CONTRIBUTION OF COMMUNITY HEALTH WORKERS ON IMPROVEMENT OF PRIMARY HEALTH SERVICES IN KILOLO DISTRICT

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CERTIFICATION

The undersigned certifies that she has read and hereby recommends for the acceptance by the Open Univeristy of Tanzania a dissertation entitled: **Contribution of Community Health Workers on Improvement of Primary Health Services in Tanzania: A case of Kilolo District.** In partial fulfilment of the requirements for the award of degree of Arts in Monitoring and Evaluation of The Open University of Tanzania.

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Date

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ACKNOWLEDGMENT

This dissertation represents the peak of an active two years study at The Open University of Tanzania. Looking back at the study, I recall a variety of experiences from wholesome pleasure, enthusiasm and passion to periods of tedium, anxiety and puzzlement. I would like to acknowledge and express my gratitude to those who have supported and inspired this voyage.

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ABSTRACT

The study sought to achieve three objectives which are; to examine the performance of CHWs in providing health services, to determine the attitudes of people on CHWs on the improvement of primary health services, and to assess challenges associated with the implementation of CHWs activities on the improvement of Primary Health Services in the study area. Data were collected by using structured interview and questionnaire as a method of data collection, then purposive and convenience sampling techniques were used in recruiting respondents in this study, collected data was analyzed by using both quantitative and qualitative approaches. Quantitative data were analyzed by using Statistical Package for Social Sciences (SPSS) Software, in which descriptive statistics were computed. Content data analysis was used to analyze qualitative information of CHWs services on improvement of Primary health Services. This study reveals that CHWs in the study area have been providing multiple services at community and health facility level. At community level CHWs conduct home visits for hygiene education and Home-Based Care to PLHIV, provision of health messages, promotion of breastfeeding and family planning and provision of health referrals. At health facility CHWs disseminate health related messages, and provide vaccination and dispensing micronutrient supplements. The findings revealed people in the study area have positive perception on CHWs services due to strong linkage between CHWs and Health facilities, CHWs and patients, also relationship between CHWs and the community. It recommends collaborative action from health practitioners, donors to strengthen primary health services through provision of support to CHWs at ground level in terms of transport, financial incentives and community mobilization through village leaders.

Keywords: *Performance of CHWs, health services, attitudes of people, village leaders*

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LIST OF ABBREVIATIONS

AMOs	Assistant Medical Officers
CBD	Community-based distributors/educators
CHAs	Community Health Agents
CHWs	Community Health Workers
EBF	Exclusive Breastfeeding
ES	Espírito Santo
HBC	Home Based Care
HIV-AIDS	Human Immunodeficiency Virus/ Acquired immunodeficiency syndrome
IHI	Ifakara Health Institute
JHSPH	Johns Hopkins
MDGs	Millennium Development Goals
MMAM	Mpango wa Maendeleo ya Afya ya Msingi
MNCH	Newborn and Child Health
MOHCDGEC	Ministry of Health, Community Development, Gender, the
Elderlyand	Children
MSPH-CU	Mailman School of Public health of the Columbia University
MSPH-CU	Mailman School of Public health of the Columbia University
MUHAS	Muhimbili University of Health and Allied Sciences
MVC	Most Vulnerable Children
NGO	Non-Governmental Organizations
OVC	Orphans and Vulnerable Children
PHC	Primary Health Care

PLHIV	People Living with HIV
PSW	Para-social Workers
SPSS	Statistical package for the social sciences
TBA	Traditional Birth Attendants
THIS	Tanzania HIV Impact Survey
TNNS	Tanzania National Nutrition Survey
TTCIH	Tanzania Training Centre for International Health
UN	United Nation
UNICEF	United Nations Children’s Fund
URT	United Republic of Tanzania
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Overview

The First chapter comprises Background Information ofthe Community Health Workers, Statement of the Problem, General Objective, Specific Objectives, Research Questions, Scope of the study, Limitations of study and Significance of Study.

1.2 Background Information

The use of Community Health Workers has been identified as one strategy to address the growing shortage of Health Workers, particularly in low-income countries. Using community members to render certain basic health services to the communities they come from is a concept that has been around for at least 50 years. There have been innumerable experiences throughout the world with programs ranging from large-scale, national programs to small-scale, community-based initiatives. Global commitment to primary health care development was accelerated by the 1978 Alma Ata International Conference on Primary Health Care (PHC) and expanded by the proliferation of community health workers (CHW) programs that has spanned three decades. Using a variety of strategies, CHWs have been deployed to implement a range of health service activities and act as agents to foster social change (van Ginneken N, et al, 2010, Hoke T, et al, 2012). They are typically community members selected to perform functions related to basic preventive, curative, and promotional healthcare delivery (Hoke T, et al, 2012, Johnson CD, et al, 2013). Most

programs around the world rely upon CHWs who have minimal training and have no university-based degree training (Chopra M, et al, 2008, Lewin S, et al, 2010). In sub-Saharan African and other developing countries where CHWs are utilized, they receive brief technical training, usually focused on the provision of specialized packages, such as integrated packages (maternal and child health), focused package (antenatal care, newborn and family planning) and specific burden of diseases (Tuberculosis, malaria, HIV-AIDS, etc) (van Ginneken N, et al, 2010, Mubi M, et al, 2011,Tran NT, et al, 2014). Their orientation and training range from 5 days to 9 months for programs where CHWs serve as multi-purpose paramedics (Hoke T, et al, 2012, O'Brien MJ, et al, 2009 Najafizada S, et al, 2014).

Further in 2008 WHO introduced task shifting strategies to address the shortage of human resources for health, improve access, save costs, and meet local needs by expanding tasks undertaken by local and community health workforces. Task-shifting programs have, however, been criticized for being mainly focused on clinical tasks with insufficient recognition of the contributions CHWs can make to other aspects of comprehensive PHC such as health promotion and community development (UNICEF 2014).

More recently, the use of CHWs has attracted attention in many countries; the growing interest in CHWs is being driven by concerns about shortage in health workforce, and the escalating burden of chronic and complex diseases that is driving a significant increase in health services demand and costs in many developing countries. Strong evidence exists on the contribution that CHWs have made to

improving access to PHC, quality of care, and health outcomes in developing countries including reduced malnutrition rates, improved maternal and child health, prevention and management of HIV/AIDS, and management of infectious diseases (Bhutta *et al*., 2010).In Tanzania just like other African countries, CHWs performs roles which are; supporting health service delivery through home visits, first aid and immunization, provide nutrition education, provide HIV prevention education to the community, identifying and registering new pregnancies, births and deaths as well as provision of environmental education (Shoo & Mzige, 2011)Over the past 50 years, Tanzania has focused on improving community-level health services as a key component of overall health systems strengthening. In the 1970s, the country expanded primary health care (PHC) services at the grassroots level by expanding frontline health facilities and training village health workers to conduct community outreach. While the country emphasized vertical programming in the 1990s, the Millennium Declaration prompted health sector reforms, including a revised national health policy to accommodate community-based health services and more integrated programs.

In 2007, in response to rapid population growth and poor health sector performance, the Mpango wa Maendeleo ya Afya ya Msingi (MMAM) was introduced in Tanzania aiming to increase coverage of health services provision and improve the continuum of care between the community and health facilities through the engagement of CHWs. This is pointed out in a document named Tanzania's Primary Health Care Improvement Policy of 2007 (known by its Swahili acronym, "MMAM"), which calls for the development of a paid official government cadre of CHWs and

reinforced in the Health Sector Strategic Plan IV 2015–2020. With development of policy guides, and presence of different types of CHW in Tanzania, the Ministry of Health, Community Development, Gender, the Elderly, and Children (MOHCDGEC), the Ifakara Health Institute (IHI) and the Mailman School of Public health of the Columbia University (MSPH-CU), in collaboration with the Tanzania Training Centre for International Health (TTCIH) developed curriculum and trained a standard CHW for 9 month. The trained cadre of CHWs was called Community Health Agents (CHAs) which in Swahili is "*Wawezeshaji wa Afya ya Jamii"* ("*WAJA*"). *WAJAs* are working in three rural districts of Tanzania in randomized cluster trial intervention called Connect Project. The project aims to strengthen the health system by utilizing *WAJAs* whom they are connecting communities to the health system, with the aim of reducing maternal mortality and improving child health to achieve MDGs 4 and 5 (Ramsey K, et al, 2013).

In Tanzania, the existing network of CHWs is a partial stopgap for the health workforce shortage, where a recent mapping documented roughly 41000 CHWs, mainly functioning in volunteer based, NGO-supported, vertically oriented programmes, with nearly half centered on either HIV or maternal, newborn and child health (MNCH) (MUHAS and JHSPH, 2015). There is a dearth of evidence on the causal effects of different care delivery approaches on public satisfaction with the health system. Community health worker (CHW) programs are an important instrument to overcome the severe shortage of nurses and physicians in Tanzania and increase use of healthcare. Many CHW programs are currently being scaled up in regions throughout Tanzania. In particular, CHWs have been widely used to improve

maternal and child health. Given their increased use throughout Tanzania. Thus, it is important to understand their effect on public satisfaction both with the CHW program and with the health system.

1.3 Statement of the Problem

In Tanzania, Primary Health Services are provided from the grass root level beginning with community health care, dispensaries and health centers, and proceeding through first level hospitals, regional referral hospitals, zonal and national hospitals, all providing increasingly sophisticated and well-defined services (URT, 2017). Population growth, too few health workers and their poor morale, lack of equipment and medical supplies, and increasing health burdens from chronic and emerging diseases have overwhelmed the capacity of the health system in Tanzania. In most of Tanzania's rural areas the lowest level of healthcare services is being offered by dispensary, but some of them are still located in poor regions and each one of them has to serve as much as 6000 people, also, most of public dispensaries lack access to funds; other dispensaries have funds acquiring from cost sharing but are not authorized to utilize these collections directly (Robertson, 2015). Community Health Workers are introduced in order to cover these identified challenges; they serve as first point of the community in provision of primary health services in rural areas (Robertson, 2015).

Tanzania government In 2007, in response to rapid population growth and poor health sector performance, the Mpango wa Maendeleo ya Afya ya Msingi (MMAM) was introduced in Tanzania aiming to increase coverage of health services provision

and improve the continuum of care between the community and health facilities through the engagement of CHWs. This is pointed out in a document named Tanzania's Primary Health Care Improvement Policy of 2007 (known by its Swahili acronym, "MMAM"), which calls for the development of a paid official government cadre of CHWs and reinforced in the Health Sector Strategic Plan IV 2015–2020. With development of policy guides, and presence of different types of CHW in Tanzania, the Ministry of Health, Community Development, Gender, the Elderly, and Children (MOHCDGEC), the Ifakara Health Institute (IHI) and the Mailman School of Public health of the Columbia University (MSPH-CU), in collaboration with the Tanzania Training Centre for International Health (TTCIH) developed curriculum and trained a standard CHW for 9 month. The trained cadre of CHWs was called Community Health Agents (CHAs) which in Swahili is "*Wawezeshaji wa Afya ya Jamii"* ("*WAJA*"). *WAJAs* are working in three rural districts of Tanzania in randomized cluster trial intervention called Connect Project. The project aims to strengthen the health system by utilizing *WAJAs* whom they are connecting communities to the health system, with the aim of reducing maternal mortality and improving child health to achieve MDGs 4 and 5 (Ramsey K, et al, 2013).

Despite the fact that CHWs have been used in Kilolo District to provide important Primary Health Services, yet their contribution on health services improvement to the community still there are less documented. Therefore, this study aimed to examine the contribution of CHW towards Community Primary Health Service improvement in Kilolo District. Specifically the study determined the activities undertaken by CHWs in provision of health services assess the attitudes of people on CHWs

activities and examined the challenges on CHWs activities to the health services improvement.

1.4 General Objective

The general objective of the study is to explore the contribution of Community Health Workers on Primary Health Service Improvement in Kilolo District

1.5 Specific Objectives

i) To examine the performance of community health workers in providing health services in the study areas.

ii) To assess the attitudes of people on Community Health Workers on the improvement of Primary Health Services in the study area.

iii) To examine the challenges associated with the implementation of CHWs activities on the improvement of Primary Health Services in the study area.

1.6 Research Questions

i) To what extent community health workers in Kilolo District satisfy the needs primary health services in the study area?

ii) What are the attitudes of people on Community Health Workers in the study area?

iii) What are the challenges on CHWs' activities in the study area?

1.7 Significance of Study

The findings of the proposed study are expected to have both theoretical and practical significance. Theoretically, the study is expected to make a profoundly

contribution to the general understanding of Community Health Workers and their contributions in health service provisions. This will be resourceful for other researchers and scholars, as it will form a basis for academic discussions on various roles of Community Health Workers in Tanzania. The study will also be a source of information for other researchers who intend to conduct similar studies in Tanzania. Moreover, the proposed study will make a valuable addition to the body of knowledge on Community Health Workers studies in developing countries particularly Tanzania. Furthermore, prospective researchers could make use of the findings to improve or apply tested theories.

The proposed study has practical implications for various practitioners, the Ministry of Health, Community Development, Gender, the Elderly, and Children (MOHCDGEC), Managers/ Administrators and the community at large will utilize the study findings in identifying the best way of ensuring these CHWs are fully utilized to realize their potential. Policy makersand decision makers can use the findings to formulate locally adapted policy interventions which stimulate effective use of CHWs.

The findings of this study might provide Community Health Workers with information that could enhance their role as health promoters in the area of primary health services.

Furthermore, the findings might be disseminated to the community specifically mothers and other community members who might get educated on the use of

primary health services. Such information could minimize the mothers" physical and possible psychological disorders, and create awareness to mothers about the importance of primary health services.

The findings of this study will be of great significance to the national government in developing policies relating to community access to better, efficient and quality health services. Lastly, the study findings will form basis for further research in the field of community health surveys.

1.8 Scope of the study

This study was conducted in Mazombe division of Kilolo District in Iringa Region. The study carried out in four dispensaries found in four wards which are Irole, Lugalo, Ilula and Uhambingeto, whereas the villages (Name of dispensaries) are Lundamatwe in Irole, Mbigili in Lugalo, Ikokoto in Ilula, and Kipaduka in Uhambingeto. Also, this study was conducted by seeking data only from the community members, health workers, and community members of the particular areas.

1.9 Limitations of Study

The limitations of this study are, first by the nature of health guidelines and regulations Researcher found some of respondents to be reluctant to give out information, Secondly Researcher found difficulties to access some of the respondents and organization mentioned in this study, and lastly the Researcher found limitation on language barrier between the researcher and some of the

respondents who fluently speak their native language. To overcome the above limitations Researcher abide to all ethical principles, and access all the needed permit from the authorities in time.

1.10 Organization of the Study

The First chapter (the Introduction) comprises Background Information of the Community Health Workers, Statement of the Problem, General Objective, Specific Objectives, Research Questions, Significance of Study, Scope of the study, and Limitations of the study. The Second chapter (the Literature Review) reviewed different literature on contribution of CHWs on community health service improvement. The chapter starts with Definitions of key terms, also this chapter reviewed Theoretical Literature Review, Empirical Literature Review, Research Gap, and Conceptual Framework and lastly this chapter reviewed The National Health Policy 2017 of Tanzania. The Third chapter (the study methodology) comprises of the Description of the study area, Research Approach and Design, Targeted Population, Sampling Design and Sample Size, Data types and sources, Data Analysis, Validity and Reliability, and Ethical Considerations, The fourth chapter reviewed Respondents Characteristics, Household Characteristics, Performance of Community Health Workers in Providing Health Services, Attitudes of People on Community Health Workers on the Improvement of Primary Health Services, and Challenges Associated With the Implementation of CHWs Activities on the Improvement of Primary Health Services, The Fifth chapter reviewed Summary of findings, Conclusions, Recommendations and Recommendations for Further Research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter reviewed different literature on contribution of CHWs on community health service improvement. The chapter starts with describing the major concepts used in the study, which are CHWs, primary health services, health facility and community health. Also this chapter reviewed two theories of Parson's theory of role of sickness and the chapter also focused on empirical where it reviewed the activities conducted by CHWs, attitude of people on CHWs as well as challenges on CHWs activities, and lastly this chapter reviewed The National Health Policy 2017 of Tanzania.

2.2 Definitions of key terms

2.2.1 Community Health Workers

Community Health Workers have been known by many different names in different countries. The umbrella term "community health worker" (CHW) embraces a variety of community health aides selected, trained and working in the communities from which they come. WHO (2017) defined Community Health Worker as a member of the communities where they work, should be selected by the communities, should be answerable to the communities for their activities, should be supported by the health system but not necessarily a part of its organization, and have shorter training than professional workers.

Then this shows that there is a trend towards CHWs functioning as the first point of care for communities, often their own, through structured interactions at the household, in community centers and through regular availability to provide urgent care in their own homes because in each of these community-based locations, CHW say routinely provide a limited repertoire of primary care services, health education and responses to acute needs. However CHWs may be a first point of contact, they are also the critical link to more clinically- skilled workers and facility-based services for complicated illness or maternal care.

2.2.2 Primary Health Services

According to WHO (2019) primary health services or care is a whole-of-society approach to health and well-being centered on the needs and preferences of individuals, families and communities. It also addresses the broader determinants of health and focuses on the comprehensive and interrelated aspects of physical, mental and social health and wellbeing. In addition, WHO described primary health services that should focus on the key important components, which are; meeting people's health needs through comprehensive promotive, protective, preventive, curative, rehabilitative, and palliative care throughout the life course. Also, address the broader determinants of health (including social, economic, environmental, as well as people's characteristics and behaviours) through evidence-informed public policies and actions across all sectors. Lastly, to empower individuals, families, and communities to optimize their health, as advocates for policies that promotes and protects health and well-being, as co developers of health and social services, and as self-cares and care-givers to others. Furthermore, Primary Health Services consist of

medical professionals, organizations, and additional health care workers who provide medical care to those in need. Health services serve patients, families, communities, and populations. They cover emergency, preventative, rehabilitative, long-term, hospital, diagnostic, primary, palliative, and home care. These services are centered around making health care accessible, high quality, and patient-centered.

2.2.3 Health Facility

A health facility is, in general, any location where healthcare is provides which range from small clinics and doctor's offices to urgent care centers and large hospitals with elaborate emergency rooms and trauma centers (Doherty, 2015). Types of health facilities include hospitals, health centers, dispensaries, medical nursing homes, pharmacies and medical stores and medical laboratory and research. This study focused more on health centers and dispensaries because these are the types of health facilities that are found in the study area and point of reference for CHWs.

2.2.4 Community Health

Is a field of publ'ic health that focuses on studying, protecting, or improving health within a community also it does not focus on a group of people with the same shared characteristics, like age or diagnosis, but on all people within a geographical location or involved in specific activity (Study.com, 2018). Community health covers a wide range of healthcare interventions, including health promotion, disease prevention, and treatment, management and administration of care.

2.3 Theoretical Literature Review

2.3.1 Parsons' Theory of Sickness

Parson's theory of the sick role was developed by Talcott Parsons the American based functionalist sociologist in 1951. The theory states that the act of falling or being sick is not simply biological but has a psychological phenomenon as well (Essays, UK.2013). This means that when an individual contracts illness, they also begin to perform the role of being sick. In addition, Milton (2004) the sick role has four major characteristics grouped in two categories of right and obligation.

Rights: The sick person is temporarily exempt from performing 'normal' social roles (such as going to work or housekeeping). The more severe the sickness, the greater the exemption. A genuine illness is seen as beyond the control of the sick person and not curable by simple willpower and motivation. Therefore, the sick person should not be blamed for their illness and they should be taken care of by others until they can resume their normal social role.

Obligations: The sick person is expected to see being sick as undesirable and so are under the obligation to try and get well as quickly as possible. After a certain period of time, the sick person must seek technically competent help (usually a doctor) and cooperate with the advice of the doctor in order to get better. In this study Parson's sick role theory helps to explain better about the state of health services utilization and provision to patients. It is further linked to this study as it provide an alert to sick persons to further find technical assistance when the situation is not getting stable. In this study CHWs provides primary health services, which are the basic services

which are curative than treatment. Furthermore, CHWs in the community helps the community to link with health facilities to access more technical health services through referrals.

2.3.2 Life Course Theory

This is a theory, which explains health, and disease patterns – particularly health disparities – across populations and over time which focusing on differences in health patterns one disease or condition at a time. Life Course Theory points to broad social, economic and environmental factors as underlying causes of persistent inequalities in health for a wide range of diseases and conditions across population groups.

The basic issues addressed in this Theory for the field of Maternal and Child Health care is about the factors that influence the capacity of individuals or populations to reach their full potential for health and well-being. Then because improving postnatal care to recent delivered woman is very critical as a part of improving the wellbeing of Maternal and Child Health, this theory relevant in studying the contribution of Community Health Workers in primary health services, such as delivering postnatal services to Kilolo District.

However, Community Health Workers are the part of the community and since the mission of Life Course Theory includes improving and protecting the health of the population, eliminating health disparities and promoting health equity across population groups, and building healthy communities (to better promote health and

prevent disease). Therefore, this study is governed by Life course Theory because it provides an opportunity to improve the health and wellbeing of mothers, children and families. At the same time, the life course theory offers the opportunity to reinvigorate and address the broad range of factors that impact on maternal health and well-being.

2.4 Empirical Literature Review

2.4.1 Health services provided by CHWs at Community level

Community Health Workers (CHWs) often serve an important primary health care role through linking health facilities and communities. Services provided by CHWs vary from place to place or country to country with the aim at improving community health services. Mhlongo and Lutge (2019) conducted a systematic review on the roles, responsibilities and perceptions of CHWs and ward based primary health care outreach teams in South Africa. Their study highlighted key activities of CHWs which are to provide health education, create a voice for the people, serve as a bridge between patient, communities and health system, act as lay counselors, fulfill identity-related needs run campaign programmes to mobilize communities‟ members for health services and targets households‟ coverage for health care service.

Kilewo *et al*., (2012) on their study "Community Health Workers‟ Training and Deployment in Tanzania" categorized CHWs in main six groups on which the groups entail their activities. The categories are Home Based Care (HBC) providers, Community-based distributors/educators (CBD), (family planning and HIV education), Para-social Workers (PSW) for Orphans and Vulnerable Children/Most

Vulnerable Children (sometimes called OVC or MVC Counselors), Peer HIV educators, Peer counselors (sometimes called Lay Counselors), Community maternal, newborn and child health care providers (MNCH) and Life Skills Trainers and Traditional Birth Attendants (TBAs). Their study summarized activities which are conduct home visits for provision of HBC services to PLHIV, promotion of life enhancing behaviors and gender sensitization, youth empowerment, provision of HIV and malaria prevention and safe water education and promotion of MNCH.
CHWs promote optimal breastfeeding practices to enhance healthy growth and development of the child as recommended by World Health Organization. The breastfeeding practices include initiation of breastfeeding within one hour after delivery, exclusive breastfeeding (EBF) up to six months of the infants‟ life and after six months complementary feeding with adequate nutritious foods and continued breastfeeding up to the age of two years after birth. Breastfeeding is the normal way of providing young infants with the nutrients they need for healthy growth and development (WHO 2017).

Virtually all mothers can breastfeed, provided they have accurate information, and the support of their family, the health care system and society at large. CHWs promotes breastfeeding practices to the people where they inform about lactating mothers to have balanced diet, under 6 months children should be exclusively breastfed without giving any additional foods and children should be properly breastfed. Mothers who received advice on breastfeeding from health care workers after delivery had higher odds of exclusively breastfeeding than those advised by traditional birth attendants (TBA) or family members.

In addition Mgongo *et al.,* (2014) conducted the study on ‟Determinants of exclusive Breastfeeding in Kilimanjaro region, Tanzania‟‟‟ which showed that majority, 66%, of mothers who counseled by CHWs‟ reported to have breastfed their new born within the first hour of life, 30% reported to have breastfed exclusively for up to at least six months while those who did not practice complete exclusive breastfeeding mentioned insufficient milk as the main reason. The same can be seen at national level where according to Tanzania National Nutrition Survey (TNNS) of 2018 indicates that the rate of exclusive breastfeeding to 0 to 5 months children has increased by 16.7% from 41.1%in 2014 to 57.8% in 2018. Furthermore, the TDHS 2015/2016 shows an increase of exclusive breastfeeding to the same children age group, the rate has been increased by 9.4% from 49.8 in 2010 to 59.2% in 2015/2015. This substantial increase of the status of exclusive breastfeeding has been contributed a lot by CHWs who work at ground level. Meeting with pregnant women and lactating mothers to provide education on breastfeeding practices.

Another activity of CHWs is promotion of family planning. Family planning is when both the husband and wife together discuss and mutually decide how many children they would like to have and when, so that they can give sufficient love, care, attention and good education to each of their children (FHI 360). There are multiple types of family planning methods including birth control pills, barrier methods, long-term contraceptive methods and natural family planning method. Each of the mentioned family planning method has its advantages and disadvantages so before choosing the best method, couples are advised to seek more clarification from health service provider. The worldwide key trends show that in almost all regions of the

world, family planning especially contraceptives is used by the majority of women in the reproductive age range (15-49 years) who are married or in a union (UN, 2017). This trend is further described that worldwide in 2017, 63% of these women were using some form of contraception. Contraceptive use was above 70% in Europe, Latin America and the Caribbean, and Northern America, while being below 25% in Middle and Western Africa. Provision of referrals is another activity conducted by CHWs whereby in Tanzania current referral system is of a pyramidal pattern: patients from the community are referred from dispensary and health centres to district and regional hospitals (URT, 2015).

The same is supported by Devlin *et al.,* (2017) on Community Health Workers catalogue in Tanzania, explained that CHWs refer clients to the health facility with which they are associated, usually a dispensary, for services they cannot provide. But also because of Tanzania's multidisciplinary approach to health and social services, CHWs may also refer clients to para-social workers, legal services, and NGO providers as appropriate. In addition, dispensaries provide preventive and curative outpatient services, while health centers can also admit patients, and sometimes provide surgical services. CHWs screen children and provide referrals to children with Severe Acute Malnutrition and Moderate Acute Malnutrition. Severe Acute Malnutrition results from sudden reductions in food intake or diet quality and is often combined with physical or mental causes. Acute malnutrition has been defined in various ways and has been referred to by various names with partially overlapping definitions, including protein energy malnutrition, wasting, kwashiorkor (Lenters et al., 2016).

WHO (2016) provides generic definitions of moderate and acute malnutrition where: Warren et al., (2005) in their study, observed, Community Health Worker (CHW) visits to the home offer an opportunity to reach the patients with care and build specific health messages based on what they are suffering from? They also delegate certain tasks in routine to a less skilled cadre, where feasible and appropriate. Moreover, Community Health Worker, and other cadres, such as traditional birth attendants, helps to improve both the knowledge base and care for the mother and baby pair immediately after birth as argued in Tanzania Demographic Health Survey (2005).

Bhandari *et al.,* (2003) provides, experiences from India which shows that Community health workers can significantly improve early initiation of breastfeeding, exclusive breastfeeding, duration of exclusive breastfeeding, and reduce diarrhea through breastfeeding promotion efforts by educating people the importance of doing them. It was further revealed that CHWs promote birth spacing, linking recently delivered women with family planning services, and in transferring information to mothers about obstetric complications and the need for referral.

2.4.2 Attitudes of people on Community Health Workers

Collins *et al*. (2017) in their study "Community perceptions and attitudes on malaria case management and the role of community health workers", provides that there is positive attitudes and perceptions of people on the roles played by CHWs which are building strong linkage between the community and health facilities, provision of cost effective health services, bringing health services to close proximity to the

community, avoiding long queues in the health facility and provision of education that encourages good health practices.

Sheppard (2016) in their study titled "Who Are They? A Case Study of Community Health Worker (CHW) Programs in Primary Health Care" conducted in South Caroline found that the perceptions and attitudes of people influences CHWs' service provision in primary health care service. The study provides that the services provided by CHWs are Patient – centered, Cultural responsiveness, Caring and supportive, Comprehensive and efficient, as well as knowledgeable, professional and effective.

Perales*et al.,* (2018) in their study on Participants perceptions of interactions with community health workers who promote behavior change: a qualitative characterization from participants with normal, depressive and anxious mood states" conducted in Cameron County, Texas found that people's perceptions and attitudes to CHWs are influenced by CHWs themselves in terms of CHWs' ability in rapport – building skills, Professionalism, Efficiency and adaptability in carrying out their roles and responsibilities as well as willingness of the people to accept CHWs' service. Furthermore, the researchers found that 82% of the people with lower socio-economic status suggested that rapport building and professionalism of CHWs as a feature that facilitated strong, positive relationships and lifestyle behavior changes. More literature here!

2.4.3 Challenges on CHWs' Activities

Roberson (2015) in the study titled "The performance of Community Health Workers in an integrated community case management in Burkina Faso" found that with or without challenges situations may influence CHWs performance in delivery of and improvement of health services. The study further highlighted three determinants related to the challenges of CHWs in health services delivery, which are health System factors, CHWs' characteristics, Community factors and contextual factors. The main challenges highlighted by the study are lack of community support, lack of financial incentives, large responsibilities, unmet promises and occasional criticisms from the other village members.

Renan et al. (2014) in their study titled "Community health agents, the challenges of working in the rural area" conducted in municipality of Jerônimo Montiro, state of Espírito Santo (ES), Brazil, pointed out challenges on CHWs in provision of health services which are lack of transport in accessing households, Community economic activities like agriculture and lack of opportunities to access formal education as impediments towards improvement of health services.

CHWs often operate on the peripheries of formalized health care CHWs' position as informal, unsalaried health workers can jeopardize their ability to provide health services. Furthermore, CHWs' informal position within the health sector can lead to difficult relationships or contention between CHWs and professional health workers, often due to ill-defined roles and responsibilities. A field observation and interviews with CHWs and formal health workers in Cameroon found that there were strained

relationships between these two groups, which CHWs attributed in part to the lack of clearly delineated duties (Tantchou, Yakam, & Gruenai, 2009).

The influence of community contexts; Some barriers to CHWs' effectiveness are not a product of the health system itself, but rather arise from the context in which the CHWs work. Some of these barriers are a result of the physical characteristics of community. For example, large coverage areas with limited transportation options can make conducting home visits challenging (Scott & Shanker, 2010).

Community members do not value the work of CHWs; Rebecca Get al. (2017) in their study titled "Challenges facing Community Health Workers in Brazil's Family Health Strategy" All CHWs described the low status and lack of recognition of their work within the community. It is perceived as an easy job, since CHWs are often seen around the neighborhood during traditional work hours. CHWs mainly provide information and health monitoring, rather than services that community members traditionally associate with care, such as vaccines and prescriptions. Healthy community members often don't see the need for regular CHW visits, and even some chronically ill individuals express similar ambivalence towards the CHWs, because CHWs dispense advice, support, and information rather than treatment.

Most CHWs in the study expressed difficulty with community members misunderstanding or overlooking the work of CHWs. In Bahia, their informal uniform, insufficient equipment, and minimal training compounded this challenge.

2.5 Research Gap

Most of the studies, that have been conducted by other researchers such as Warren et al. (2005) and Bhandari et al. (2003) shown that, their focus were based on contribution of CHWs to the community in relation to health services provision through creating awareness, promotion and education visits but very little has documented about if the roles played by CHWs helps to improve primary health services. Therefore, this study will bridge this gap by exploring the contribution of CHWs to the improvement of primary health services in Kilolo District.

2.6 Conceptual Framework

A conceptual framework explains either graphically, or in narrative form, the main things to be studied, the key factors, concepts or variables and the presumed relationship among them Vaughan (2008). The conceptual framework focused on the relationship between independent and dependent variables. Independent variables in this study are CHWs' activities, attitudes of people and CHWs' challenges.

The underlying assumption of the independent variables towards dependent variables is that if CHWs performs well their activities the attitudes of people towards CHWs services will be positive, hence will lead to the improvement of primary health services, while if CHWs not perform well their activities the attitudes of people towards CHWs services will be negative, hence will lead to poor improvement to primary health services. If CHWs not perform well their activities the attitudes of people towards CHWs services will be negative, hence will lead to poor improvement to primary health service.

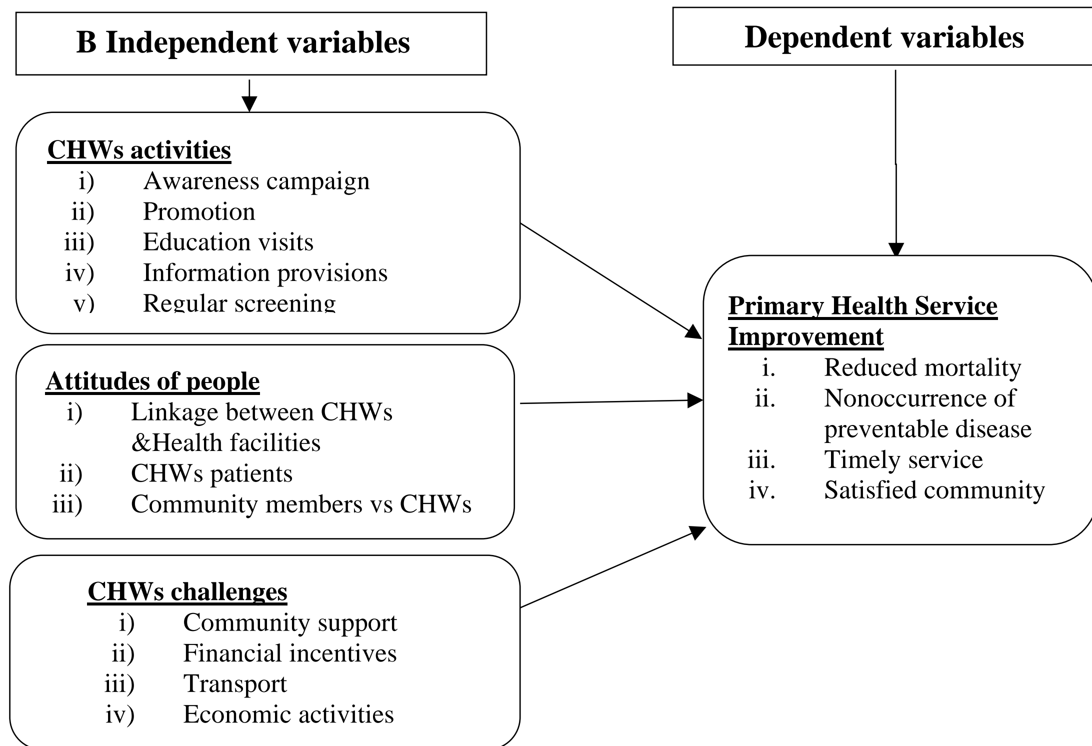

Figure 2.1: A Conceptual framework on the contribution of CHWs on primary health improvement

Source: Sanga E, 2019

2.7 The National Health Policy 2017

The aim of policy and government commitments is the delivery of health services to ensure fair, equitable and quality services to the community. Furthermore, the policy aims at empowering communities and involving them in health services provision. Unfortunately, fair, equitable and quality services remain to be desired. This is because the burden of diseases is still very high due to continued existence of communicable and non-communicable diseases. As a result, communities are still faced with many cases of mortality and morbidity. The biggest problem is inadequate coverage of the health system to deal with the health service needs of all people in the country. This state of affair mainly is due to uneven distribution of health

services to different communities. The outcome of this, in some areas people need to travel long distance or many hours before reaching the point of health services delivery.

This problem is due to poor infrastructure especially in rural areas. Uneven distribution of health services also contributes to poor quality of services as some of communities are left out of health services participation. Since independence, the government main focus has been to ensure that health services reach all the Tanzanians especially those living in rural areas. However, due to various constraints this objective has not been accomplished in full. In order to ensure that health services reach all the people the government is planning to speed up the process and the focus will be on the district health services where people can easily access services. The overall objective will be to provide accessible quality health services to all Tanzanians (The National Health Policy 2017).

Furthermore, The National Health Policy 2017 of Tanzania recognized the role of Community health workers on providing Mental Health Services. Tanzania has limited number of psychiatric hospitals and rehabilitation facilities and only very few offer comprehensive mental health care (treatment, case management and rehabilitation). The country has very few psychiatrists, clinical psychologists and social workers. Most mental health care is provided by the community health workers (CHWs), general nurses and assistant medical officers (AMOs) in the primary health care facilities. Currently mental health care has been integrated into primary care in most regions (The National Health Policy 2017).

2.8 Chapter Summary

This Second chapter reviewed different literature on contribution of CHWs on community health service improvement. The chapter starts with describing the major concepts used in the study, which are CHWs, primary health services, health facility and community health. Also, this chapter reviewed two theories of Parson's theory of role of sickness and Life Course Theory, the chapter also focused on empirical where it reviewed the activities conducted by CHWs, attitude of people on CHWs as well as challenges on CHWs activities, and lastly this chapter reviewed The National Health Policy 2017 of Tanzania.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

This chapter presents background of the study area and the methodological processes used for data analysis for this study. This chapter is divided into ten sections: The chapter starts with describing the description of the study area and justification of its selection, Research Approach and Design, Targeted Population, Sampling Design and Sample Size. Data types and sources, Data Analysis, Validity and Reliability, Ethical considerations in the study, Limitations of the Study Chapter Summary.

3.2 Description of the Study Area

The study was conducted in Mazombe division of Kilolo District in Iringa Region. Kilolo District is one of the four Local Authorities forming Iringa Region. The district extends between Latitude 7.0° and 8.3° south of the equator and between Longitude 34° and 37° east of the Green - which. The District borders Mpwapwa and Kilosa Districts to the north, Kilombero District to east, Iringa District council to the west and Mufindi District to the south. The district is divided into 3 divisions, 24 Wards, 106 Villages and 555 hamlets with 46,002 households, with only Parliamentary Constituency (URT, 2013). The division has eight wards and 41 villages, the wards are Irole, Ilula, Ibumu, Image, Lugalo, Mlafu, Nyalumbu, and Uhambingeto. According to Wilson, (2002), it sounds unreasonable to select the study area for research using a random sampling technique; one should make use of the available information that might quite logically guide the choices.

3.3 Justifications for Area Selection

The reason for choosing Mazombe division was due to the fact that people of Mazombe division they are well informed and possess good knowledge about CHWs also the fact that there are poor health facilities at Mazombe division so they highly depends on CHWs, another reason for selecting Mazombe division was due to the fact that there is shortage of health facilities which requires most of the people to travel to town about 30 to 50 km for accessing health services, also this division is among the most affected by the HIV/AIDS about 5644 (which is 58% of the infected people district wise) Mazombe Community members are infected by the disease, which is very high to compare to other division found in Kilolo DC, which are Kilolo division which have 2150 people (22%) are infected, and Mahenge division have 2000 (20%), on which makes the total percentage of infection in Kilolo District to be 11.3% which is equal to 9794 people of the whole population, but also the level of infection for the districts found in Iringa region (which is currently prevalence rate is 11.3% secondly national wise), the rate of infection is 11.3% in Kilolo DC, 5.6% in Iringa MC, 11.3% in Mufindi DC, and 11.3% in Iringa DC and it is expected that CHWs are the key personnel in providing primary education on how to overcome the diseases (Tanzania HIV Impact Survey (THIS), 2016-2017).

3.4 Research Approach and Design

Academicians such as White and Nteli (2004) distinguish two main research approaches namely quantitative and qualitative approaches. Quantitative research sometimes referred to as positivist, is scientific in approach (Kotler, 2009). This study employed both methods (mixed methods) where quantitative as numerical data

was used to collect information on contribution of health workers in health service provision this was captured from Mazombe people. Information on if the CHWs educate them on different issues regarding their health, also if they receive support of any kind was captured. Also the qualitative information was obtained from CHWs themselves.

The design of the study was Descriptive research studies. It was descriptive research study because it was concerned with describing the characteristics of a particular individual, or of a group, sets out to thoroughly describe community health workers contributions by considering their key roles, It is a one-time cross-sectional study; it cannot therefore gauge the temporal variations or a trend in the data collected and hence, enabled the researcher to collect a large amount of data from a sizeable population in a highly economical way. According to Saunders *et al.* (2005), this kind of design, gives the researcher more control over research process.

3.5 Targeted Population

Before the researcher discusses the sampling method, the researcher takes an indication from Sullivan (2001) by examining the populations for which sample will be taken for the study. The target population for this study constituted the Mazombe community which has a total population of 83,494 inhabitants of whom 40,354 are male and 43,140 are female (Source Census August 2012).

3.6 Sampling Design/Techniques and Sample Size

3.6.1 Sample Techniques

This is a method used in drawing samples from a population in a manner that the

sample facilitated determination of research questions concerning the population. Therefore this study adopted the following sampling techniques.

3.6.1.1 Purposive Sampling

Purposive sampling starts with a purpose in mind and the sample is thus selected to include people of interest and exclude those who do not suit the purpose (Creswell, 2014). Due to the nature of the study, the purposive sampling technique was used to select the sample of respondents basing on the knowledge and by virtue of working in the study area. The purposive sampling was used to select the Community health workers and health providers (from the dispensaries) found in Mazombe division. Also purposive or judgmental sampling was used to select the Villages and Dispensaries found in the study area; hence it enables the researcher to select Villages and Dispensaries, which provide the details about the study purpose.

The purposive sampling technique suited the demands of the study as it assured economical aspects in selection of the intended respondents who are well known, knowledgeable and willing to take part in the study.

3.6.1.2 Convenience Sampling

This technique involves selecting respondent's primary on the basis of their availability and willingness to respond. In this study convenience sampling was applied to the respondents regarding to their willing and availability to be involved in the study, this is relevant particularly to the recent delivered women, people who are infected with HIV/AIDS, and other community members in Mazombe division. Researcher adopted this technique because it would be ideal to test the entire

population, but in most cases, the population is just too large that it is impossible to include every individual.

3.6.2 Sample Size

Sample size refers to the number of items to be selected from the population to constitute a sample (Dryden, 1995). The size of the sample should be optimum (Kothari, 2014) and an optimum sample is the one that fulfills the requirements of efficiency, representativeness; reliability and flexibility (Dryden, 1995). Therefore, the size of sample needed depends in part on the size of the margin of error that is acceptable to the researcher and the size of the population from which the sample was drawn (Saunders et al., 2009). As such the final sample size is both a matter of judgment and calculation (Colin Fisher et al. 2010).

The sample size for this study was computed by using the following formula below;

Sample size $(n) = N/(1 + ND^2)$

Where n is the number of samples, N represent the total population or sample frame and D represent the standard error.

Given the sample frame of 83,494 and standard error of sampling (10%), the sample size will be computed as following; $n= 83{,}494/(1+ (83{,}494 \times 10\%^{2})$

Therefore, the sample size used was 99.88, which is approximately to 100 community members.

3.7 Unit of Analysis

This study focused on groups as a unit of analysis, where by Community health workers, health providers (from the dispensaries), and community members from the study area, were the key sources of data.

3.8 Data types and Sources

Both primary and secondary data was collected basing on the objectives of the study.

3.8.1 Secondary Data

Secondary data are information gathered from other previous studies, e.g. published material and information from internal sources such as raw data and unpublished summaries (Mbogo et al., 2012). Documentary review entails gathering information from recorded documents (Best and Khan, 2013). Review of documents is a process of reading with or associated with issues related to what the researcher is studying (Borg and Gall, 2015).

3.8.2 Primary Data

Primary data are afresh information gathered directly from fields (Mbogo et al., 2012). Primary data is fresh, first-hand information and original in character intended for the research being undertaken (McGregor, 2015). Primary data is important for all areas of research because it is the direct information about the results of an experiment or observation. In this study, primary data was quantitative and qualitative. So in this study Primary Data was collected from individual community

members, health providers and community health workers, and interview was used for collection of primary data.

3.8.3 Primary Data Collection Methods and Tools

This study employed both qualitative and quantitative methods to collect data from the respondents as indicated below;

3.8.3.1 Quantitative Data

Quantitative data was collected from individual community members and community health workers. Well-structured questionnaires were designed for data collection. The quantitative data that was collected and was used to measure the extent of people's attitude on Community Health Workers on the improvement of Primary Health Services, activities undertaken by CHWs in providing health services, and challenges associated with the implementation of CHWs activities on the improvement of Primary Health Services in the study area.

3.8.3.2 Qualitative Data

Qualitative data was collected in this study to supplement the quantitative data. The following methods were employed in collection of qualitative data;

3.8.3.3 Key Informant Interviews

Key informants were selected basing on their knowledge and experience on contribution of community health workers and on improvement of primary health services. The key informants of this study were the community health workers and

Health care providers. Key informants are important because they are readily accessible, willing to talk and mostly have great depth of knowledge on the study topic. An interview guide was used to collect data from all the key informants in Kilolo District.

Interview: Interview method of collecting data involves presentation of oral-verbal stimuli and reply in terms of oral-verbal responses. This method can be used through personal interviews and, if possible through telephone interviews. According to Kothari (2008) Interview as a technique of data collection is very popular and extensively used in every field of social research. The interview is, in a sense, an oral questionnaire. Instead of writing the response, the interviewee or subject gives the needed information verbally in a face-to-face relationship. For this study, an interview involved a list of questions relating to the study topic that guided the discussion and were answered by the respondents. This method was used to collect data from the community health workers.

3.9 Data Analysis

Data Analysis is the process of inspecting, rearranging, modifying and transforming data to extract useful information from it. Also, it is important to make sure that your data analysis is done in a responsible way.

3.9.1 Quantitative Data

Quantitative data was analyzed by using the data collected from study area to be entered in a Microsoft excel database and cleaned to ensure accuracy and

completeness. Statistical package for the social sciences (SPSS), was used to analyze the data and the hypothesis of findings was tested by using chi-square in cross tabulation and the descriptive data was analyzed into frequency distributions, percentages and data interpretation was done by using table and charts. All in all statistical package for the social sciences (SPSS) was used to measure associations, statistics and variation in some of the variables on contribution of community health workers on improvement of primary health services.

3.9.2 Qualitative Data

Qualitative data was analyzed using content analysis technique. Data were interpreted and organized into different themes based on the conceptual description of ideas, which was expressed by respondents during the discussion. Contents were analyzed in higher level. This level of analysis is not only interpretive, but also is concerned with the response as well as is inferred or implied. Data collected in this study through interviews was edited, coded, summarized, classified, tabulated and finally analyzed.

3.10 Validity and Reliability

Reliability and validity are two important aspects of a research project, they show the correctness of the Instrument (questionnaire) used to collect data and therefore that can be relied upon. If the two criteria (reliability and validity) are met in a given research, then the chances are high that the research work is of the desired quality and can be used with confidence to whoever the research work is intended to.

3.10.1 Validity

Validity refers to degree to which the instrument is capable of measuring what it is supposed to measure accurately, effectively and efficiently (Omari, 2011). It is the extent to which inferences, conclusions and decision made on the basis of test scores are appropriate and meaningful (Banks, 2005). The researcher took a number of different steps to ensure the validity of the study; Data were collected from reliable sources, Questions to be based on the literature review and conceptual framework and the questionnaires were pre-tested by a small number of carefully selected respondents to make sure that they are well understand and measure what they are supposed to measure.

3.10.2 Reliability

Reliability is whether the instrument is likely to give consistent results across time, place, similar instrument, irrespective of who is using it, (Omary, 2011). Also Reliability is concerned with consistency of responses with which the repeated measure produces the same results across time and respondents (Saunders et al. 2007).

For a research to be reliable, it must demonstrate that if it will be carried out on a similar group of respondents in a similar context, then similar results will be found (Kothari, 2004). Reliability is a measure of how consistent the results from a test are and in order to ensure the reliability of these research findings therefore, the researcher designed the questionnaires in a simple, short, and hence not boring format, the questionnaire was structured in a simple language as to avoid respondent

confusion. Additionally, the researcher conducted a pre-testing of questionnaires where a total of 10 questionnaires will be distributed to few respondents as to test whether they generated the sought data. The researcher then collected the pilot questionnaires, redesigned them and then redistributed them to all target respondents for final data collection.

3.11 Ethical Considerations

Research ethics refers to the type of the agreement that the researcher enters into with the research participants. According to Best & Khan (2014) ethical issues in research fall into one of the five categories, which are protection from stress, harm, or danger; informed consent; right to privacy; confidentiality; and honesty with professional colleagues. The researcher observed and guaranteed participants confidentiality that is; they were assured that identified information will not be made available to anyone who is not directly involved in the study. The researcher was abide to strict ethical principles and guaranteed participants of anonymity throughout the study process, Also all references was cited accordingly and moreover, the researcher respected respondents' freedom as to when to complete the administered questionnaires.

3.12 Limitation of the Study

During the process of carrying out this study, the researcher encountered a challenge of budgetary limitation and time constraints which were major challenges since the costs for research were pre assumed by the researcher independently. The costs of transport especially in field and lunch allowance were overlooked as they were high

compared to the budget set. In order to overcome the challenge research assistants were required to walk along distances and to have heavy lunch in midafternoon in order to save costs and meet with all respondents as planned.

Other challenge encountered of this study to have expectation of getting allowances by participating in the study. The researcher overcame this limitation by prior explaining to respondents that the participation were freely as there were no any allowances for them but in near future the results will contribute to primary health service improvement.

Some of the respondents were reluctant to respond on the account that they were too busy with their daily business activities as result the researcher had to put more efforts by following respondents into their homes during late hours for interviews and fill in questionnaires.

3.13 Chapter summary

The Third chapter (the study methodology) comprises of the Description of the study area, Research Approach and Design, Targeted Population, Sampling Design and Sample Size, Unit of analysis, Data types and sources, Data Analysis, Validity and Reliability, Ethical Considerations, and Limitations of the Study.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Overview

In this chapter the results of the study are described and the analyses of the data are presented. The results describe information on demographic characteristics of the respondents, activities undertaken by the CHWs, attitudes of people towards services provided by the CHWs as well as challenges facing CHWs on provision of primary health services. In addition, the analysis provides the relationships between socio-demographic variables, the awareness of CHWs" services by the people and socioeconomic status with improvement of primary health services.

4.2 Respondents Characteristics

Demographic variables in this study include age, sex, level of education and marital status.

4.2.1 Age Profile of the Respondents

Age of the respondents is one of the most important characteristics in understanding their views about the particular problems: by and large age indicates level of maturity of individuals in that sense age becomes more important to examine the response (Mandal, 2014). The selected sample in this study comprised of 100 people who were involved in accessing CHWs" services in the study area. Table 4.1 shows age group of the respondents who provided with CHWs" services whereby their aged from 18 to 54. Majority of the respondents 39 (39%) were aged 25 to 34, followed by 26 (26%) who aged 35 to 44, 18 (18%) aged 18 to 24, 7 (7.0%) ranged from 45 to

54, 5 (5.0%) ranged from 55 to 64, and 5 (5.0%) are 65 and above. Thus, these findings imply that majority of respondents served by CHWs with primary health services were between 18 and 44 years old. This finding is in consistent with the results of the study conducted by Mpunga (2015) who reveal that about 80% of people aged 20 to 35 and above are beneficiaries of post-natal services as provided by CHWs.

4.2.2 Sex of The Respondents

In this study, 100 respondents were involved where by 61 (61.0%) respondents were Women and 39 (39.0%) were men as presented in Table 4.1. This study covered more women compared to men because by experience women are the most targeted beneficiaries of primary health services provided by CHWs compared to men.

4.2.3 Level of Education of Respondents

Education is often valued as act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life. In this study also respondents were asked about their education level, whereby the results revealed that 66 (66.0%) of the respondents they have primary school education, 27 (27.0%) have secondary school education, 4 (4.0%) have Diploma, 2 (2.0%) have degree and only 1(1.0%) respondent had certificate level education as shown in Table 4.1. The TDHS (2015/2016) indicated that half of respondents have completed primary school (50% of women and 48% of men), but never continued on to secondary school. Also, women are less likely than men to attend any secondary schooling (23% of women

and 28% of men have attended secondary or higher level). Women are also less likely to attend any school (15% of women have no formal education compared with 8%of men), and less likely to attend primary school without completing it (12% of women and 16% of men). So in comparison with the study findings results it showed that the number of respondents in the study area were more educated compared to those of TDHS due to various reasons like different in sample size, timing of the studies as wellas instruments used in data collection and analysis.

4.2.4 Marital Status of the Respondents

Marital status of the respondents is an important demographic characteristic as it gives picture of respondents‟ family arrangement. Study findings showed that 77 (77.0%) respondents were married, 18 (18.0%) of them were single, 3 (3.0%) never married, 1(1.0%) separated and only 1(1.0%) was widowed as indicated in Table 4.1.

Table 4.1: Demographic characteristics of the respondents

Variable	Frequency (N = 100)	Percentage (%)
Age of respondents		
18 – 24	18	18.0
25 – 34	39	39.0
35 – 44	26	26.0
45 – 54	7	7.0
55 – 64	5	5.0
65 and Above	5	5.0
Sex of the respondents		
Male	39	39.0
Female	61	61.0
Level of Education of respondents		
Primary Level	66	66.0
Secondary Level	27	27.0
Certificate Level	1	1.0
Diploma Level	4	4.0
Degree Level	2	2.0
Marital status of respondents		
Single	18	18.0
Never Married	3	3.0
Married	77	77.0
Widowed	1	1.0
Separated	1	1.0

Source: Research findings 2020

The study findings are supported by the report fromTDHS (2015/2016) which reported that 62% of women and 52% of men in Tanzania are currently in union (married or living together).

4.3 Household Characteristics

4.3.1 Respondents Household Size

In this study finding revealed 50 (50.0%) households have 3 – 4 household members, followed by 27 (27.0%) households have 5 – 7 household members, 19 (19.0%) have 0 – 2 household members, and only 4 (4.0%) had more than 7 household members as indicated in Table 4.2. The average household members from these findings of 3 to 4 are not so much different from that of the national surveys. The 2014 ILFS report reveals that, the average household size in Tanzania Mainland is 4.4 persons per household, whereby rural households had the largest household size of 4.7 persons and Dar es Salaam had the smallest household size, recording an average of 3.8 persons per household. This minor differences of number of household members with the one at national level because it is said the number of household in rural areas is high, the villages selected in this study are all located alongside Morogoro – Iringa main road and had similar characteristics to streets in urban areas.

4.3.2 Households' Main Sources of Income

In order to meet day to day household expenses, a household needs income which is usually obtained from wages, self-employment, agriculture or other sources. Source of household income is important as it provides extra information when analyzing income from employment (URT 2014). The study findings revealed that 78 (78.0%)

of the respondents they are engaging in farming activities while, 16 (16.0%) respondents engaged in retail business and only 6(6.0%) respondents are formally employed by the government as indicated in Table 4.2.

Table 4. 2: Respondents' Household characterization

Variable	Frequency (N = 100)	Percentage (%)
Number of household members		
0 – 2	18	19.0
3 – 4	39	50.0
5 – 7	26	27.0
More than 7	4	4.0
Household's source of income		
Farming	78	78.0
Employed	6	6.0
Retail Business	16	16.0

Source: Research findings 2020

4.4 Performance of Community Health Workers in Providing Health Services

4.4.1 Respondents' Knowledge on Services of Community Health Workers

4.4.1.1 Existence of CHWs At Village

Respondents were asked about the existence of CHWs in the study area. The researcher found out that all of respondents interviewed had reported to understand the existence of CHWs in their area as indicated in Table 4.3. These results are supported by the results of the study conducted by Najafizada *et al., (*2019) in Rural Afghanistan where they found that community are aware of CHWs and in many of the villages visited for their research, CHWs were called "village doctors." Also their study further revealed that CHWs had the authority to distribute drugs, treat common childhood diseases such as pneumonia and diarrhea, provide counseling, and refer patients to health facilities.

4.4.1.2 CHWs' Service Provision Platforms

Table 4.3 shows CHWs provide services to community through various platforms, this study findings revealed that there are main four platforms which people often met witch's namely village clinics, village meetings, health facilities and group counseling conducted on monthly basis in most of the villages. From the respondents‟ multiple responses analysis show that 60 (40.0%) responses indicates clinic as a meeting point, 42 (28.0%) at village gatherings, 45 (30.0%) at health facility and 2(2.0%) group counseling as indicated in Table 4.3. So village clinics are the most platforms which CHWs met with the community during service provision where most of the time the clinics are place where monthly children screening took place. Also other platforms include village meetings, group counseling and health facility. The result of the study is similar to Oliver *et al*., (2015), who identified six main area of practice used by CHWs to provide services to community. These are households‟ visits, medical interventions at health facility, referrals, educational interventions, data collection and monitoring meetings. Some platforms differ in two studies due to different interventions or programs taking place in these areas.

4.4.1.3 CHWs' Meeting Frequency with the Community

About the frequency and last time of meeting with CHWs the findings shows that 83(83.0%) of the respondents meet with CHWs on monthly basis, 15(15.0%) meet on quarterly basis and only 2 (2.0%) meet with CHWs on weekly as indicated in Table 4.3. Most of the community members meet with CHWs on monthly basis through home visits, health facility or group counseling. These results imply that

majority of community members meet with CHWs at least once in every month to access health services.

Table 4. 3:Community knowledge on CHWs' activities in the study area

Variable	Frequency (N = 100)	Percentage (%)
Existence of CHWs in the study area		
Yes	100	100.0
No	0	0.0
Meeting place	**Response**	**Percentage (%)**
Clinic	60	40.0
Village gatherings	42	28.0
Health facility	45	30
Group counseling	2	2.0
Frequency of meeting		
Weekly	15	15.0
Monthly	83	83.0
Quarterly	2	2.0

* Some of the respondents gave more multiple answer categories, number of cases will not necessarily add to 100 (data set was based on multiple responses)

Source; Research findings 2020

4.4.2 Services Provided By Chws at Community Level

Services provided by CHWs at community level in the study area were determined and presented in Table 4.4 the study findings revealed that, CHWs provide numerous services in the study area. The services are home visits for hygiene education and Home-Based Care to ill patients, Promotion of Breastfeeding, Nutrition screening and growth assessment to less than five years children, Immunization of children under 5years, Family planning education, HIV/AIDs prevention education and Home Based Care to PLHIV, to mobilize expectant mothers and children to be taken to the clinic. The Findings of the study indicated that CHWs performs more than one mentioned activity whereby 37 (25.0%) responded that CHWs promote family

planning in order to enable partners to have health children and strengthen mother's health, 33 (22.0%) responded that CHWs provide education on HIV/AIDS prevention in order to reduce number of new infection, and also they are conducting Home Based Care to people leaving with HIV, 29 (19.0%) responded that CHWs conduct monthly nutrition status screening to under five years children, 20 (13.0%) responses were for promotion of breastfeeding, 18 (12.0%) responded that CHWs provide immunization of children under 5years, 8 (5.0%) responded that CHWs conduct home visits by walking house to house to provide environmental hygiene education and Home Based Care to ill patients, and 5 (4.0%) respond that CHWs are mobilizing expectant mothers and children to be taken to the clinic. Results findings imply that most common service provided by CHWs at community level is promotion of family planning which was highly responded followed by provision of education on HIV/AIDS prevention and conducting Home Based Care to people leaving with HIV and provision of nutrition education.

However, activities performed by CHWs differ from one place to another or differs from one intervention to another. The results of this study is supported by the study conducted by Ngugi *et al.,* (2018) in Kenya who found that, the roles of CHWs include educating the communities on health issues such as maintaining good hygiene and having a toilet. Additionally, the study indicates that CHWs encourage sick people seek medical attention, ask pregnant mothers to deliver at health facilities, counsel nursing mothers on exclusive breast feeding and childhood immunizations, identify Tuberculosis (TB) and Antiretroviral (ARV) medication

defaulters, encourage boiling or treatment of (drinking) water, register members of assigned households and conduct monthly household visits to identify health issues.

Table 4.4: Services provided by CHWs at community level

Activity category	Response	Percentage (%)
Promotion of family planning	37	25.0
Provision of education on HIV/AIDS prevention	33	22.0
Conducting monthly nutrition status screening to under five years children	29	19.0
Promotion of breastfeeding	20	13.0
CHWs provide immunization of children under 5years	18	12.0
CHWs conduct home visits for hygiene education and HBC to ill patients	8	5.0
CHWs are mobilizing expectant mothers and children to be taken to the clinic	5	4.0
Total	**150**	**100.0**

* Some of the respondents gave more multiple answer categories, number of cases will not necessarily add to 100 (data set was based on multiple responses)

Source; Research findings 2020

4.4.2.1 Home Visits For Hygiene Education And HBC To Ill Patients

One of services provided by CHWs at community level is to conduct home visits for environmental hygiene education and Home-Based Care to chronically ill patients. CHWs provide hygiene education which comprises of both personal hygiene and environmental hygiene. URT (2010) defines Home-based Care (HBC) as any form of care given to chronically ill people in their homes which includes services that provide physical, psychological, social, and spiritual support whereby families are the central focus and form the basis of community HBC. The study assessed frequency and effectiveness of home visits as CHWs‟ service at community level. The study findings presented in Table 4.5 revealed that 91 (91%) people were visited at home by CHWs in different timings either once, twice or more than three times in

the last three months ago while 9 (9.0%) of them were not visited at all. From the total of 91 (100.0%) respondent, 47 (51.6%) of the respondents revealed that CHWs visited their households four times in the last three months, 31 (34.1%) of the respondents revealed that CHWs visited their households once in the last three months, 10 (11.0%) of the respondents revealed that CHWs visited their households two times in the last three months, and only 3 (3.3%) of the respondents revealed that CHWs visited their households three times in the last three months. The study also determined that the rest respondents who were visited once, twice or never visited at all they are given education through other platforms as it not necessarily home visit to be the only platform.

Furthermore, the findings imply that more than 91% respondents visited at their homes by CHWs were given either hygiene education and or HBC services. Among HBC service as stated by URT (2010) includes identification of HIV infected family or households members through counseling and testing, emotional support, nutritional guidance, spiritual and psychological support and sensitization on adherence to counseling and supporting.

Table 4.5: Frequency of home visits

Frequency of home visits	Frequency (N = 100)	Percentage (%)
Once	31	31.0
Twice	10	10.0
More than three times	50	50.0
Not at all	9	9.0
Total	100	100.0

Source; Research findings 2020

Also, the study findings are fairly concurred with the systematic study conducted by Tripath *et al., (*2016), the results indicated that there was moderate quality evidence

that home visits by trained CHWs are associated with improved care-seeking for ill young infants to health facilities in resource-limited settings. These evidences provide support for implementation of home visits by CHWs for improving outcomes of sick newborns and young infants in these areas. Furthermore, it is advised that well designed studies evaluating the effect of home visits by CHWs on successful identification of seriously ill newborns and young infants verified by a "gold standard" should be carried out.

4.4.2.2 Promotion of Breastfeeding

Respondents were asked to provide further information about promotion of breastfeeding as service provided by CHWs at community level. The findings revealed that more responses 63 (63.0%) are for exclusive breastfeeding to under 6 months children, 27 (27.0%) responded that a child must be breastfeed for up to two years, and 10 (10.0%) responses are for proper breastfeeding as presented in table 4.6. Breastfeeding messages that CHWs provide to the people as per results presented helps to strengthen mothers‟ health and improves child's growth. UNICEF (2016) showed that the period from pregnancy to first two years of life is very important for mother's health and rapid child growth.

Furthermore, women have strong belief on breastfeeding education given by CHWs as CHWs are regarded as key information personnel regarding IYCF and their words are believed to be correctly especially in the rural community. Additionally, CHWs "promotion of breastfeeding practices at community level has contributed to increasing of exclusive breastfeeding from 41.1% in 2014 to 57.8 in 2018 as reported

by TNNS of2018. The same substantial increase has been reported by TDHS (2015/16) which shows exclusive breastfeeding increased by 9.4% from 49.8 in 2010/11 to 59.2% in 2015/2016.

Table 4. 6:Promotion of breastfeeding

Promotion of breastfeeding	Response	Percentage (%)
Exclusive breastfeeding to under 6 months children	63	63.0
A child must be breastfeed for up to two years	27	27.0
Proper breastfeeding	10	10.0
Total	**100**	**100.0**

Source; Research findings 2020

4.4.2.3 Promotion of Family Planning

The findings as presented in Table 4.7 show that people receive multiple information concerning family planning practices. Some of the common messages or information received is; partners can choose suitable family planning method for them when they are well informed, family planning services are available and offered at health facility, family planning helps to strengthen mother's health and there are multiple family planning methods. The results revealed more responses of more than 59 (59.0%) in total indicated that family planning services are available at health facilities and they are advised to consider Inter-pregnancy interval (IPI), 31 (31.0%) responses are for use of contraceptive methods, and 10 (10.0%) responded that family planning helps to strengthen health of the mothers and children as presented in table 4.7. The provisioning status of family planning in Tanzania is substantially increasing due to the increasing in the number of health facilities as well. Pregnancy intervals were spaced at least 3 years TDHS (2015/2016) described that in Tanzania, family planning services area component of the Reproductive, Maternal, Newborn,

Child, and Adolescent Health (RMNCAH)interventions provided by the Ministry of Health, Community Development, Gender, Elderly, and Children (MoHCDGEC).

The results of this study indicate that the availability and provision of family planning services in rural areas is fairly high due the collective work done by CHWs at community level and health care worker at facility level. But it should be noted that not all family planning methods are available at health facilities in rural areas some of the services or methods has to be acquired at district or regional hospital. This statement is supported by the study conducted by Deutsche Stiftung Weltbevokerung (DSW) on family planning in Tanzania, a review of National and district policies and budget a case study in Handeni and Shinyanga district. The results of this study show that pills and injectable are highly preferred and available in almost all the facilities but methods are like implants and IUDs are not available at health facility (health center and dispensaries) they have to be acquired to the districts or regional hospitals.

Table 4.7: Promotion of family planning

Family Planning	**Response**	**Percentage (%)**
Inter-pregnancy interval (IPI)	59	59.0
Use of contraceptive methods	31	31.0
Family planning helps to strengthen health of the mothers and children	10	10.0
Total	**100**	**100.0**

Source; Research findings 2020

4.4.2.4 Provision of Referrals

The study further sought for more information on provision of referrals service of CHWs as regard to community health. The findings revealed that most of referrals 9

(44.5%) are for moderate and severe acute malnutrition cases of under five years children, 6 (33.3%) are normal patients both adult and children and 4 (22.2%) responses are for pregnant women as presented in Table 4.8. The study finding is further revealed that Moderate and Severe Acute malnourished children are the most community category provided with referrals. This is because CHWs in the study area meet with less than five years children in at least every month for nutrition and growth screening so it is easy for them to provide referrals whenever the child's status is in chronic condition.

Table 4.8: Provision of referrals

Provision of referrals	Response	Percentage (%)
Moderate and Severe acute malnutrition cases	9	44.5
Normal patients both adult and children	6	33.3
Pregnant women	4	22.2
Total	**19**	**100.0**

Source; Research findings 2020

4.4.3 Services Provided by CHWs at Health Facility Level

At health facility level CHWs provide number of services mainly to support health facility workers. The study findings found 87 (87.0%) responses from 100 respondent to each of services identified to be provided by CHWs at health facility level. Additionally, Dissemination of health-related messages responded by 70 (68.0%) respondent, and vaccination and dispensing micronutrient supplements and immediate care were responded by 33 (32.0%) respondents as presented in Table 4.9. These results imply that CHWs provide various services at health facility due to insufficient health care workers at health facilities in the study area which is again supported by Olaniran *et al.,* (2019) who argued that CHWs are often expected to

provide services that are beyond their scope of practice during emergencies where health professionals are unavailable and/or referral may not be possible.

In addition the results from an in depth interview with key informants had similar results whereby of the 4 health care providers interviewed one from each of Ikokoto Dispensary, Lundamatwe Dispensary, Kipaduka Dispensary and Mbigili dispensary agreed that CHWs provide services like supporting them on deliveries, provision of messages to mothers during clinic, provision postnatal care services and minor treatments to patients. Also the same health care providers added that health facilities have few staffs with a lot of tasks to be done which necessitate CHWs to support them by providing services which ideally were supposed to be provided by professional health care workers. One of them from Mbigili dispensary was here quoted:

> *...We are only 4 working in this* dispensary *serving a lot Of people coming from different villages apart from this village, sometimes it is not easy to provide* services *effectively so CHWs help us by providing some of the services to community members when we are busy or not available...*

Table 4.9: Services provided by CHWs at health facility level

Service category	Response	Percentage (%)
Dissemination of health-related messages	70	68.0
Vaccination and dispensing micronutrient supplements and immediate care	33	32.0
Total	**103**	**100.0**

*Some of the respondents gave more multiple answer categories, number of cases will not necessarily add to 100 (data set was based on multiple responses)

Source; Research findings 2020

4.4.3.1 Dissemination of Health Messages to the Community

One of the key services that CHWs provide is to assist health care workers in dissemination of health-related messages to the people through different forums. Apart from health messages the study results indicated that CHWs provides other messages such as environmental and socio-economic based messages to various community groups one of them being TASAF project benefitting households. On this aspect the study further assessed types of messages that are commonly provided to the people as one of the services of CHWs. From the study results presented in Table 4.10, indicated that most common health messages provided by CHWs includes environmental hygiene, quality latrines, abstaining from alcohol during pregnancy, adhering to family planning and caring and nurturing of children starts at pregnancy. The findings indicate 38 (27.0%) responded on family planning especially to consider Inter-pregnancy interval (IPI) , 37 (26.0%) respondent revealed that were encouraged to do HIV Testing, 33 (23.0%)for each of environmental preservation and abstaining from alcohol during pregnancy, 22(16.0%)responded on child care and nurturing starts at pregnancy as health message received, and responses for quality latrines was 12 (9.0%) as indicated in Table 4.10. The messages provided they were all useful to the people especially mothers who are key beneficiaries of CHWs‟ services. This statement is supported by Yousafzai *et al.,* (2019) found that CHWs provides important and appropriate health promotion messages at a level that was highly understood by mothers. This study shows that CHWs‟ provision of health messages at health facility were highly understood and appreciated by majority of mothers in the study area.

Table 4.10: Disseminating of health-related messages

Health Messages	Response	Percentage (%)
Follow Family Planning	38	27.0
Encouraged to do HIV Testing	37	26.0
Environmental Preservation and abstaining from alcohol during pregnancy	33	23.0
Child care and nurturing starts at pregnancy	22	16.0
Quality Latrines	12	8.0
Total	**142**	**100.0**

*Some of the respondents gave more multiple answer categories, number of cases will not necessarily add to 100 (data set was based on multiple responses)

Source; Research findings 2020

4.4.3.2 Immunization and Dispensing Micronutrient Supplements

The study further assessed vaccination and dispensing micronutrient supplements to the community as one of services provided by CHWs at facility level. According to World Health Organization (2018), Immunization is the process whereby a person is made immune or resistant to an infectious disease, typically by the administration of a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease. The findings revealed that CHWs assist health care workers in provision of vaccine to pregnant women which include provision of iron folic acid. Others are children aged 0 to 5 years and vaccination to none prioritized diseases like hydrocele and Usubi. More than 33% of the responses indicated that CHWs assist health care workers to provide vaccine to under five children through health facility or outreach programs as presented in Table 4.11.

Furthermore, Feikin *et al.*, (2016) described six vaccines provided to children namely; Bacille Calmette-Guérin (BCG), Diphtheria, Tetanus, and Pertussis (DTP), and Measles and Polio. These results imply that CHWs assist provision of health services at facility level in vaccination to under five years children more than other

groups because are the most groups which CHWs meet with them on service provision.

Table 4.11: Immunization and dispensing micronutrient supplements

Vaccination groups	Response	Percentage (%)
CHWs assist health care workers to provide vaccine to under five children	33	33.0
Total	**33**	**33.0**

Source; Research findings 2020

4.4.4 Contribution of CHWs on Community Health Improvement

In order to determine the contribution of CHWs‟ service provision on community health improvement multiple responses table were used to compute the results. The identified improved situation included reduced home deliveries, reduced waterborne diseases, reduced malnourished cases, reduced maternal deaths and reduced mortality deaths. The results revealed that 60 (27.0%) of the respondents responded that CHWs activities reduced number of HIV infection in the community, 47 (21.2%) of the respondents revealed that CHWs activities reduce Malnutrition cases, 33 (14.9%) responded that modern methods of contraceptive are followed, 24 (10.8%) responded that as reduced Malaria cases, home deliveries and reduced waterborne diseases had average responses of more than 46 each occupying more than 10.4% of the total responses while other reduced infant mortality and reduced maternal deaths had responses of 7 (3.2%) and 5 (2.3%) respectively as indicated in Table 4.12.

Furthermore, the contribution of CHWs service provision through monthly screening and referral has resulted to the reduced rate of stunting to under five children at

national level from34.4% in 2014 to 31.8% in 2018 (TNNS, 2018). This substantial decrease of stunting rate as part of malnutrition cases were seen also in Iringa Region where the rate has been decreased from 51.3% to 47.1%. Another contribution is on reduced home deliveries which include deliveries at traditional healers, on the way to health facility and at home. According to DHISII in Iringa Region in 2017 home deliveries were 1097 and in 2018were 1002. Also the same substantial decrease were seen at district level were in 2017 home deliveries were 235 while in 2018 were 217.

Table 4. 12: Contribution of CHWs' service provision on Community Health Improvement

Health Messages	Response	Percentage (%)
Reduced number of HIV infection in the community	60	27.0
Reduce Malnutrition cases	47	21.2
Modern methods of contraceptive are followed	33	14.9
Reduced Malaria cases	24	10.8
Reduced home deliveries	23	10.4
Reduced waterborne diseases	23	10.4
Reduce Infant Mortality	7	3.2
Reduced maternal deaths	5	2.3
Total	**222**	**100.0**

*Some of the respondents gave more multiple answer categories, number of cases will not necessarily add to 100 (data set was based on multiple responses)

Source; Research findings 2020

4.5 Attitudes of People on Community Health Workers on the Improvement of Primary Health Services

The study assessed attitudes of the people on CHWs" service provision which based three main aspects. These include attitude of people on linkages between CHWs and health facilities, Relationship between CHWs and patients and relationship between CHWs and the community. To obtain respondents" attitude on CHWs" services, five

likers scale with 1 = strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 =strongly agree were used. Respondents were asked to rate their responses to the statements about three aspects. In discussion the mean scores below 3 were judged as negative attitude and that of 3 were judged as neutral attitude. On the other hand, the mean scores of above 3 were judged as positive attitude. In addition, the study findings revealed that respondents" attitude are influenced by CHWs and their service provision due CHWs" ability in building relationship with the community at health facilities, patients and community.

4.5.1 Attitude of People on Linkages between CHWs and Health Facilities

The findings as presented in Table 4.13 found that more than a half (50%) of the respondents strongly agreed about all statements formulated on attitude of people on linkages between CHWs and health facilities. On the other hand an average of 31.75% respondents agreed with all formulated statements while very few below (18.5%) in total were neutral, disagreed and strong disagreed about almost all statements. In addition, Respondents admitted that CHWs helps people to access health facility services as agreed by 85 (85%) respondents, provide referrals agreed by 76 (76%), avoid long queues in accessing health services agreed by 82 (82%) and also CHWs supports health facility staff in carrying out some of their responsibilities agreed by 88 (88%). These findings indicate respondents agreed by almost all of the respondents by more than 80%.

Table 4. 13: Attitude of people on linkage between CHWs and health facilities

Community Health Workers and Health Facilities					
Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
CHWs help people to access facility	-	2(2%)	13(13%)	32(32%)	53(53%)
CHWs helps in provision of referrals	1(1%)	7(7%)	16(16%)	36(36%)	40(40%)
CHWs avoid long queue at health facility	-	1(1%)	17(17%)	32(32%)	50(50%)
CHWs support health facility staff	-	-	12(12%)	27(27%)	61(61%)

Source; Research findings 2020

The above different responses of respondents were summarized into mean score for each of the statement formulated and presented in Table 4.14. The average mean score for all statements were 4.3 which mean that they had positive attitudes towards o linkages of CHWs and health facilities. Different respondents‟ attitude among formulated statements were observed where CHWs support health staff at facility had highest mean score of 4.5, followed by two statements of CHWs help people to access health facilities and CHWs avoid long queue at health facility both had mean scores of 4.3 and the last one of CHWs helps in referral provision which had mean score of 4.1. These results may be contributed to the insufficient health care workers at facilities which require CHWs to take some responsibilities at the facility.

Table 4.14: Mean score of the respondents' attitude on linkage between CHWs and health facilities

Attitude Statement	Mean Score (=5)
CHWs helps people to access facility	4.3
CHWs helps in provision of referrals	4.3
CHWs Avoid long queue at heath facility	4.1
CHWs Support health facility staff	4.5
Average mean score	**4.3**

Source; Research findings 2020

The same findings are highly supported by Owek *et al.,* (2017) who argued that the community members appreciate the role of the CHWs in helping them avoid long queues for testing of malaria in health facilities. In addition the same authors further elaborated that CHWs test the people at home for malaria using rapid diagnostic test(RDTs) kits and if anyone in the community is positive, CHWs give them a referral note to go to the health facility. Also Herry *et al.,* (2013) argued that at health facility CHWs support health facility staff in carrying out selected PHC services which are treatment for other life-threatening conditions, minor illnesses, first aid for injuries, and provision of family planning (FP) services but under specific conditions like If coverage of key interventions is low, if currently available facility-based health care resources are limited, or if funds are not available for building, operating, and staffing new peripheral health facilities.

4.5.2 Attitude of People on Relationships between CHWs and Patients

The findings in table 4.15 revealed that an average of 60% of respondents strongly agree with the statements formulated about their attitudes on relationship between CHWs and patients. Also an average of 26% respondents agreed with all formulated statements while very few of them about 14% were neutral, disagree and strong disagreed. In addition more than 80% of the respondents agreed with all formulated attitude statements. Specifically, first statement which is CHWs are supportive and caring patients were most agreed by 92%, CHWs services are comprehensive and efficient to patients agreed by 88%, CHWs services are cultural centered and responsiveness to patients agreed by 85%, and lastly CHWs often conduct regular follow up to patients agreed by 81% of the respondents.

Table 4. 15: Attitude of respondents on the relationship between CHWs and patients

Community Health Workers and Patients					
Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
CHWs are supportive and caring patients	-	-	8(8%)	27(27%)	65(65%)
CHWs services are cultural centered and responsiveness to patients	-	1(1%)	14(14%)	28(28%)	57(57%)
CHWs services are comprehensive and efficient to patients	-	-	12(12%)	32(32%)	56(56%)
CHWs often conduct regular follow ups to patients	1(1%)	3(3%)	15(15%)	17(17%)	64(64%)

Source; Research findings 2020

The above results were summarized and presented in Table 4.16 below using mean score for each of the statement. The average mean score for all the statements was 4.5 which imply that respondents had positive attitude towards relationship between CHWs and patients. Furthermore, the first statement had highest mean score of 4.6 while the remaining three statements had mean score of 4.4. This is supported by Karmrul & Malin (2014) described cultural centered services are those which are sensitive to cultural differences and tailor their approaches to meet the specific needs of patients and their families. It is advised that health care providers and health organizations should provide services which take into considerations cultural differences of the community.

Table 4. 16: Respondents' attitude on the relationship between CHWs and patients

Attitude Statement	Mean Score (=5)
CHWs are Supportive and caring to patients	4.6
CHWs services are Cultural centered and responsiveness to patients	4.4
CHWs" services are Comprehensive and efficient to patients	4.4
CHWs often conduct Regular follow ups to patients	4.4
Average mean score	**4.5**

Source; Research findings 2020

4.5.3 Attitude of Respondents On Relationship Between CHWs and Community

The results from the findings as presented in Table 4.17 revealed that an average of 56.2%of respondents strongly agrees with the statements formulated about their attitude son relationship between CHWs and community. Also an average of 23% of the respondents agreed in all of the statements on this category while very few of them were under neutral, agree and disagree in the same statements.

Table 4. 17: Attitude of people on relationship between CHWs and community

Community Health Workers and Community					
Statement	**Strongly disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly agree**
Awareness of people on CHWs is high	-	1(1%)	25(25%)	19(19%)	55(55%)
Willingness of people in CHWs counseling groups is high	-	-	26(26%)	30(30%)	44(44%)
Participation of people in CHWs counseling groups is high	1(1%)	4(4%)	24(24%)	20(20%)	51(51%)
CHWs facilitate behavior change and lifestyle	-	-	19(19%)	19(19%)	62(62%)
CHWs provide services close to community	-	-	4(4%)	27(27%)	69(69%)

Source; Research findings 2020

This also were summarized in mean score for all statements and presented in Table 4.18.The average mean score for all the statements was 4.4 which imply that

respondents had positive attitudes on the relationship between CHWs and the community. In addition the last statement CHWs provide Services close to community had highest mean score of 4.7 followed by CHWs Facilitate behavior change and lifestyle had a mean score of 4.4, Awareness of people on CHWs is high had a mean score of 4.3, Willingness of people during CHWs‟ home visits is high and Participation of people in CHWs‟ counseling groups is high each had a mean score of 4.2.The positive attitude by the respondents may be contributed to the fact that CHWs are part of the community and they live within the community so they have high frequency of meeting with the community members. Furthermore, peoples‟ positive perception in willingness and participation to CHWs‟ services provision by the CHWs through home visits, group counseling and clinics contribute to the reduction of neonatal mortality deaths. This statement as appeared in the study area is supported by Gogia and Sachdev (2010) who conducted study titled “Home visits by CHWs to prevent neonatal deaths in developing countries”. The results of their study shows that home visits for neonatal care by community health workers, contributes to the reduced neonatal mortality in resource limited settings with poorly accessible health-facility-based care when conducted along with community mobilization activities.

Table 4. 18: Respondents attitude on relationship between CHWs and community

Attitude Statement	Mean Score (=5)
Awareness of people on CHWs is high	4.3
Willingness of people during CHWs‟ home visits is high	4.2
Participation of people in CHWs‟ counseling groups is high	4.2
CHWs Facilitate behavior change and lifestyle	4.4
CHWs provide Services close to community	4.7
Average mean score	**4.4**

Source; Research findings 2020

4.6 Challenges Associated With the Implementation of CHWs Activities on the Improvement of Primary Health Services

The findings as presented in Table 4.19 indicate there are number of challenges to CHWs on implementing their activities. The challenges determined and discussed are insufficient CHWs‟ knowledge, insufficient refresher orientation, little community support, lack of transport, lack of financial incentives and community participation uneconomic activities.

4.6.1 CHWs Knowledge on Primary Health Services

The study findings revealed that CHWs‟ knowledge of primary health services had 10 (100.0%) responses from all the responses as presented in Table 4.19. These results mean that majority of respondents agreed that CHWs‟ knowledge on primary health services is not a challenge to their services provision. Also, the results imply that majority of community in the study area are served with CHWs who are knowledgeable on primary health services. This is in consistent with the baseline survey conducted by Mwangole (2015) in his baseline survey on situation and context of CHWs in Iringa and Njombe who found that78.3% attended primary education and very few attended more than that. In addition, the survey revealed that apart from basic schools CHWs also are given orientation on basic primary health services to enable them to carry their responsibilities.

The results of findings in the study area differs with those of Renan *et al.,* (2014) and Huang *et al*., (2018) who pointed out lack of basic primary health and specific training skills as among of challenges to CHWs in provision of primary health

services to the community. These differences between these studies are due to existence or nonexistence of programs in two areas where the studies took place. In Mazombe division where this study took place there are number of programs that deployed CHWs to implement activities at ground level where before given responsibilities CHWs are prior given training on specific area within the framework of primary health services.

4.6.2 CHWs Refresher Orientation

The study assessed refresher orientation as a challenge to CHWs services provision. The findings indicated that refresher orientation had all 10 (100.0%) responses as presented in Table 4.19.From these findings, it means that all respondents disagreed that CHWs lack of refresher orientation on primary health service is one of the challenge towards their service provision. Also, these results mean that majority of the community members are served by CHWs who are often given refresher training related to basic primary health services.

4.6.3 Community Support to CHWs

Community support to CHWs in provision of primary health services as presented in table 4.19 is one of the challenges assessed. The study findings revealed insufficient community support as challenge to CHWs services provision had 8 (80.0%) responses from the total responses. This can be witnessed from one of the key informants interviewed who is Village Executive Officer as quoted here;

> *CHWs are doing great efforts of improving the health of our children, they often visit or screen them on almost all months voluntarily, but we as community and* leaders *we don't support them much, sometimes mothers are required to provide to them Tsh 200 or 500during screening*

but not all mothers can provide that amount as some of them are reluctant and others they don't have such amount of money but whether mothers pay or don't pay CHWs will still screen our children…

This also was supported by the interview conducted to 14 key informants who included 2 village executive officers, 4 facility health care workers and 8 Community Health Workers. The results of the interview were not very far from the respondent's questionnaires where 10 (71.4%) key informants showed that the community does not support CHWs‟ activities but the support comes mainly from NGOs. Key informants indicated that community provides nonfinancial support to CHWs which is exclusion to village development works and paying them during specific tasks like under household's registration and occasionally data collection. One of the key informants was here below quoted;

…We are aware about challenges facing CHWs in provision of primary health services, but the village office don't have funds to full support CHWs, what we do is to mobilize the community *to support CHWs in whatever ways like currently CHWs are supported through contribution paid by mothers during clinic days and we provide some payments on specific tasks which are not often conducted but that is not so much sustainable…*

Little community support to CHWs in services provision may lead to CHWs poor performances. This argument is highly supported by Roberton (2015) who argued the same as he was assessing the reason for high or low performing status of the CHWs such that community support was one of the determinants for highest or lowest performance.

Furthermore, Brunie (2014a) on keeping community health workers in Uganda motivated: key challenges, facilitators, and preferred program had almost the same

findings with the one presented in this study where he found that CHWs are supported by the community members but on none financially support. Additionally, his study found that most of CHWs (89.2%) had received some recognition or support from their community in the past year as main examples were being called "doctor" (73.5%),being consulted for advice on a range of health issues (70.5%), time to address family planning at community meetings (48.4%), gifts/food/labor support (35.8%), and being thanked publicly (33.7%).From these results findings, nearly half of the community members support CHWs on primary health services provision in multiple ways but in non-financial support. This means that 50% of the people in the study area are provided with primary health services from CHWs‟ that they are supporting them. However it is argued that in order for the community to support CHWs, village leaders had to play a great role in mobilizing for this support from the community.

4.6.4 Transport Facilities to CHWs in Study Area

The study assessed further information about lack of transport to CHWs as challenge for CHWs‟ service provision. The findings revealed that most of the CHWs in the study area have a means of transport 8 (80.0%) of the respondent, while only 2 (20.0%) of respondent revealed that they don't have a means of transportation as presented in Table 4.19. From the results it showed that majority CHWs do have means of transport in providing services to the community.

Also the results from in depth interview with key informants showed the same findings where almost 90% of the people interviewed pointed out most of the CHWs

they have bicycles as a means of transport to assist them on their daily activities in the study area. The study went further in searching out how CHWs manages to provide services to community without definitive means of transport. The results from the same key informants that CHWs usually walks from one house to another for provision of primary health services. This can be witnessed from one of the key informants interviewed who is CHW as quoted here;

> *…We don't have any means of transport which enable us to provide services to community, for home visits we often walk from one house to another, the nearest household is found* below *5km while some households live more than 10km from the center where I live, all households need my service so I have to reach them all…*

These findings are highly concurred by the study conducted by Brunie *et al.,* 2014whereby in their article study titled "keeping community health workers in Uganda motivated: key challenges, facilitators, and preferred program inputs in Uganda" argued that CHWs help to promote healthy behavior, but keeping them motivated in terms of transport is often a challenge. The results of their study found that the most common challenges were means of transport of which 74.4% of CHWs reported facing difficulties in reaching clients as well as 60.1% for not refunded as transport cost for supervisory meetings. These results from the findings mean that all community members in the study area are served by the CHWs who do not have definitive means of transport. Some of CHWs in the study area provide services through walking from house to house in order to make sure they reach all the clients. Also majority of CHWs walks 0 to 5km to more than 10km to serve the nearest households and most farthest households respectively, time spent also is a challenge whereby with these distances majority of CHWs in the study area use most of the time to walk to reach these household for service provision.

4.6.5 Financial Incentives to CHWs

The study assessed financial incentives as a challenge to CHWs‟ services provision. The study findings indicated that the challenge had more than 8 (80.0%) responses which disagreed that lack of incentives is one of the challenges on CHWs‟ service provisions presented in Table 4.19.The same results were seen in depth interview with key informants of whom more than95% indicated that lack of incentives to CHWs is not a challenge for CHWs to provide service to the community. Further the results from in depth interview indicated that CHWs are provided with financial incentives on monthly basis from NGOs. This can be witnessed from one of the key informants interviewed who is CHW as quoted here;

> *…In fact, the payments we are paid has not been enough, but it has not been a hindrance to us in fulfilling our daily responsibilities to the community, because I* personally *was motivated to do this work after seeing the difficult health care delivery system in our village…*

These results are contrarily different to those of Roberton (2015) who pointed out that lack of financial incentives is one of challenge to CHWs on their services provision to community thus contributing to poor CHWs‟ performances. These differences just like in existence of CHWs‟ basic knowledge are caused also by the existence or nonexistence of NGOs or programs in study area. In the area where there are NGOs implementing programs that will deploy CHWs have high chances of their CHWs being provided with incentive than those areas where there are no NGOs. In Mazombe division where the study took place there are number of NGOs implementing different programs that deploys CHWs, for this reason CHWs are provided with financial incentives through these programs despite the fact that the

incentives are not enough in comparison with CHWs tasks. This can be witnessed from one of the key informants interviewed who is CHW as quoted here;

> *…We work as volunteers accomplishing a lot of tasks, we are paid by NGOs the incentive of 60,000 Tsh per* quarter*, meaning that we are paid20,000 Tsh per month, if compared with the activities that we doing surely the amount is not enough at all…*

Also, financial incentives improve individual's performance as it was quoted from Khaled (2018) who argued that financial incentives are those meeting individual financial needs and motivate him to produce and develop his performance, where their aim is to increase efficiency and improve performance. Additionally, the more CHWs are being financially assisted the more they perform or retained. Singh D et *al.,* (2015)argued that In worldwide CHW programs have taken a variety of approaches to payment, volunteers in wealthier countries generally are highly paid or have other incomes, such as pensions, spousal income or part-time employment, and find it meaningful way to occupy their time or make a contribution to society unlike in poor or middle countries where there is low remuneration or not at all, for this case it is difficult to retain them. These findings from the study area mean that all CHWs are being supported with financial incentives to carry their tasks of serving the community. Also, the big part of the financial support come from NGOs while very little amount witnessed to come from village offices. Additionally, majority of community members in the study area get services from CHWs who are often financially supported.

4.6.6 Community Participation on Economic Activities

Study findings as presented in Table 4.19 revealed that majority of respondents 78 (78.0%) depends on farming as economic activity, followed by retail business 16

(16.0%), and employed 6 (6.0%).The study further assessed if people participating on these activities affects CHWs service provision. The results of findings revealed that more than three quarter concurred with this challenge while one quarter of them disagreed that community being too busy is a challenge to CHWs service provision. The study went further on analyzing the data of an in depth interview with key informants whereby majority of them pointed out the same results as above where by one of the participant were quoted;

> *…Economic activities are one of the challenge to CHWs' service provision particularly farming activities, it is difficult for CHWs to meet with community members during farming season, CHWs have to visit severalties in the same households in order to meet the, most of farms are located very far so people tend to shift from their homes to the farm areas where they live there almost a whole month.*

This study is in consistence with the study conducted by Baptistin R & Figueiro de(2014) who found that most families living in the rural areas work in agriculture and related activities which provides their sustenance, it is difficult to meet them even during harvesting times as family members including some women, are out working in the fields in the area. The results of the findings mean that majority of the community members in the study area engage on farming activities while others engage in other economic activities as a means of sustaining their lives. Also majority of community members benefiting with CHWs" activities are farmers cultivating small farms near their homes but having also large farms located in more than 10 kilometers away from their homes. During cultivation and harvesting season as presented it is difficult for CHWs to visit households to provide services as most of them are busy in farms. This needs CHWs to visit households several times in order provide services.

Table 4.19: Challenges CHWs on service provision

Challenge	Responses	Percentage (%)
CHWs knowledge on primary health services	10	100.0
Refresher orientation to CHWs	10	100.0
Community support to CHWs		
Lack of Community support	8	80.0
Good Community Support	2	20.0
Means of transport to CHWs		
Have means of Transport	8	80.00
Don't have means of Transport	2	20.0
CHWs financial incentives		
Lack of incentives does not affect CHWs service provision	8	80.0
Lack of incentives affects CHWs service provision	2	20.0
Community participation on economic activities		
Farming	78	78.0
Employed	6	6.0
Retail Business	16	16.0

Source; Research findings 2020

4.7 Chapter Summary

This Fourth chapter the results of the study were described and the analyses of the data were presented. The chapter starts with describing Respondents characteristics, followed by Household Characteristics, the chapter also focused on Performance of community health workers in providing health services, Attitudes of people on Community Health Workers on the improvement of Primary Health Services and lastly Challenges associated with the implementation of CHWs activities on the improvement of Primary Health Services.

CHAPTER FIVE

SUMMARY, CONCLUSIONS & RECOMMENDATIONS

5.1 Overview

This chapter presents the summary of the findings, conclusions and recommendations on contribution of CHWs on primary health services improvement in Kilolo District. Specifically the study examined the performance of community health workers in providing health service sat community level; assessed services provided by CHWs at health facility level and determined the attitude of men and women on CHWs‟ services provision in study area.

5.2 Summary of findings

5.2.1 Demographic Characteristics of Respondents

The study reached 100 respondents of which majority of them 61% were women, aged between 25 – 34 who were regarded as the most energetic and reproductive age group. Also in terms of education the study covered respondents who attended primary school education as group with highest number compared to informal, secondary and postsecondary education.

5.2.2 Services of CHWs at Community Level in the Study Area

The study showed CHWs performed number of activities regarding community health. Majority of community members knows CHWs and are aware of the services provided or activities of CHWs. Also it showed CHWs provide services or conduct their activities through various platforms which are village clinics, health facility,

village meetings and group counseling where the most place met by many respondents was village clinics.

The study also shows that CHWs performs multiple number activities that improve the health status of the community as well as primary health services in general. The activities include promotion of breastfeeding, provision of referrals, home visits, and promotion of family planning as well as provision of health messages. All these activities are done during home visits, village clinics, group counseling and village meetings. The study findings indicated that the efforts done by CHWs through following up these activities lead to the improvements of primary health services in the study area.

5.2.3 CHWs services at Health Facility Level

At health facility level, the study findings revealed that CHWs provide multiple services but promote services by supporting health care workers. All CHWs" health facility-based services aim on improving community health. The services include dissemination of health-related messages and Vaccination, dispensing micronutrient supplements and immediate care.

5.2.4 Attitude of people on CHWs

The study findings indicated that attitude and perception of people to CHWs are affected by three aspects which are linkages between CHWs and health facilities, relationship between CHWs and patients and relationship between CHWs and the community.

Further the study found that CHWs acts as a linkage between the community and health facility but as well as providing assistance at health facility under supervision of health care workers. Moreover, the study showed that majority of people react positive to the services provided by CHWs because the services are cultural centered and also CHWs usually makes regular follow ups to patients through home visits. Positive perception also can be witnessed in willingness of people to be visited by CHWs for provision of health messages, participation of people in counseling groups, in all these aspects it showed high responses which indicated that people's attitude to CHWs services are positive.

5.2.5 Challenges on CHWs in the Study Area

Existence of challenges to CHWs reduces their efforts of providing primary health services to the community. The study pointed out little support from the community is one of the challenges that reduce CHWs morale of serving their fellow community members. But also despite of lack of support in a very few occasions some of the community members criticizes CHWs activities as they feel are more educated or CHWs services are not comprehensive. However, in some cases it was reported that village leaders mobilize the community to support CHWs with non – financial assistance such as excluding them on village development works. Further the study pointed out financial incentives as another challenge; however, it is luck that CHWs in the study area are provided with financial incentives on monthly basis but the amount provided in relation to CHWs tasks is not equivalent despite the fact that CHWs are volunteers. Also, it was argued that in the area where CHWs are

supported with financial incentives and other assistance their performance differs from those with little or no motivation at all.

5.3 Conclusions

The following conclusions were made from the findings of this study:

i) Performance of community health workers in providing health services to the community through village clinics, village meetings, health facilities and group counseling, from the results findings was very good and very useful for community members; hence it helps to improve primary health services.

ii) Attitudes of people on Community Health Workers on the improvement of Primary Health Services; Majority of people in study area had positive attitude on CHWs services due to strong linkage between CHWs and facilities which enable the community to access health services, strong linkage between CHWs and patients as well as the relationship between CHWs and the community which facilitates participation to health-related matters. Also, Majority of people benefit from CHWs service provision at community level through education, home visits, health messages, family planning education and referrals in the study area.

iii) Challenges associated with the implementation of CHWs activities on the improvement of Primary Health Services. The challenges determined and discussed are insufficient CHWs knowledge, insufficient refresher orientation, little communitysupport, lack of transport, lack of financial incentives and community participation oneconomic activities. Due to the above challenges there is a need of establishing clear national guidelines and

regulations describing what training and certifications needed by CHWs who provide diagnosis and treatment should be improved time to time reflecting the changing nature of the environment and community needs.

Therefore, program implementers should consider providing types of remuneration, such as housing, transportation, and job opportunities, which can decrease the burden of volunteer work on families and reinforce altruism while being sustainable for sponsoring organizations or governments.

As these conclusions show, the consideration of multiple sources of moral, material, and monetary support can help programmers proactively tailor interventions to motivate CHWs and help ensure the sustainability of CHW programs.

5.4 Recommendations

This study has an implication on the Tanzania Health Policy which aims at improving the health status of all people wherever they are, in urban and rural areas, by reducing mobility and mortality and raising life expectancy. Therefore, In the light of the above conclusion, the following recommendations may be useful to rural community policy makers, development agencies for strengthening of CHWs services for improvement of primary health services in Kilolo district and the rest of the country;

5.4.1 National Level

At national level the following recommendations were made:

i) Developmental agencies and policy makers at national level are recommended to strongly recognize and support the operations of CHWs in rural settings. The support should be based on financial incentives, transport and provision of guidelines that will harmonize the operations of CHWs.

ii) Policy makers are highly recommended to advocate CHWs cadre in the national health guidelines, this is because despite of CHWs contributions on primary health improvement but very little has been documented in the amended Tanzania National Health Policy of 2017.

iii) Formalization of CHWs new cadre as suggested in National Health Strategic Plan (2015 – 2020) with clear plan for transitioning from existing CHWs to new cadre.

5.4.2 District Level

At district level the following recommendations were made:

i) District councils through health department to support CHWs in terms of financial incentives and transport by linking them with health facilities through planning and budgeting

ii) District authority to provide a clear guideline to the village authorities to support

iii) CHWs through village own sources, in this case the sustainability of interventions will be highly guaranteed.

5.4.3 Community Level

At community level the study recommends the following to be made:

i) Support CHWs through paying minimal contribution during monthly screening as well as non-financial support like giving them pieces of land for farming or helping them to cultivate, and excluding them on village development works is implemented in few villages.

ii) Plan properly timetable of meeting with CHWs at least once per month despite of participation on economic activities

5.5 Recommendations for Further Research

The findings presented in this study were based on a cross sectional case study: This study has assessed the contribution of CHWs on primary health services improvement in Kilolo District, Iringa Region. However, this study has not covered all the aspect of primary health services. CHWs alone are not enough to improve primary health services but it requires a number of actors in collaborative for comprehensive improvements in Tanzania. This is due to the fact that CHWs activities may differ due to geographical or nature of programs that they are implementing or the community that they are serving.

Three suggestions are therefore made concerning the specific areas that should be studied;

i) This study assessed the contribution of CHWs on primary health services improvement. Future studies can pose their attention on the facility health care workers to the improvement of primary health services since they are actors as well for primary health services.

ii) This study assessed the contribution of CHWs to the improvement of community health in rural areas. The study recommends the same to be done

but in urban areas to compare the results in urban and rural areas to validate implications in terms of geographical disparities

iii) The data collected for this study were collected in one district and one region but Tanzania has more than 100 district and 30 regions and it is important to know the applicability of the results to other regions and districts. So it is recommended future studies to collect the data in other regions and district to assess if the same findings can be found.

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APPENDICES

Appendix I: Questionnaire for Community Members about Contribution of Community Health Workers on Primary Health Services Improvement in Kilolo District

Introduction

I am student from The Open University of Tanzania pursuing Masters of Arts in Monitoring and Evaluation, now I am conducting a study on the contribution of Community Health Workers on primary health services improvement in Kilolo district. In order to conduct this study and select appropriate questions, I would like to listen to and learn from your experiences with this study.

SECTION ONE; BASIC PERSONAL INFORMATION		
SN	**QUESTIONS**	**ANSWERS**
1	Name (optional)	
2	Ward and Village	Ward………………………… Village……………………….
3	Age	1. Below 18 ( ) 2. 18 – 24 ( ) 3. 25 – 34 ( ) 4. 35 – 44 ( ) 5. 45 – 54 ( ) 6. 55 – 64 ( ) 7. 65 and above ( )
4	Sex	1. Male( ) 2. Female ( )
5	Education level	1. Primary level ( ) 2. Secondary level ( ) 3. Certificate level ( ) 4. Diploma level ( ) 5. Degree level ( ) 6. Others ………………………………
6	Marital status	1. Single ( ) 2. Never married ( ) 3. Married ( ) 4. Widowed ( ) 5. Separated ( ) 6. Divorced ( )
7	Number of household members	1. 0 – 2 ( ) 2. 3 – 4 ( )

		3. 4 – 7 ( ) 4. More than 7 ( )
8	Number of children	
9	What is the main source of income in your household	1. Farming ( ) 2. Employed( ) 3. Business ( )
SECTION TWO: PERFORMANCE OF COMMUNITY HEALTH WORKERS INPROVIDING HEALTH SERVICES **PART A: ACTIVITIES CONDUCTED BY COMMUNITY HEALTH WORKERS**		
1	Do you know Community Health Workers in your village?	1. Yes( ) 2. No ( )
2	If yes how many are there?	…………………..…….
3	If yes in 1 above, can you name them?	1. …………………………………… 2. …………………………………….
4	Where do you often meet with CHWs?	1. Clinic ( ) 2. Village gatherings ( ) 3. Health facility ( ) 4. Counseling groups ( ) 5. Others ………………………….
5	How often do you meet with CHWs?	1. Daily ( ) 2. Weekly ( ) 3. Monthly ( ) 4. Quarterly ( )
6	When was the last time to meet with CHWs?	1. Yesterday ( ) 2. Last week ( ) 3. Last month ( ) 4. Last 3months( )
7	Which services did you get from CHWs when you last time met him/her? (Name them)	1. ……………………………. 2. …………………………………… 3. …………………………………….
8	Do you know about primary health Services?	1. Yes () 2. No( )
9	Who informed you about these services?	1. CHWs 2. Professional doctor 3. Neighbor 4. Friend 5. Other …………………
10	If yes in 8 above can you name them?	1. ……………………………………… 2. ……………………………………

		…. 3. …………………………………….
11	Who provides these services?	1. CHWs ( ) 2. Professional doctor( ) 3. Other specify …………………….
12	What are the activities of CHWs on primary health services? (Tick which apply to you)	1. Home visits (2. Provision of health messages (3. Promotion of breastfeeding ( ) 4. Promotion of family planning ( ) 5. Provision of health referrals (
13	How many home visits does CHWs conducted to you in last three months?	1. One ( ) 2. Two ( ) 3. More than three ( ) 4. None ( )
14	What does CHWs informed you about family planning?	
15	What does CHWs informed you about breastfeeding?	
16	Does CHWs provide health referrals?	1. Yes( ) 2. No ( )
17	If yes in 16 above, which type of health referrals are provided by CHWs?	1. SAM/MAM cases referrals( ) 2. Pregnancies related referrals( ) 3. Sick for adult and children referrals ( ) Others…………………………… ( )
18	Where are those referrals linked to?	1. Dispensary ( ) 2. Health center( )
		3. District hospital( ) 4. Regional hospital () 5. Referral hospital( )
19	What are your comments on Activities conducted by CHWs?	
PART B: SERVICES PROVIDED BY CHWs AT HEALTH FACILITY LEVEL		
1	Do CHWs provide services at health	1. Yes ( )

	facility level?	2. No ( )
2	When was the last time to meet CHWs at health facility?	1. Lastweek( ) 2. Lastmonth( ) 3. Last threemonths( )
3	What are the services provided by CHWs at health facility level?(Tick all that apply)	1. Health messages dissemination ( ) about monitoring and deliveries(2. Postnatal care ( ) 3. Vaccination and nutrition supplements( ) 4. Immediate care to newborn ( )
4	What are the health messages that are mostly provided to you by CHWs at health facility? (mentioned all that you know)	1. …………………………….. 2. …………………………….. 3. …………..………………… 4. ……………..………………
5	What are the roles of CHWs in labour monitoring and deliveries?	
6	In which group does CHWs provide vaccination and nutrition Supplements?	1. Pregnant women ( ) 2. Under five years children ( ) 3. None prioritized diseases( )
7	What are the roles of CHWs in Provision of post-natal services?	
8	What are the roles of CHWs in Provisioning of immediate care to new born?	
9	What do you comment about CHWs Services at health facility level?	
PART C: CONTRIBUTION OF CHW's SERICES ON COMMUNITY HEALTH IMPROVEMENT		
1	Does CHWs‟ service provision Contribute to the Community health improvement?	1. Yes () 2. No ()
2	Which condition has improved as results of CHWs‟ services provision (mention all that you know)	
3	What are your comments on Community health improvement?	

SECTION THREE: ATTITUDES OF PEOPLE ON COMMUNITY HEALTH WORKERS

Please show level of agreement and disagreement on the below statement by circling your best answer

(1= strongly disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly agree)

A	**PART A:Community Health Workers and Health Facilities**					
1	CHWs helps people to access facility	1	2	3	4	5
2	CHWs helps in provision of referrals	1	2	3	4	5
3	CHWs Avoid long queue at heath Facility	1	2	3	4	5
4	CHWs Support health facility staff	1	2	3	4	5
B	**PART B: Community Health Workers and Patients**					
1	CHWs are Supportive and caring to patients	1	2	3	4	5
2	CHWs services are Cultural centered and responsiveness to patients	1	2	3	4	5
3	CHWs‟ services are Comprehensive and efficient to patients	1	2	3	4	5
4	CHWs often conduct Regular follow ups to patients	1	2	3	4	5
C	**PART C: Community Health Workers and Community**					
1	Awareness of people on CHWs is high	1	2	3	4	5
2	Willingness of people during CHWs‟ home visits is high	1	2	3	4	5
3	Participation of people in CHWs‟counseling groups is high	1	2	3	4	5
4	CHWs Facilitate behavior change and Lifestyle	1	2	3	4	5
5	CHWs provide Services close to Community	1	2	3	4	5

SECTION FOUR: CHALLENGES ON CHWs' ACTIVITIES		
1	Do you know health system provisioning in Tanzania?	1. Yes( ) 2. No( )
2	If yes in above can you state it?	
3	Does the health system in Tanzania supports CHWs in carrying out his or her activities	1. Yes( ) 2. No ( )
4	In which categories is the system supports CHWs in carrying his or her activities?	1. Transport( ) 2. Incentives( ) 3. In kind support( ) 4. Other support……………
5	Where does the support come from?	1. Village authority( ) 2. District council( ) 3. NGOs( ) 4. Private companies ( ) 5. Individuals/community ( )

		6. Others……………………
6	Is the support from the above enough for CHWs to carry his or her activities?	1. Enough ( ) 2. Partially ( ) 3. Not enough a tall( )
7	What is the frequency for this support?	1. Monthly ( ) 2. Quarterly ( ) 3. Bi –annual ( ) 4. Annually ( )
8	Which type of support do you got from the community?	1. Transport( ) 2. Incentives( ) 3. In kind support ( ) 4. Other support………………
9	Do the community members criticize the service provided by CHWs?	1. Yes( ) 2. No ( )
10	If yes, why do you think they criticize?	1………………………………… 2………………………………… 3………………………………… 4…………………………………
11	Does CHWs have a means of transport for them to carry their activities?	1. Yes ( ) 2. No ( )
12	If yes, which type of means transport?	1. Bicycles ( ) 2. Private car ( ) 3. Public transport ( ) 4. Others …………………
13	If no, how do they manage to provide services?	1. Walking house to house (2. Phone conversation ( ) 3. Group counseling( ) 4. Referrals( ) 5. Others ……………………..
14	If by walking how many average kilometers can you walk to serve the farthest household?	1. 0 to 5 KM () 2. 5 to 10 KM () 3. 10 to 15KM ( ) 4. 15 to 20 ( ) 5. 20 + ( )
15	How much time spent to serve the farthest household?	1. 30 to 60 minutes () 2. 1 to 1.30 hours () 3. 1.30 to 2 hours () 4. 2 hours and above ( )
16	Do you get financial incentives support?	1. Yes ( ) 2. No ( )
17	If yes how much do you get?	1. 5,000 to15,000 TSH ( ) 2. 15,000 to 25,000 TSH 3. 25,000 to 35,000 TSH( ) 4. 35,000 to 45,000 TSH 5. 45,000 and above ( )

18	What is the frequency for getting this financial incentive?	1. Monthly() 2. Quarterly( ) 3. Bi –annual ( ) 4. Annually ( )
19	If no what is your comments?	
20	What are the economic activities conducted in this village by the most of the community members?	1. Farming ( ) 2. Livestock keeping ( ) 3. Retail business ( ) 4. Fishing ( ) 5. Mining ( ) 6. Others …………………………
21.	Do these activities affect CHWs" service provision?	1. Yes 2. No
22		1. Farming ( ) 2. Livestock keeping ( ) 3. Retail business ( ) 4. Fishing ( ) 5. Mining ( ) 6. Others ……………………….
23	Do CHWs have enough knowledge on provision of these services?	1. Yes ( ) 2. No( )
24	If yes, when did you get this knowledge?	1. Last year( ) 2. Last 5years( ) 3. Last than 10 years ago ( )
25	If no what are your comments?	
26	Where did you get this knowledge?	1. Private companies ( ) 2. NGO ( ) 3. From the government( )
27	Do CHWs get refresher orientation to provide primary health services?	1. Yes ( ) 2. No( )
28	How often do CHWs get refresher orientation to provide services?	1. Annually 2. After every 2years 3. After every 3 years and above
29	When were the last time CHWs oriented	1. Last year 2. After every 2years 3. Last 3 years ago
30	Please what do you recommend that can be done to improve Community Health Services at this areas	1. ………………………… 2. ………………………… 3. …………………………

Appendix II: Questionnaire for Health Care Providers in Health Facilities at Kilolo District

I am student from The Open University of Tanzania pursuing Masters of Arts in Monitoring and Evaluation, now I am conducting a study on the contribution of Community Health Workers on primary health services improvement in Kilolo district. In order to conduct this study and select appropriate questions, I would like to listen to and learn from your experiences with this study.

Name of the Health Facility	
Name of respondent (optional)	
Gender	Male [ ] Female [ ]
Title of respondent/occupation	
Age	
District Name	
Marital status	Marriage [ ] Single [ ] Divorced [ ] Widow [ ]
Educational level [tick appropriate]	Secondary education (form four) [ ] Secondary education (form six) [ ] Certificate [ ] Diploma [ ] Degree [ ] Medical Doctor(MD)[ ] Masters [ ] Others (specify)...............................

1. Does this Health facility work together with CHWs? Yes[ ] No [ ]
2. What type(s) of services are provided by CHWs? **(CHECK ALL THAT APPLY)**

Facility-based services: Information or services provided at a health facility setting (either static or mobile). It includes any level of provider.

Community-based services: Information or services provided at a particular place in the community, including outreach clinic services. It includes any level of provider or community health workers

Home-based services: Information or services provided at the household level. It includes any level of provider or traditional birth attendant (TBA).

Facility-based [ ]

Community-based [ ] Home-based [ ]

Other, please specify: [ ]……………………

3. How do you evaluate/ comment on the performance of Community health worker in delivering their services?

....
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………
……………………………………………………………………………………………

4. Where is CHWs services provided? (**CHECK ALL THAT APPLY**) [ ] Health center/hospital

[ ] Community health clinic [ ] Home

[ ] Other (SPECIFYHERE)……………………………

Appendix III: Qualitative Interview with Community Health Workers in Kilolo

District Location of Household Where CHW Lives

Region	
District	
Village	
Ward	
Neighborhood	
Nearest Health Facility	
Area covered by CHW (km or Households no.)	

DEMOGRAPHIC INFORMATION

Name: ……………………………………..

Age [ ]
Marital status ………………………….
Gender[ ] Male [ ]Female
The highest level of education……………………………

CHW'S CAREER

1. What year did you start your career as a CHW? [ ]

2. How where you selected? *(Probe: recruited, appointed, other)*

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

3. As a CHW, can you mention your roles to the community?

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

4. What motivates you to be a CHW?

(Probe: community situation, money, accountability, being philanthropic)

…………………………………………………………………………………………
…………………………………………………………………………………………

…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

5. Have you ever been trained on how to provide health care to the patients?

[ ]Yes [ ]No

If YES. Which organization provided this training? (Mention)………………….
How long was the training (days) and what year did it take place?

Appendix IV: Interview Guide Questions to be used for the Key Informants

1. How does CHWs activities contribute to primary health services improvement in your area?
2. How the government does support CHWs‟ activities in your area?
3. How the government policy does say about primary health services and CHWs activities in general in your area?
4. What are the bylaws regarding CHWs‟ activities in your area?
5. What are the challenges of CHWs activities in your area?
6. What are the strategies set for overcoming CHWs‟ challenges in service provision in your area?

Appendix V: Ethical Consideration

THE OPEN UNIVERSITY OF TANZANIA

DIRECTORATE OF POSTGRADUATE STUDIES

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Our Ref: PG201800489

12th August 2020

District Executive Director (DED),
Kilolo District Council,
P.O. Box 2324,
IRINGA.

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007.In line with the Charter, the Open University of Tanzania mission is to generate and apply knowledge through research.

To facilitate and to simplify research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to both its staff and students who are doing research in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr. MINJA, Benedict Jackson Reg No: PG201800489** pursuing **Master of Arts in Monitoring and Evaluation (MAME).**We here by grant this clearance to conduct a research titled **"Contribution of Community Health Workers on Improvement of Primary Health Services in Kilolo".** He will collect his data at your area from 13th August 2020 to 30th September 2020.

In case you need any further information, kindly do not hesitate to contact the Deputy Vice Chancellor (Academic) of the Open University of Tanzania, P.O.Box 23409, Dar es Salaam.Tel: 022-2-2668820.We lastly thank you in advance for your assumed cooperation and facilitation of this research academic activity.

Yours Sincerely,

Prof.Hossea Rwegoshora
For:VICE CHANCELLOR
THE OPEN UNIVERSITY OF TANZANIA

KILOLO DISTRICT COUNCIL

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Tanzania

Ref. No. KDC/S.20/4 VOLL.V/129

28th August, 2020

The Head of Department,
The Open University of Tanzania,
P.O.BOX 23409,
DAR ES SALAAM

RE: A LETTER OF INTRODUCTION TO MR. MINJA, BENEDICT JACKSON

Reference is made to the above subject.

We would like to inform you that the above mentioned are the bonafide student of The Open University of Tanzania, the District Executive Director allow him to conduct his research in our District.

The title of his research is ***"Contribution of Community Health Workers on Improvement of Primary Health Services in Kilolo"***

The period for which this permission has been granted start from 13rd August, 2020 to 30th September, 2020.

Irene Fisima
For District Executive Director
KILOLO

C.C

- Mr. Minja, Benedict Jackson

All correspondence should be addressed to the District Executive Director .