 9.5% | 45 | 47.4% | 41 | 43.2% | 95 | 68.8% |
| Total | 12 | 8.7% | 65 | 47.1% | 61 | 44.2% | 138 | 100.0% |

The gender difference was not statically significant ($\chi^2$ =0.29 p-value=0.8640 Df =2)

Age group 30-39 had the lowest proportion (40.7 percent) reporting that they would not leave followed by 40-49 (47.4 percent) see Table 5. There was no significant (p>0.05) difference between the age groups ($\chi^2$ =2.6 P value 0.6348).

**Table 5: Intentions of health professionals to leave a facility by age**

| Age | Intend to leave | | | | | | Total (n=138) | |
|---|---|---|---|---|---|---|---|---|
| (Years) | Yes (n=12) | | No (n=65) | | Undecided (n=61) | | | |
| | N | % | n | % | n | % | n | % |
| 20-29 | 2 | 11.1% | 10 | 55.6% | 6 | 33.3% | 18 | 13.0% |
| 30-39 | 4 | 7.4% | 22 | 40.7% | 28 | 51.9% | 54 | 39.1% |
| 40-49 | 3 | 7.9% | 18 | 47.4% | 17 | 44.7% | 38 | 27.5% |
| 50-59 | 3 | 11.5% | 14 | 53.9% | 9 | 34.6% | 26 | 18.8% |
| 60+ | 0 | 0.0% | 1 | 50.0% | 1 | 50.0% | 2 | 1.5% |
| Total | 12 | 8.7% | 65 | 47.1% | 61 | 44.2% | 138 | 100.0% |

The age difference was not statistically significant (Chi square=2.6 p-value=0.6348 Df=4)

**Reasons given by respondents for reported intentions to leave**

The respondents who were certain they would leave or were not certain of remaining were asked the reasons for their current attrition status. Table 6 presents the frequency of the reasons given by respondents for their current intentions by gender. The leading reason was low salary and remunerations (36.9 percent), delayed promotions (30.1 percent) and heavy workload (28.8 percent). Less frequent reasons were poor infrastructure (6.9 percent), lack of job for spouse and lack of school for children (9.6 percent).

**Table 6: Reasons given by respondents for reported intentions to leave practice at a facility in next 3 years by sex (n=73)**

| Reason | Male | Female | Total |
|---|---|---|---|
| | n (%) | n (%) | n (%) |
| Low salary and remunerations | | | |
| Yes | 10(43.5%) | 17(34.0%) | 27(36.9%) |
| No | 2(8.7%) | 5(10.0%) | 7(9.6%) |
| Lack of appropriate/adequate work equipments including drugs | | | |
| Yes | 8(34.8%) | 16(32.0%) | 24(32.9%) |
| No | 3(13.0%) | 4(8.0%) | 7(9.6%) |
| Delaying promotions | | | |
| Yes | 6(26.1%) | 16(32.0%) | 22(30.1%) |
| No | 3(13.0%) | 5(10.0%) | 8(10.9%) |
| Shortage of health care providers | | | |
| Yes | 6(26.1%) | 15(30.0%) | 21(28.8%) |
| No | 4(17.4%) | 5(10.0%) | 9(12.3%) |
| Lack of exchange of knowledge /experiences on case management and work from health professionals from facility of higher referral level e.g. hospitals/special hospital etc | | | |
| Yes | 5(21.7%) | 12(24.0%) | 17(23.3%) |
| No | 2(8.7%) | 4(8.0%) | 6(8.2%) |
| Limited opportunity on participation and involvement in problem solving and making of decisions during work processes | | | |
| Yes | 6(26.1%) | 11(22.0%) | 17(23.3%) |
| No | 2(8.7%) | 7(14.0%) | 9(12.3%) |
| Inadequate communication between health care providers and management / employer | | | |
| Yes | 2(8.7%) | 14(28.0%) | 16(21.9%) |
| No | 5(21.7%) | 6(12.0%) | 11(15.1%) |

| | | | |
|---|---|---|---|
| Poor interpersonal relationships between health care providers and management/administration | | | |
| Yes | 6(26.1%) | 10(20.0%) | 16(21.9%) |
| No | 4(17.4%) | 5(10.0%) | 9(12.3%) |
| Lack of sponsorships for training and career development | | | |
| Yes | 3(13.0%) | 12(24.0%) | 15(20.6%) |
| No | 4(17.4%) | 6(12.0%) | 10(13.7%) |
| Unfriendly hospital rules and regulations | | | |
| Yes | 6(26.1%) | 8(16.0%) | 14(19.2%) |
| No | 3(13.0%) | 10(20.0%) | 13(17.8%) |
| Lack of efforts for quality control measures | | | |
| Yes | 5(21.7%) | 8(16.0%) | 13(17.8%) |
| No | 5(21.7%) | 7(14.0%) | 12(16.4%) |
| Lack of supportive supervision from management/Employer | | | |
| Yes | 4(17.4%) | 8(16.0%) | 12(16.4%) |
| No | 3(13.0%) | 6(12.0%) | 9(12.3%) |
| Office/ Work buildings in bad state of repair | | | |
| Yes | 2(8.7%) | 8(16.0%) | 10(13.7%) |
| No | 5(21.7%) | 8(16.0%) | 13(17.8%) |
| Unclear job descriptions | | | |
| Yes | 2(8.7%) | 7(14.0%) | 9(12.3%) |
| No | 6(26.1%) | 9(18.0%) | 15(20.6%) |
| Conflicts among staff | | | |
| Yes | 3(13.0%) | 6(12.0%) | 9(12.3%) |
| No | 5(21.7%) | 9(18.0%) | 14(19.2%) |
| Lack of social amenities | | | |
| Yes | 3(13.0%) | 5(10.0%) | 8(10.9%) |
| No | 5(21.7%) | 11(22.0%) | 16(21.9%) |
| Lack of school for children | | | |
| Yes | 2(8.7%) | 5(10.0%) | 7(9.6%) |
| No | 4(17.4%) | 9(18.0%) | 13(17.8%) |

| | | | |
|---|---|---|---|
| Lack of job for spouse | | | |
| Yes | 3(13.0%) | 4(8.0%) | 7(9.6%) |
| No | 4(17.4%) | 10(20.0%) | 14(19.2%) |
| Inadequate infrastructure, roads, electricity e.t.c. | | | |
| Yes | 2(8.7%) | 3(6.0%) | 5(6.9%) |
| No | 5(21.7%) | 8(16.0%) | 13(17.8%) |

**Staff attritions 2004-2007 and their characteristics**

Heads of heath facilities interviewed reported a total of 131 attritions in the period 2004-2007 see Table 7. Majority (64.1 percent) of those who left were female and most (42.8 percent) were in the age group 30-39. Comparing between cadres most (32.8 percent) were trained nurse midwives followed by clinical officers (21.4 percent).

**Table 7: Socio-demographic characteristics of those had left in the past three years**

| Age group | Male (n=47) | | Female (n=84) | | Total (n=131) | |
|---|---|---|---|---|---|---|
| (Years) | N | % | n | % | n | % |
| 20-29 | 15 | 31.2% | 33 | 68.8% | 48 | 36.6% |
| 30-39 | 24 | 42.9% | 32 | 57.1% | 56 | 42.8% |
| 40 49 | 6 | 31.6% | 13 | 68.4% | 19 | 14.5% |
| 50-59 | 2 | 25.0% | 6 | 75.0% | 8 | 6.1% |
| **Cadre** | | | | | | |
| MO | 2 | 66.7% | 1 | 33.4% | 3 | 2.3% |
| AMO | 3 | 75.0% | 1 | 25.0% | 4 | 3.1% |
| CO | 19 | 67.9% | 9 | 32.1% | 28 | 21.3% |
| ACO | 2 | 100.0% | 0 | 0.0% | 2 | 1.5% |
| ADO | 1 | 100.0% | 0 | 0.0% | 1 | 0.8% |
| DT | 1 | 100.0% | 0 | 0.0% | 1 | 0.8% |
| NO | 7 | 35.0% | 13 | 65.0% | 20 | 15.2% |
| TNM | 4 | 9.3% | 39 | 90.7% | 43 | 32.8% |
| PHN A | 0 | 0.0% | 1 | 100.0% | 1 | 0.8% |
| PHN B and TN | 1 | 14.3% | 6 | 85.7% | 7 | 5.3% |
| MCHA | 0 | 0.0% | 9 | 100.0% | 9 | 6.9% |
| LT | 3 | 60.0% | 2 | 40.0% | 5 | 3.8% |
| ALT | 0 | 0.0% | 1 | 100.0% | 1 | 0.8% |
| PA | 1 | 33.3% | 2 | 66.7% | 3 | 2.3% |
| PT/RGT/RGA/ and others | 3 | 100.0% | 0 | 0.0% | 3 | 2.3% |
| Total | 47 | 35.9% | 84 | 64.1% | 131 | 100.0% |

The heads of health facilities or acting facility in charges were asked the duration since employment to attrition, (acting facility in charges were found at six facilities during time of study, they were included in role of head of the facility and interviewed in the facilities where heads of facility were not available at time of interview. The rest of facilities interview was held with heads of facilities). Slightly more than third ( 35.1percent) of the attritions took place before end of two years of posting to the facility. See Table 8. The rest left after two years of employment.

**Table 8: Distribution of attrition of health professionals by cadre and duration of service since employment to attrition**

| Cadre | Duration of service before attrition (Years) | | | | Total (n=131) |
|---|---|---|---|---|---|
| | <2 | 2+ - <6 | 6+ -<10 | 10 + | |
| MO | 1(33.3%) | 1(33.3%) | 1(33.3%) | 0(0.0%) | 3(2.3%) |
| AMO | 0(0.0%) | 1(25.0%) | 2(50.0%) | 1(25.0%) | 4(3.1%) |
| CO | 15(53.6%) | 8(28.5%) | 2(7.2%) | 3(10.7%) | 28(21.4%) |
| ACO | 0(0.0%) | 1(50.0%) | 1(50.0%) | 0(0.0%) | 2(1.5%) |
| ADO | 0(0.0%) | 1(100.0%) | 0(0.0%) | 0(0.0%) | 1(0.8%) |
| DT | 1(100.0%) | 0(0.0%) | 0(0.0%) | 0(0.0%) | 1(0.8%) |
| NO | 8(40.0%) | 4(20.0%) | 4(20.0%) | 4(20.0%) | 20(15.2%) |
| TNM | 15(34.9%) | 15(34.9%) | 8(18.6%) | 5(11.6%) | 43(32.8%) |
| PHN A | 0(0.0%) | 0(0.0%) | 0(0.0%) | 1(100.0%) | 1(0.8%) |
| PHNB and TN | 2(28.6%) | 4(57.2%) | 1(14.3%) | 0(0.0%) | 7(5.3%) |
| MCHA | 2(22.2%) | 3(33.3%) | 2(22.2%) | 2(22.2%) | 9(6.8%) |
| LT | 1(20.0%) | 3(60.0%) | 0(0.0%) | 1(20.0%) | 5(3.8%) |
| ALT | 0(0.0%) | 0(0.0%) | 1(100.0%) | 0(0.0%) | 1(0.8%) |
| PA | 0(0.0%) | 2(66.6%) | 0(0.0%) | 1(33.3%) | 3(2.3%) |
| PT/RGT/ RGA and Others | 1(33.3%) | 1(33.3%) | 1(33.3%) | 0(0.0%) | 3(2.3%) |
| Total | 46(35.1%) | 44(33.6%) | 23(17.6%) | 18(13.7%) | 131(100.0%) |

The difference across cadre was not statistically significant (Chi square=3.77 P-value=0.7073 Df=6)

Analysis was done to determine the type of health facility experiencing more attrition. A high proportion (47.3 percent) of those who left were from faith based hospital followed by public dispensary ( 29.0 percent) see table 9. Few were from private health center and faith based dispensary.

**Table 9: Proportion of Health care providers who left facilities by ownership and level of care**

| Ownership | Level of care | Number of attrition (n=131) | Percentage |
|---|---|---|---|
| Public | Dispensary | 38 | 29.0% |
| | Health center | 9 | 6.8% |
| | Hospital | 8 | 6.1% |
| Faith Based | Dispensary | 3 | 2.4% |
| Organization | Hospital | 62 | 47.3% |
| Private | Dispensary | 9 | 6.9% |
| | Health center | 2 | 1.5% |
| Total | | 131 | 100.0% |

More than three quarters (81.9 percent) of respondents reported that they knew a provider who had left from service in the district. They were further asked to mention their perceived reasons of their leaving .The commonest perceived reasons were low salaries (15.1 percent) , difficult living conditions 10.6 percent and poor remunerations (9.6 percent) see table 10. Least was poor terminal benefits and illness and old age (0.9 percent).

**Table 10: Health professionals' perceived reasons for attrition of previous health care providers (n=113)**

| Reasons | Number | % |
|---|---|---|
| Low salaries | 17 | 15.1% |
| Difficult living conditions and working conditions e.g. inadequate social services | 12 | 10.6% |
| Poor remunerations and lack of financial incentives | 11 | 9.6% |
| Frustrations from lack of work equipments including lack of drugs | 10 | 8.9% |
| Inadequate /unreliable transport systems to the District | 8 | 7.1% |
| Lack of decent house for health worker to live | 8 | 7.1% |
| Lack of supportive supervision and stigmatization from management or administration | 7 | 6.2% |
| High work load and increased turn over of patient | 7 | 6.2% |
| Not being valued | 6 | 5.3% |
| Lack of non monetary incentives /non financial rewards | 6 | 5.3% |
| Opportunities for training and career development | 5 | 4.4% |
| Delay/Lack of promotions in employment | 4 | 3.4% |
| Work extra hours with out pay/Lack of overtime allowance | 3 | 2.7% |
| Shortage of human resource for health / trained health care providers | 2 | 1.8% |
| Wanted to change environment/Bored for staying at one Place for long | 2 | 1.8% |
| Married/went to join spouse | 1 | 0.9% |
| Remote/distance from the district | 1 | 0.9% |
| Delays of salary /not timely paid | 1 | 0.9% |
| Inadequate pension benefits | 1 | 0.9% |
| Illness and old age | 1 | 0.9% |

The respondents were asked what the destinations for those who left were. The commonest was non governmental organization (29.2 percent), followed by other government institutions (23.9 percent) see table 11. Those who were not sure of the destinations were 31.9 percent.

**Table 11: Reported destinations for previous attrition of health professionals (n=113)**

| Destination | Number | Percentage |
|---|---|---|
| Non Governmental organizations | 33 | 29.2% |
| Governmental institutions | 27 | 23.9% |
| Private institutions | 9 | 7.9% |
| Faith based organizations | 3 | 2.7% |
| Training | 2 | 1.8% |
| Other countries | 1 | 0.9% |
| Not sure | 36 | 31.9% |
| Total | 113 | 100.0% |

# CHAPTER FIVE

## DISCUSSION

The main aim of this study was to determine proportion of health professionals who intend to leave rural primary health care facilities in next 3 years and reasons for the intentions to leave. Just less than half (n=65) of the interviewed health workers had no any intention to leave. There was no significant difference ($p>0.05$) comparing male and female. Providers in the age group 30-49 years had significantly higher intention to leave compared to the rest. The commonest reasons for intention to leave were difficult living conditions and poor remunerations.

The study revealed a moderate proportion of the health workers had intention to leave when compared to findings in similar studies done in Zimbabwe which reported that 68.0 percent had intention to leave [18]. In Ghana, South Africa and Cameroon reported intentions to leave were 61, 58.3 and 49.3 percents respectively [18]. There is definitely a wide variation between countries in the intentions to leave among health workers. This is supported by the lower proportion intending to leave in Senegal and Uganda which found to be 37.9 and 26.1 percents respectively [18]. A possible reason for the differences between countries could be due to differences in remuneration and other contexts influencing intention to leave.

Health workers in the age group 30-39 had the highest intention to leave. Most workers get employed in their mid-twenties during which they are still learning skills and getting

used in the environment. It is possible that when they reach thirties they have acquired the experience they need and start to focus on personal development goals. They make assessment of the possibility of the work environment to meet their personal development goals when it is uncertain they start planning to leave. Such workers will then embark on search for places to move to where their goals can be met. This is supported by the leading reasons for the intention to leave which included poor working conditions and low remuneration.

Another explanation for intention to leave could be low commitment to the job due to lack of motivation. Lack of motivation could be due to low pay and hence would spend much of their time to generate extra income. The work of Manzi et al (2004) and Schmidt-Ehry and Siedel (2004) support this idea [19, 36].

Other reasons for the intention to leave were delayed promotions (30.1 percent) and heavy workload (28.8 percent). Less frequent reasons were poor infrastructure (6.9 percent), lack of job for spouse and lack of school for children (9.6 percent). This results corresponds to the common factors that influence attrition and reasons reported for out migration of health professionals from private not for profit and government hospitals. Such reasons include low salary, poor remunerations, delayed promotions, high workload, job dis-satisfaction, lack of opportunity for further training and career advancement, management and governance tools, work

environments, and social and family motivations , lack of retirement benefits, join spouses and poor accommodations [18,20,22].

A high proportion (47.3 percent) of those who left were from faith based hospital followed by public dispensary ( 29.0 percent). At the same time those who left were clinical officers and trained nurse midwives. These are the cadres who are critical in providing primary health care in dispensaries and health centers. Since the reasons to leave included poor remunerations and working conditions. It is possible that the migration followed better opportunities in the government sector especially after the reforms. Results from this study also underscore the fact that, supportive supervision and non monetary incentives were also important determinants of migration. Role of financial and non-financial factors in migration of health workers has been properly documented [21]. It is further illustrated that with an adequate salary health worker may not be motivated: more money does not automatically imply retention. On the other hand, even without an adequate salary and under poor working conditions, there are highly motivated and performing health workers. In fact there is common agreement that financial incentives are insufficient; non financial incentives are an essential component to increase staff motivation and retention [21].Ultimately the authors cite that non financial incentives comprise the human related quality management tools namely; supervision, feedback, staff appraisals, staff satisfaction surveys, clear leadership and guidance, clear organizational objectives ,and missions, staff participation mechanisms(including staff meetings),adequate training, as well as self assessments.

These quality management tools aim at improving staff working conditions, targeted at improving their skills, and also their motivation through clear acknowledgement and recognition of (psychological) staff needs [21]. Therefore non financial incentives should be used hand in hand to complement financial incentives as panacea to mitigate attrition intentions.

The destinations of those who left were non-governmental organizations (NGO) followed by governmental institutions. Many NGOs were in urban areas and most often paid their workers better salaries thus attracting workers who would be able to compete. Also it is possible the difference in income one would gain was higher for those in faith based health facilities since they were paid low salaries compared to those working in public health facilities.

**Study strengths and limitations**

1. Results can not be generalized to represent situation in every facility in Tanzania, because study populations was conveniently chosen in one district.

2. However findings are still reflective of the general proportion of health providers who would express intentions to leave and the general feelings of health care providers for the reasons for such intentions and the attrition status in Muheza district council, because study was adequately represented by targeted populations using cross sectional design. The findings from this study will form a basis for future references in the subject pertaining to attrition intentions and attrition status in the district, further more it will save as a base line data to compare in future time.

3. Since intention to leave is a psychological process, respondents could give different answers to the same question at different time hence jeopardize validity and reliability of results. Respondents were emphasized to respond according to the best feeling about the question.

4. Since reasons for attrition intentions are also influenced by many factors in realms of leadership/supervision, work conditions, pay, promotion, co worker and some personal/individual factors which could not be ascertained in this study; therefore more research on these realms needs to be done.

5. To minimize some chances of respondents reporting data in order to please the researcher, rapport with each respondent was normatively built in the beginning of each session, and then after good rapport been established, each respondent was emphasized to express freely and to the best feeling and impression about her/his answers to interview questions. Possible biases could jeopardize validity and reliability the study.

6. Some respondents worried on how their volunteered information would be used, fearing that it could affect their employment status. To allay this fear, the purpose of the study was clearly explained to each respondent. And they were assured the information provided will be used only for the purposes of this study and will be dealt in strictest confidentiality manner; in addition they were not required to reveal their identity during the interview. Lack of openness could result into under estimation or overestimation of results.

7. The tools were administered to each respondent in Kiswahili language by well trained and experienced research assists using a pre tested Kiswahili questionnaire while

observing congruency and consistency of the meaning in the language used. Clarification of the information in the questionnaire was assured by principle investigator and the two research assists, the necessary corrections were done before research team left the facility.

8. Among perceived reasons for attrition of previous health workers; living conditions could have been easily mixed with working conditions by respondents. It was minimized by clearly explaining the objectives of the study and emphasizing on their perceived reasons for such attrition. It could result into confounding results.

9.Information on those who left depended on recall memory of the heads of facilities or acting in charges of facilities, since there was no HMIS data available concerning attritions at all dispensaries, health centers and the Council, except at the District Designated hospital where information was retrieved from a computer data base in the hospital, heads of facilities or acting in charges of facilities could remember easily information on incidents of attritions which occurred within previous one year and three years, it was some how difficult to remember information on incidences which occurred five years ago or more precisely. Possible bias was attempted to be minimized by estimation with respect to 'the best feeling' about age of a health care provider at the time of attrition done by heads of facility or acting in charges of facility. Like wise, the duration of stay in the facility was estimated to the nearest less than three months, three to six months, six to nine months, one year or years. This could result in over estimation or under estimation of age and duration of service of which a health provider worked in a facility before attrition and hence jeopardize the validity and reliability of the study.

# CHAPTER SIX

## CONCLUSIONS

From this study results following conclusions can be made:

1. Less than half (47.1 percent) of health care providers have no intention to leave their work places. Those who were more likely to remain were public health nurse A/B, assistant laboratory technicians (ALT), trained nurse midwives followed by clinical officers. Those who were more likely to leave were medical officers, assistant medical officers and maternal and child health aides, though the differences were not statistically significant.

2. Female health care providers were more likely to express intention to remain at the facilities compared to males, though the difference was not significant. Age group 30-39 are more likely to express the highest intention to leave, followed by age group 40-49. Age group 20-29 are least likely to express intentions to leave.

3. Leading reasons that influence attrition intentions in descending order were low salary and remunerations, poor working conditions, delaying promotions and heavy workload. Other reasons can be summarized as lack of the following elements also in descending order; exchange of knowledge and experiences from higher referral levels, participation and involvement in problem solving, positive vertical and horizontal communication, training and career development opportunities, friendly work regulations, performance quality improvement, supportive supervision, and clear job descriptions.

Least frequent reasons influencing attrition intentions are poor infrastructure, lack of job for spouse and lack of school for children.

4. More female health providers left the facilities compared to male counter parts in a study period between January 2004 and July 2007. Most of those who left were in the age group 30-39, and comprised of nurse midwives followed by clinical officers significantly compared to the rest of cadres.

5. Slightly above one third of attritions would take place before end of the second year of posting to facilities. The rest would take place after two years of employment.

Slightly less than a half of attritions took place in faith based hospitals; slightly less than a third of attritions took place in public dispensaries. Less attritions from private health centers and faith based dispensaries.

6. Attrition is an existing and a well known phenomenon among health care providers since, more than three quarters of health care providers knew at least a health care provider who left facility.

7. Health care providers perceived main reasons for attrition of health providers from rural health facilities were low salaries, difficult living conditions and poor remunerations. Supportive supervision and non monetary incentives were important elements within study findings that significantly complement afore mentioned reasons. The weakest reasons were poor terminal benefits, illness and old age.

8. Common destinations for those who left were institutions and places which pay better salaries/and remunerations.

## RECOMMENDATIONS

The following recommendations are made to the Ministry of Health and Social Welfare; department of human resources, planners for health, district council authorities, council health management teams(CHMTs), regional health management teams(RHMTs), the Christian Commission for Social Services(CCSS) and other stake holders for health.

1. Given the fact that slightly above a half of health care providers would not report intention to stay, therefore it is important to do interventions designed and targeted to retain staff and minimize attritions.
2. Interventions should include a good mix of monetary incentives and non monetary incentives to motivate health care providers retentions. As it was learned that leading reasons for intentions to leave comprised both monetary and non-monetary incentives.
3. Employers should device interventions to include improvement/ raise of salary, improvement of remunerations, timely promotions of staff and employing and deploying adequate staff to reduce heavy workload due to staff shortages. Other interventions could be short and long term training, participatory environment and involvement in problem solving in work processes, positive vertical and horizontal communication and career development.
4. A call of dialogue between FBO,NGO,the government, and other development partners to improve, subsidization, standardization of salaries and remuneration packages, improve working conditions, and establishing efficient mechanism of employing and deploying health care providers, since leading reasons for

intention to leave were low salaries and remunerations; poor working conditions ,delaying promotions and heavy work loads.

5. Working environment like facilities and housing, supplies and equipment should be improved since poor working and living conditions is among leading reasons for attrition intentions and actual attrition.

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