

PERCEPTION, PRACTICE AND RISK FACTORS FOR SELF-MEDICATION AMONG RESIDENTS OF KAKONKO DISTRICT COUNCIL

By

Marcelly S. Lusinge

**A Thesis Submitted to School of Public Administration and Management in
Partial Fulfillment of the Requirement for the Award of Master of Health System
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CERTIFICATION

The undersigned certify that the supervisor has read and hereby recommended for the acceptance by the Mzumbe University, a thesis titled, '*Perception, Practice and Risk Factors for Self- medication Among Residents of Kakonko District Council*' in partial fulfillment of Master of Health System Management of Mzumbe University.

Major supervisor

.....

.....

Internal Supervisor

...

Accepted for the board of the School of Public Administration and Management

.....

Dean, School of Public Administration and Management

DECLARATION

I Marcely S. Lusinge, declare that this thesis is my own original work and it has not been submitted and will not be presented to any other institution/university for similar or any other academic/professional award.

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DEDICATION

This Thesis is dedicated to my beloved parents, my mother **Caritas J. Munyogwa**, wife **Happy Richard** and my son **Kendrick**. I appreciate their concern about me, their encouragement and sacrifices, **May Almighty God bless them**

LIST OF ABBREVIATIONS

ADDO	-	Accredited Drug Dispensing Outlet
ALU	-	Artemether/ Lumefantrine
CCHP	-	Comprehensive Council Health Plan
IPF	-	International Pharmaceutical Federation
MSH	-	Management Science for Health
NMCP	-	National Malaria Control Program
OTC	-	Over the Counter
Rx	-	Prescription medicines
STIs	-	Sexual Transmitted Infections
TCDC	-	Tanzania Communication and Development Center
TFDA	-	Tanzania Food and Medicines Authority
WHO	-	World Health Organization
WMA	-	World Medical Association
WSMI	-	World Self – Medication Industry

ABSTRACT

This study was about perception, practice and risk factors for self-medication. Specific objectives of this study were; to determine the perception of Kakonko District residents towards self- medication, to identify risk factors that influence them to practice self-medication, to identify medicines which are commonly used for self- medication as well as to determine sources of medicines information among those who self- medicate.

This study was carried out at Kakonko District council in which 6 wards were randomly selected from the available 11 wards in which in each ward 2 villages were selected. The study area was chosen due to limited health care and increased population as a result of influx of Burundian refugee which jeopardize health services delivery. This study covered 90 respondents with different backgrounds and experiences. Information from respondents were collected through questionnaires and interviews.

Results show that out of 90 respondents, only 28% were aware of the concept of self-medication while 88% of all respondents practiced self-medication. Risk factors for self-medication mentioned were as; lack of basic education 64%, dishonorable behaviors of service providers 30%, limited health services 71%, low income 51%, long waiting hours at the facility 61%, knowledge of local medicines 33%, past experience 44% and lastly fear to seek medical care was mentioned by 14% of all respondents. On the other hand, common medicines used were found to be; 14 (25%) respondents said that they usually use ALU for self-medication, 13 (23%) respondents paracetamol, metakelfin was used by 10 (17%), local medicines by 6 (11%) respondents, ciprofloxacin by 3 (5%) respondents, amoxicillin by 7 (12%) while fragyl used by 4 (7%) respondents. Source of medicines information mentioned are individual themselves, friends, family members, parents and other relatives. Given the extent of the study findings, there is a need of concerted efforts to deliver basic factual information to the society on health and social-economic effects of self-medication.

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CHAPTER ONE

1.1 Background of the Problem

Self-medication is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms by individual himself or herself (WHO, 1998). Self-medication has also been defined by world self- medication industry (WSMI) as the treatment of common health problems with medicines mainly intended and labeled for use without medical supervision and approved as safe and effective for such use to the individual suffering from certain illness (WSMI, 2014). Thus, it implies obtaining and consuming one (or more) medicine(s) without the advice of a medical practitioner either for diagnosis of the disease, prescription or surveillance of treatment. In practice, it also includes use of the medication of family members, especially where the treatment of children or the elderly is involved as family members tend to decide the kind of medicines to be given to the children or elderly whom most of the time cannot make decisions concerning their health (Nichter, 1998).

Medicines for self-medication are usually called ‘non- prescription’ or ‘over the counter’ (OTC) and are available without a medical practitioner’s prescription through pharmacies, shops and other medicine dispensing outlets. In some countries OTC, products are also available in supermarkets and other drug dispensing outlets. In this study, medicines include modern medicines (industrial made medicines which are usually found in modern health facilities) as well as herbal and traditional medicines (locally made medicines). Self-medication is one among many elements of self-care and it is a global phenomenon and potential contributor to human pathogen resistance to antibiotics and other medicines such as ant malarial and the like which have negative impacts on human being welfare (Darshana, 2013).

Self- medication is classified into two main parts, namely; responsible as well as non- responsible self- medication. Responsible self-medication means using approved and available medicines in a safe and effective way as directed though

without prescription of a medical practitioner. The types of medicines used are indicated for a self-recognizable condition following preliminary medical diagnosis (physical diagnosis or through laboratory examination), which means that users have prior knowledge of the dose, time, and side effect(s) of the overdose of the medicine they are using to cure their ailments (Kalaiselvi, 2014).

Responsible self-medication is mainly possible and practiced in the developed nations because of the high quality of education which enable people to have enough knowledge of medicines they are consuming, access to health information as a result of high technology specifically communication technology such as internet, safety and quality health care, including government policies on health attached with the health-seeking behavior of the majority population (Talevi, 2010).

Non-responsible self-medication is the use of medicines in the treatment of self-diagnosed illness or symptoms of diseases without supervision or prescription by a medical practitioner (Ruiz, 2010). It is characterized by improper use of medicines which can either be modern medicines or traditional medicines for the management of illness many of which have resulted into intoxication which in turn results to death or disability to the individual consuming them (Trauthman, 2010).

The transfer of prescription (“Rx”) medicines to non- prescription medicines or OTC status is known as the “Rx-to-OTC switch”. Many new medicines are first introduced as prescription medicines at the time they enter in to the market following their discovery. After an ample time has passed on the use of the medicines by many patients and large-scale experience and scientific information has been gathered for appropriate conditions such as how such medicines are used by majority population as well as its side effects to the users, a manufacturer may decide on submitting an application to the appropriate authority for the medicines to be given OTC status (WSMI, 2014).

In Tanzania self-medication has been widely practiced as a result of high incidences of malaria, which have contributed to self-medication with anti-malarial medicines. In recent years, there has been an achievement in malaria control, which has resulted to decreased malaria transmission, morbidity and mortality among Tanzanian population (Mayumana, 2012). However, there are risks associated with self-medication which include lack of clinical evaluation of the condition by a health care provider which could result in misdiagnosis and incorrect choice of medicines, delays in seeking proper treatments, use of excessive medicines or lower dosage and prolonged duration of use of medicines (Hughes, 2001).

Other potential risks include the development of adverse drug reactions to the user, dangerous drug interactions when more than one medicine is administered by the patient, masking of a severe disease which can make it to become chronic disease as well as the risk of developing resistant pathogens which bring suffering to the individual concerned. The current problem of antimicrobial resistance and the development of parasite resistance to anti-malarial medicines and other disease's medicines that has been reported in several countries are likely to be associated with the irrational use of antibiotics and anti-malarial medicines among those who practice self-medication (Kotwani, 2012).

In Tanzania, regulation of medicines is carried out by Tanzania Food and Medicines Authority enacted by the Parliament of the United Republic of Tanzania. An Act that guides the regulation of medicines, food and medicines provides for the efficient and comprehensive regulation and control of food, medicines, medical devices, cosmetics, herbal medicines and poisons and to repeal the Food (Control of Quality) Act of 1978, the Pharmaceuticals and Poisons Act of 1978 and to provide for related matters. The authority is responsible to oversee the quality of medicines imported from abroad or locally made as well as to make follow up on distribution of such medicines to the population (TFDA Act, 2003).

Different initiatives have been taken by the government of Tanzania to address the problem of self- medication to the population. The National Health Policy of 2013 and The National Guideline for Diagnosis and Treatment of Malaria of 2006 were established to regulate self- medication in Tanzania. These authorities have been entrusted to promote rational use of medicines, medical devices and herbal drugs. They have been established to ensure that no prescription drug can be supplied or dispensed without the supervision of a pharmacist or qualified medical personnel (NMCP, 2006).

Recently, the government of Tanzania in collaboration with other health stakeholders including non- government organization, private sector and faith based organizations has launched a media campaign known as '*Sio Kila Homa Ni Malaria*' ("Not Every Fever Is Malaria") initiative aiming to promote proper testing and treatment for malaria and other illnesses, and to reduce self- medication that could lead to the development of ant malarial and other drugs resistance in Tanzania. This work is to improve the acceptability among patients by not being prescribed an ant- malarial when the test for malaria is negative. This is an important part of controlling the irrational use of ant- malarial as well as controlling self- medication practices among the population (TCDC, 2015). However, the program has focused much on improper use of ant- malaria ignoring other kind of medicines such as antibiotics and traditional medicines which also when used irrationally, may bring harm to the individual consuming (using) them, thus they also need to be addressed so as to reduce this problem.

1.2 Statement of the Problem

Self-medication is becoming progressively more important constituent of health care in both developing and developed countries. Unlike other parts of self- care, it involves the use of medicines which have the ability to do good as well as cause mischief to the individual who practice them (Gwyther, 2001).

Many people especially in developing countries, most times underestimate conditions such as headache, fever, cough, throat infection, common cold and stomach ache. Some do perceive some conditions to be too simple to necessitate medical consultation with appropriate medical practitioner for proper medical treatment something which influence them to treat themselves (Awosusi, 2015).

In Tanzania, small drug shops known as Accredited Drug Dispensing Outlet (ADDO) shops are common sources of medicines especially in rural and remote areas (Goodman, 2007). The program was issued by World Health Organization (WHO) in 2001 so as to ensure accessibility and availability of common medicines (OTC) to the rural and remote areas (WHO, 2001). Availability of medicines in markets and poor drug regulatory practices and control such as failure of regulatory authorities to implement sanctions, successful concealment of regulatory violations, and the improper permission of local regulatory staff contribute to self-medication. Also poor prescribing in health facilities, poor dispensing at ADDOs and inappropriate patient demand continue to contribute to inappropriate medicines use by majority population (MSH- journal, 2008).

Self-medication is very common among individuals in the country and at Kakonko District Council is not an exceptional place. As a result of limited health services across the country many people find themselves using self- medication to cure their ailments. Despite the growing research interest on the topic, not much is known by people especially those living in rural and remote areas about its major determinants, practices and risk factors that influence them to practice self- medication. Hence, this study focused on discovering their perception, practice and risk factors for self-medication among people living in this particular area.

1.3 Research Objectives

1.3.1 General Objective

The general objective of this study was to determine the perception, practice and risk factors for self- medication among Kakonko District residents.

1.3.2 Specific Objectives

- i. To determine the perception of Kakonko District residents towards self-medication.
- ii. To Identify risk factors that influence Kakonko District residents to practice self-medication
- iii. To discover medicines which are commonly used by Kakonko District residents to practice self- medication.
- iv. To pinpoint source of medicines information for those who self-medicate.

1.4 Research Questions

1.4.1 General Research Question

The general research question of this study was, what is the perception, practice and risk factors for self- medication among Kakonko District residents?

1.4.2 Specific Research Question

- i. What is the perception of Kakonko District residents towards self-medication?
- ii. What are the risk factors that influence Kakonko District residents to practice self- medication?
- iii. What medicines are commonly used for self- medication by Kakonko District residents?
- iv. What is the source of medicines information for those who practice self-medication?

1.5 Scope of the Study

The issue of self- medication is a growing problem across the country. For the purposes of this study, the scope covered Kakonko District Council because of its limited health services and increased population as a result of the influx of Burundian refugees in the district who have been settled at Mtendeli refugee camp thus making health services more limited than it has been before. The District has only 27% of the required health facilities thus majority of residents depend on small private

pharmacies to purchase medicines to cure their ailment most of the time when they get sick (www.kakonkodc.go.tz).

1.6 Significance of the Study

- This study will help rural residents and other stakeholders to be aware of self-medication and its impacts to their health. This will help them to take precautionary measures before they decide to self-medicate.
- It will help policy makers to establish or strengthen the available rules and regulations that govern self-medication. This will enable proper regulation and distribution of OTC through various drug outlets hence control of irrational use of medicines especially prescribed medicines.
- It will help rural residents to become aware of the possible risks associated with self-medication. This will enable them to consider following proper channels for treatment instead of practicing self-medication when they become sick
- Moreover, the study will be useful to the researcher as it is partial fulfillment of the requirement of Master of Health System Management of Mzumbe University.

1.7 Organization of the Thesis

Chapter one comprises of six parts, it starts with background information of the study followed by statement of the problem, objective of the study, significance of the study, scope of the study, organization of the thesis and limitations and delimitations.

Second chapter is literature review, it chronologically entails theoretical review of the study which includes; meaning and concepts of the study, perception of self-medication, practice of self-medication, risk factors for self-medication, sources of medicine information, importance of self-medication, history of self-medication, studies on self-medication, conceptual framework and research model as well as variables and measurements.

Chapter three is methodology used in the study; it starts with research design, study area, study population, sample size and sampling technique. The chain followed by types of data, data collection techniques, data processing and analysis, ethical consideration and the last parts are validity and reliability of the study.

Chapter four is data analysis, presentation and discussion of findings whereby it started with the sample size and characteristics of respondents, findings and discussion on perception of respondents towards self- medication, practice of self- medication, risk factors for self- medication, common medicines for self- medication, sources of medicines information as well as side effects resulting from practicing self- medication.

Chapter five is concerned with summary, conclusion and recommendation of the findings, it start with provision of education on the importance of professional consultation by medical practitioners, implementation of policies on advertisement and selling of medicines, formulation of strategies that prevent supply of medicine without prescription by pharmacist and traditional healers, improvement of health services delivery as well as focusing on further researches.

1.8 Limitations and Delimitation

The research met its merit; the objectives presented were achieved, however, certain issues that would have hindered the success of this thesis arose. These issues are discussed below;

The researcher was met with financial challenges, example, the proposed budget was never met. Initial budget never included emerging issues like the fluctuated costs of transport and research digital audio recorder. The researcher, however, managed to carry out the research by making certain adjustments which on the other hand affected the efficiency.

Some respondents were not reliable; they did not fill and submit the questionnaires as they had earlier promised. The researcher had to take longer time in trying to make them understand the importance of the study to the society.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

A literature review surveys books, articles, and any other sources relevant to a particular phenomenon, area of research or theory, and therefore provides a description, summary, and critical evaluation of these works in relation to the research problem being studied. Literature reviews are designed to provide an overview of sources which have been used while researching a particular topic and to reveal to the readers how the research is applicable within a larger field of study (Fink, 2014).

2.2 Theoretical Literature Review

2.3 Meaning and concepts

Perception of self- medication

Perception of self- medication refers to a way of regarding, understanding, or interpreting something or a mental impression towards self administration of medicines by an individual. In this case people's knowledge and awareness of towards self drug administration shape their perception towards self- medication. The rate of practicing self- medication is largely determined by individual perception towards self diagnosis of disease and effectiveness of the medicine(s) to be used for treatment.

Practice of self- medication

Practices of self- medication refers to the process of carrying out or performing self administration of medicines habitually or regularly by an individual without clinical evaluation of medical practitioner. It determines how often an individual engage in self administration of medicines without concerting a medical professional. Practice of self- medication is largely influenced by individual perception and belief on effectiveness of the medicine to be administered by the patient to treat certain illness without concerting a medical practitioner.

There are reasons why people practice self-medication, which includes; delay in seeing the medical practitioner, perception of people towards their illness as they frequently regard them as not being serious to necessitate medical consultation, lack of enough income to cover hospital bills such as paying for consultation, medical examination and purchasing medicines. However, practice of self- medication is important component of health care, most of the time is accompanied by some side effects which includes; drowsiness, stomach upset, tinnitus, constipation and even addiction. It has been revealed in various studies that many people are aware of the dangers associated with self-medication but regardless of this, they still engage themselves in self- medication (Almasdy, 2011).

Risk factors for self- medication

A risk factor for self- medication is any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury resulting from self administration of medicines. For a person to engage in self- medication practices there must be different reasons that influence him or her to engage in such activity. The reasons ranges from individual concerned to the environment, political, economical and social factors.

Source of medicines information

Source of medicines information for those who practice self- medication refers to a place, person, or thing from which medicines information comes or can be obtained. Theoretically, this information may be obtained from past experience, relatives, parents or even commercial advertisement of medicines by pharmaceutical through media or placards. People tend to ask for medicinal information from their trusted source before they make decision of practicing self- medication. However it is not all the time they ask such information from medical practitioners, hence this increase the chances of developing drug side effects and other problems to the individual concerned.

Importance of self- medication

Self-medication is important for healthcare systems as it contributes to rational use of clinical skills by medical practitioners in treatment of various diseases, increases access to medication among patients suffering from certain diseases and may contribute to reducing prescribed medicine costs associated with publicly funded health programs. It is an important role in the prevention of chronic diseases among the people especially in developing countries where provision of health services is very limited (Hughes, 2001).

Some studies done in different areas have revealed that the general population had a fairly good knowledge on the advantages of self- medication, as they surely perceived it as time-saving and economical as they regard that minor illness does not necessitate medical consultation with a medical practitioner since self- medication may be used to provide quick, easy and convenient relief to the patient. These perceptions of people are the same with those reported by the WHO, that self-medication provides a cheaper and convenient alternative for treating common minor illnesses by individual themselves. The problem of self- medication is that not all individual have the knowledge of the medicines being used, the right indications, dosages, and duration of use as well as the side effects (KayalvlizhiI, 2001).

2.3 History of self- medication

In 1970, the World Federation of Proprietary Medicines Manufacturers Association which was later named as World Self- Medication Industry (WSMI) was established with a major objective to stress for world-wide regulatory classification of medicinal products (drugs and medicines) into two classes namely; Prescription and non-prescription (OTC). In 1975, the first international conference on the role of the individual in primary care was held at the European Regional Offices of the WHO with the emphasis on “self-care” which implies that every individual is responsible for his own health. In 1977, the World Health Assembly approved the resolution calling for “health for all” which means that health services must reach every human being regardless of where he or she lives by the year 2000. The 1978 Declaration of

Alma-Ata stressed on the same matter where by primary health care was emphasized, thus, the movement towards self- medication began to be popular across the world from that time forward (WSMI, 2016).

In 1981, the World Medical Association (WMA) emphasized the responsibility of people for their own health in a “Declaration on the Rights of the Patient” where by principles were laid down to empower patient choice of treatment. In 1986 at Ottawa (Canada), the WHO launched “the Ottawa Charter for Health Promotion”, in which self-care was identified as one of the three key mechanisms for health promotion. The conference led to the signing of agreement which launched series of actions to be followed by governments, international organizations and local communities so as to achieve the grand objective of health for all. A new period of access to modern and effective medicines started in the early 1980s, when medicines which had previously only been available on prescription began to be switched to non-prescription (OTC) status as agreed during the meeting (WMA, 2000).

Among the first products switched from prescription (R_x) to non-prescription status was *ibuprofen* for the treatment of pain whereby in the UK it was switched in 1983 and the US in 1984. In Canada, *hydrocortisone* became available without a prescription in 1986. A statement of WSMI, Policy on Consumer Information and the Role of Labeling was formally approved and released by the WSMI Board of Directors at the Fifth General Assembly in October 1979 in Australia. The policy emphasizes that the role of labeling is “to provide all information necessary to enable an individual without medical training to use the medicines appropriately whenever the demand of using such product arise (WSMI, 2016).

In 1990's, there was an increasing recognition in many parts of the world that people were managing or treating a large proportion of their ailments without always consulting a health professional or following proper treatment procedures. Around 1998, role of pharmacist in self-medication was explained by WSMI and the International Pharmaceutical Federation (FIP, 2016). The roles kept forward

recognized a pharmacist as a communicator, where by the pharmacist is supposed to initiate dialogue with the patient to obtain a sufficiently detailed medication history of the patient as well as the pharmacist should help the patient to perform responsible self- medication (WHO, 2016).

In 1993, WSMI's 11th General Assembly was held in Acapulco, Mexico, where the theme was “Globalization of the self- medication market: challenges and opportunities. This led to different changes on matters concerning self- medication. In 1997, WSMI published its first global review of consumer surveys named “Health care, self-care and self-medication; while in early 1999, a joint statement was produced by WSMI and FIP named “responsible self-medication” which implies that individual can treat themselves with medicines approved and available for treatment of such ailments without prescription from a medical practitioner after careful medical diagnosis.

The 13th WSMI's General Assembly in Berlin, Germany, which had a theme “self-care, a vital element of health policy in the information age” was held to keep more emphasis on matters related to self- medication (WSMI, 2016). In 2000, the WHO published “guidelines for the regulatory assessment of medicinal products for use in self- medication” which enabled some of medicines to be sold without medical prescription (OTC). From 2006 to the future, a globalizing world Prevention of disease through self- care and responsible self-medication has been given more emphasis around the world (WHO, 2015).

Responsible self- medication has a number of benefits to the individual and the community at large. Those benefits include; it provide an active role of an individual in his or her own health care, self-reliance in preventing or relieving minor symptoms or conditions, education opportunities on specific health issues such as stop smoking aids, Convenience as well as economy, particularly since medical consultations will be reduced or avoided (WHO, 2000).

To the community level responsible self- medication has the following benefits; saving scarce medical resources from being wasted on minor conditions which individuals can take care of them, lowering the costs of community funded health care programs, reducing absenteeism from work due to minor symptoms which can simply be treated by individuals themselves, reduce the pressure on medical services where health care personnel are insufficient hence it helps on improvement of services as well as increasing the availability of health care to populations living in rural or remote areas (WHO, 2000).

2.3 Studies on Self- medication

Studies on Self-medication show that self- medicines administration is becoming an increasingly important component of health care in both developing and developed countries. A study carried out at Ikeja local government in Nigeria which included a total of 200 residents of Ikeja Local Government Area (aged above 15 years) with a response rate of 92%, shows that the country is one among the few countries in the world where medicines are freely displayed for sale in unauthorized places such as markets, shops, roadside stalls, motor parks and other public places by individuals without license from recognized authority to provide such kind of medical services (Inyi, 2004).

Furthermore, the study revealed that in Nigeria, medicines such as antibiotics, analgesics hormonal medicines and anti- hypertensive which must be prescribed by a medical practitioner before purchase over-the-counter in developed countries find their way into the hands of consumers without a proper prescription from the proper medical personnel. In Nigeria, it is known that the government granted medicines sellers to go as far as dispensing the medicines as opposed to the stated regulation which instructs that OTCs are the only medicines that can be sold without consultation with a medical professional (National Mirror, 2011).

When asked on what Self-medication was, 70% out of 200 respondents rightly defined as the use of medicines not prescribed by authorized medical personnel (a doctor) to treat ailments. In response to the question on whether or not should someone use medicines when ill without seeing a doctor, 87% answered “No”, with the reason that it was thought to be unsafe and likely to be associated with side effects when someone use medicines without concerting a medical practitioner, while 11% of them answered “Yes” mainly because they consider it more affordable, readily available and ultimately cost and time effective. This shows that majority of people are aware of the consequences of self- medication even though they still practice it (Kuku, 2011).

From the study, a total of 172 respondents representing 86% of the sample population had practiced self- medication in the last one month. As was revealed in the study; fever, headaches, common cold and cough were the most common conditions for which the residents practiced self- medication. The respondents largely believed that pain relievers (paracetamol and aspirin), anti- malarials (fansidar, coartem), antibiotics (ampicillin and flagyl) and cough mixtures were particularly safe enough to be used to treat ailments without consulting a doctor or any other medical practitioner. The medicines used for self- medication were therefore mostly purchased from private pharmacies, chemists and hospital pharmacies (Olumuyiwa, 2011).

On the other hand, a cross-sectional study was conducted from December 2012 to January 2013 in the four service areas of the urban health center attached to a medical institution namely Kurusukuppam, Vazhaikulam, Chinnayapuram, and Vaithikuppam, which had a total population of about 9000. Minimum sample size required for the study was 294 people. The study aimed at finding the prevalence of self- medication for *allopathic* medicines and associated factors among households of urban community. It also aimed at assessing the attitude of respondents who had experienced self- medication. This cross-sectional study was done in field practice area attached to a medical institution in urban periphery (Kumar, 2013).

A total of 352 subjects from 124 households were selected randomly. With pretested interview schedule, information regarding self- medication use in the past three months and associated socio-demographic factors, purpose, source of drug procurement, attitude toward self-medication use were collected by researchers (Selvaraj, 2013).

Prevalence of self-medication was found to be 12%. Males with the age above 40 years and involving in moderate level activity of occupation were found to be significantly associated with higher self- medication usage in this particular area. Fever (31%), headache (19%), and abdominal pain (17%) were most common illnesses where self- medication was being used. In addition to that, telling the symptoms to pharmacist (38%) was the commonest method used to procure medicines by the customers. Many of those who practiced self- medication expressed that self- medication is not detrimental in general to individual health in which about 66% of all respondents mentioned that. About 90% of all respondents mentioned that they are going to self- medicate again while 74% mentioned that they are going to advice others to use self- medication to cure their ailments if they seek their advice when they become sick (Selvaraj, 2013).

The reasons for self-medication are mainly due to simple nature of illness and time constraints. Six respondents reported their illness being chronic in nature thus it was up to them to take care of themselves with self- medication. Respondents who use self- medication for chronic illnesses justified their practice by saying even if they go for repeated visits to the hospitals or any health service facilities; their medical practitioners will continue to provide them with the same treatment as they have been doing before. Thus, they thought that there is no harm that will befall them when they decide to continue using same medication for a long period of time. People reported that for the illnesses which are very minor, if they decide to go to health care provider apart from other expenses they will incur, they will have to lose their one day wage or earnings. Thus, reasons for self- medication revolved around saving

time and money which may be used if they decide to seek proper medical care through proper treatment channels (Selvaraj, 2013). This shows how the problem of self- medication is globally widespread and hence there is a need to conduct as many studies as possible on the issue.

Another descriptive, epidemiological cross sectional survey in which Seven hundred rural dwellers that were the residents of periphery of Karachi city were involved. It was conducted at the two largest tertiary care government based teaching hospitals of Karachi, Civil hospital and Jinnah Postgraduate Medical Centre, from January 2015 until March 2015. The study aimed at assessing the prevalence of using non-prescribed medications in economically deprived rural population of Pakistan (Haseeb, 2015).

According to the survey, 595 (85 %) respondents had practiced self- medication in their lifetime. The most common reasons expressed for self- medication were; cost of consultation and availability of transport from rural areas to health care facilities. The painkiller (paracetamol), acetylsalicylic acid as an anti- pyretic (drug used to reduce fever), anti- biotic and anti- allergic (drug to treat allergy) were the commonest drug used without prescription of a health professional (Bilal, 2015).

Moreover, 90 % (535) never bother to read the instructions that are placed with medicines and only 9 % (54) have been reading about side effects and contraindications of the medicines they have purchased. In addition to that, 35 % (208) of the respondents practicing self- medication adjusted dosage of medicines after consulting pharmacist and 22 % (131) adjusted according to previous dose usage experiences. frighteningly, only 196 (33 %) self- medicated Out Patient Department patients were aware of the fact that their practice can lead to harmful effects and only 150 (25 %) respondents among them appreciated that they should consult a medical practitioner before starting a new medicine (Bilal, 2015).

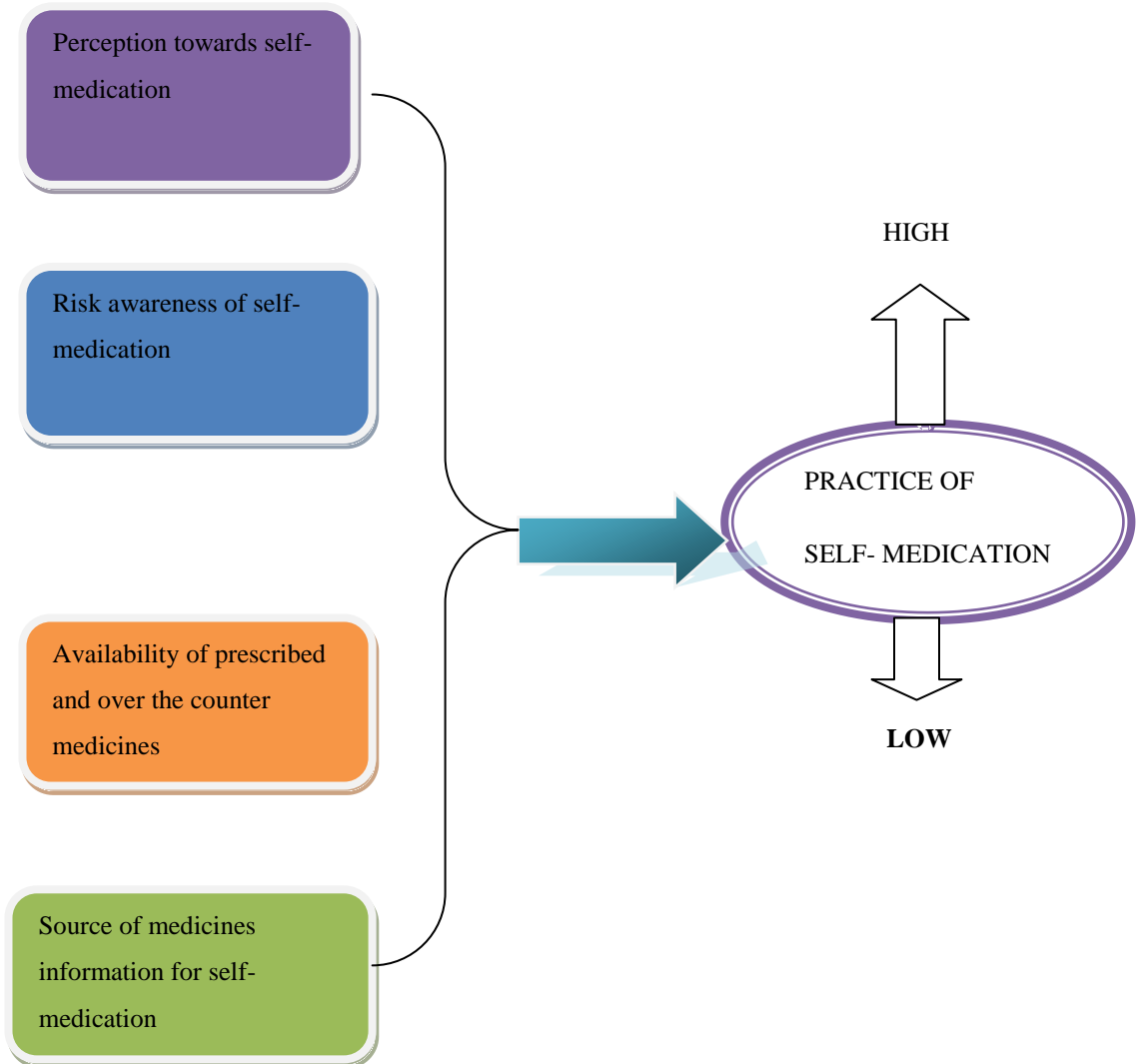
2.4 Conceptual Framework and Research Model

The hypothesis model for this study rely on the hypothesis that practice of self-medication (as the dependent variables) is determined by the following independent variables; perception of individual towards self- medication, risk factors for self-medication, availability of medicines for self- medication as well as the sources of medicines information for self- medication. The mentioned variables are considered to be the main determinants for self- medication among residents of Kakonko District Council. **Figure 1.1** shows the hypothesized model of assessment of perception, practice and risk awareness of self- medication among rural residents.

Figure 1.1 Conceptual framework

INDEPENDENT VARIABLE

DEPENDENT VARIABLE



Source: Researcher, 2016

2.5 variable and measurement

Table 2.1 variable and measurement

Variable	Definition	Measurement
Perception of self-medication	General residents understanding of self- medication	Whether the residents are aware of the concept of self- medication
Risks awareness	Understanding of the effects associated with self- medication	Measured by how the respondents mentioned effects that are caused by self- medication
Availability of prescribed and over the counter medicines	Presence of medicines at health facilities and pharmacies	Measured by availability of prescribed and over the counter (OTC) medicines at health facilities and pharmacies
Source of medicines information for medication	Refer to where people get medicine information before they self- medicate	Whether medicines information from non- medical professionals influence people to practice self- medication

Source: Researcher 2016

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Study Design

According to Kothari (1990), study design can be defined as the detailed blue print used to guide a research study toward its objectives in order to secure data or information. This study used a Case study design so as to accomplish its objectives. This design involves a depth and thorough study of a particular subset (small unit) of the focus about specific phenomena. The area chosen was appropriate since it was suitable to the researcher in terms of traveling costs and accommodation. It helped the researcher to save time and funds since it enabled the researcher to select an area and collect data through application of various data collection techniques. This study used questionnaires and interview during data collection.

3.2 Study Area

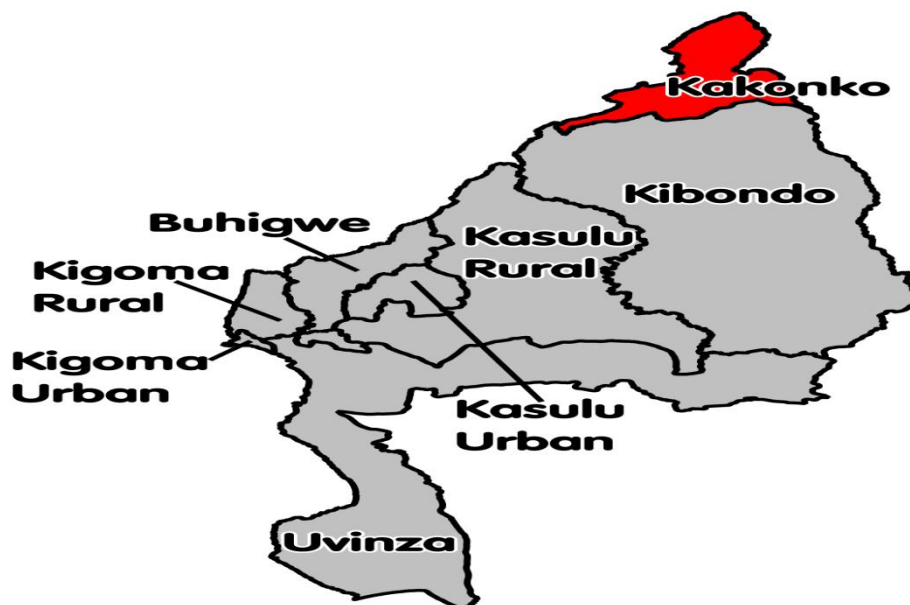
A study area is geographical area for which data is collected and analyzed in a report. (Kothari, 2004). This study was conducted at Kakonko District Council, which is one of eight districts of Kigoma Region. Kakonko District is bordered to the north by Kagera Region, to the east by Geita Region, to the south by Kibondo District, and to the west by Burundi country. The District administrative seat is the town of Kakonko. According to the 2012 Tanzania National Census, the population of Kakonko District was 167,555 and the District is administratively divided into 11 wards. For health care services, the District has 27 health facilities; among those 24 are dispensaries and the other 3 are health centers, the District has no District hospital instead is using Muganza health centre as a temporary District hospital.

In Tanzania, dispensary is the primary level health care facility which provides basic curative care and preventive care to the population. A dispensary accommodates about 5,000 people and oversees all the village health services. Health centre is the second level facility, which offers outpatient and inpatient services and accommodate about 50,000 people and supervises all the dispensaries in the Division. Hospitals are

third level facilities when all levels are concerned. However, in term of hospital levels when only hospitals are concerned, district hospital is on level one and act as referral for the primary health care facilities in the district which includes dispensaries and health centers. According to the national health policy, the available health facilities at this District are only 27% of the required facilities thus the District has a deficit of 73% percent of the required health facilities (www.kakonkodc.go.tz). The common diseases found in this District are water borne disease like typhoid due to unprotected water sources; however, Malaria is still a leading cause disease in the District. Other diseases are meningitis and HIV/AIDS which affect labor force of the District.

The burden of disease has increased as a result of increased population after the arrival of refugees from Burundi in 2015 which resulted into shortage of health facilities comparing with the demand (<http://kakonkodc.go.tz>). With shortage of health facilities as well as increased disease burden majority of residents have been trying to find other means to cure their ailments hence this area was hypothesized as having high level of self- medication.

Figure 3.1 The map of Kigoma region showing Kakonko district council



Source: Google map. com

3.3 Study Population

A study population refers to a well-defined collection of individuals or objects known to have similar characteristics. All individuals or objects within a certain population usually have a common, binding characteristic or trait (Varkevisser, 2003). This group may be studied for different reasons, such as their response to a drug or risk of getting a disease just to mention the few.

The study population here was Kakonko District residents from the selected wards. It comprised residents who were selected randomly from the current 11 Wards in the Kakonko District Council area as well as health service providers who were purposely selected. The inclusion criterion for the selection of participants was that, all participants should be permanent residents of the local government and must be above 15 years of age.

3.4 Sample and Sampling Techniques

Sample size is the number of items selected from a population to constitute a sample that will be studied on behalf of the whole population (Kamzora and Jamal, 2010). On the other hand, Kothari (2000), defined sampling as the process of obtaining information about an entire population by examining only part of it. It involves making decisions about which people, setting, behavior, events, or documents to include in the study being conducted. The sample size for this study was 90 respondents from selected wards of Kakonko District council.

The sample for this study was calculated by using the sample size calculator developed by survey system as shown below;

$$n = \frac{z^2 \times p \times (1 - p)}{c^2}$$

Where:

n = the minimum sample size when the population is more than 10,000 (population =83,874; Kakonko residents above 15 years as per National Census of population and housing of 2012)

Z = Z value (1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (85% or 0.85)

c = confidence interval, expressed as decimal (± 7),

Whereby,

$$n = \frac{1.96^2 \times 0.85 \times (1 - 0.85)}{\pm 7} = 90$$

Table 3.1 Table to show how the samples were obtained

	General population	Health service providers	Total
Questionnaires	60	00	60
Interviews	00	30	30
Total	60	30	90

Source: Searcher, 2017

The techniques applied in selecting sample were both probability and Non probability sampling techniques. In probability sampling researcher deployed Simple random sampling technique due to its effectiveness and appropriateness to get number of health care providers. On the other hand, multi-stage sampling was used to get respondents from the general population as the study covered many stages which involved different techniques at each stage.

Non- probability sampling used in this study was Purposive sampling (judgemental sampling (Kothari, 2004). The reason for the choice of purposive sampling was that, the focus of the study primarily aimed at specifically assessing issues attached to perception, practice and risk factors for self- medication. This technique was used to obtain health service providers which includes; doctors, nurses and pharmacists. Also convenience sampling was deployed to get the number of respondents from the general population as targeted by the researcher.

The sample was selected by using the following steps.

Step 1.the researcher selected 6 wards out of 11 wards available at Kakonko District Council their names were written on pieces of paper which were then closed and placed in the Bucket and being sampled using rotary method, here only six wards

namely; Kakonko, Kasanda, Muhange, Gwanumpu, Nyamtukuza and Kiziguzigu were obtained

Step 2. Each ward went through random selection method where 10 respondents were selected randomly which implies that in each ward, 10 questionnaires were distributed to the respondents.

Step 3. Purposive sampling was deployed to get a total of 30 healthy service providers who were interviewed Interviews.

3.5 Types of Data

This study used both primary and secondary data. Primary data were collected from the field using questionnaires and interview techniques. Secondary data were obtained after reviewing various documents containing different information which has already been collected and stored, including books, journals, articles and past researches. In this study secondary data were obtained from the internet and library.

3.6 Data Collection Techniques

This study used questionnaires and interview so as to enable a researcher to collect relevant information in accordance with the requirement of this study.

3.6.1 Questionnaires

A total of 60 self- administered questionnaires were distributed by the researcher to 60 respondents. The aim was to collect quantitative data for those who practice self-medication so as to determine the magnitude of self- medication at Kakonko District Council. Questionnaires were prepared in English language and then translated into Swahili language before they were randomly distributed to respondents. When returned by respondents they were translated into English language ready for analysis. Out of 60 questionnaires, only 57 (95%) were returned fully answered. The sample questionnaire is attached on this document as Appendix 1.

3.6.2 Interview

This study also used semi structured- interview technique as a method of data collection. The researcher organized an interview with 30 respondents who are health care providers from health facilities and private pharmacies that discussed the topic with the researcher and shared their experiences. The aim for this was to gather qualitative information on; the risk factors which influence people to practice self-medication, common medicines used for self- medication as well as exploring the source of medicines information and effects of irrational use of medicines. The sample of interview guideline is attached on this document as Appendix 2.

3.7 Data Processing and Analysis

Data Analysis is the process of systematically applying statistical and/or logical techniques to describe and illustrate, compact and summarize as well as to evaluate data. According to Shamoo and Resnik (2003) various analytic procedures “provide a way of drawing inductive inferences from data and distinguishing the signal (the phenomenon of interest) from the noise (statistical fluctuations) present in the data”. The researcher analyzed the collected data from questionnaires and interview by using SPSS 22 program whereby data were coded and entered into the program for analysis. This tool helped a researcher to analyze data and present results in tables, graphs and percentages depending on the data collected. Information obtained from the field was checked for accuracy and completeness to ensure that unnecessary errors are avoided.

3.8 Ethical Consideration

Ethical approval was obtained from Mzumbe University and all participants were briefed on the aims and objectives of the study being conducted. To protect identification of the respondents and interview participants, all personal information that could identify the study participants were treated with high privacy by the researcher while names were not allowed to be written on questionnaires or mentioned during interview.

3.9 Reliability

To ensure reliability of the study, a researcher used more than one method of data collection, which in this case questionnaire and interview were used. The study also used secondary methods by passing through several articles, journals and books which had relevant information concerning this study.

3.10 Validity

To ensure validity of measures, data were gathered from various categories of respondents within the study area. Respondents under the study were from different gender, age, occupation as well as different marital status and had different experiences.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Sample Size and Characteristics of the Respondents

The sample size for this study was 90 respondents with inclusion criteria that, a respondent must be above 15 years of age and a permanent resident of Kakonko District Council. 50 respondents (55%) were males and the remaining 37 (41) respondents were females. The dominant age group was between 26 to 35 years which had 28 (31%) respondents. On education level, majority of respondents had secondary level of education which accounted for 31 (34%) of the respondents. In case of occupation, the group of medical practitioners (doctors, nurses and pharmacists) and that of people with no specified jobs (others) were dominant in which each group had 28 (31%) respondents. Lastly, the issue of marital status which was asked on questionnaires only, majority of respondents 31 (51%) were married.

Table 4.1 Characteristics of Respondents by Gender, Age, Education Level, Occupation and Marital status.

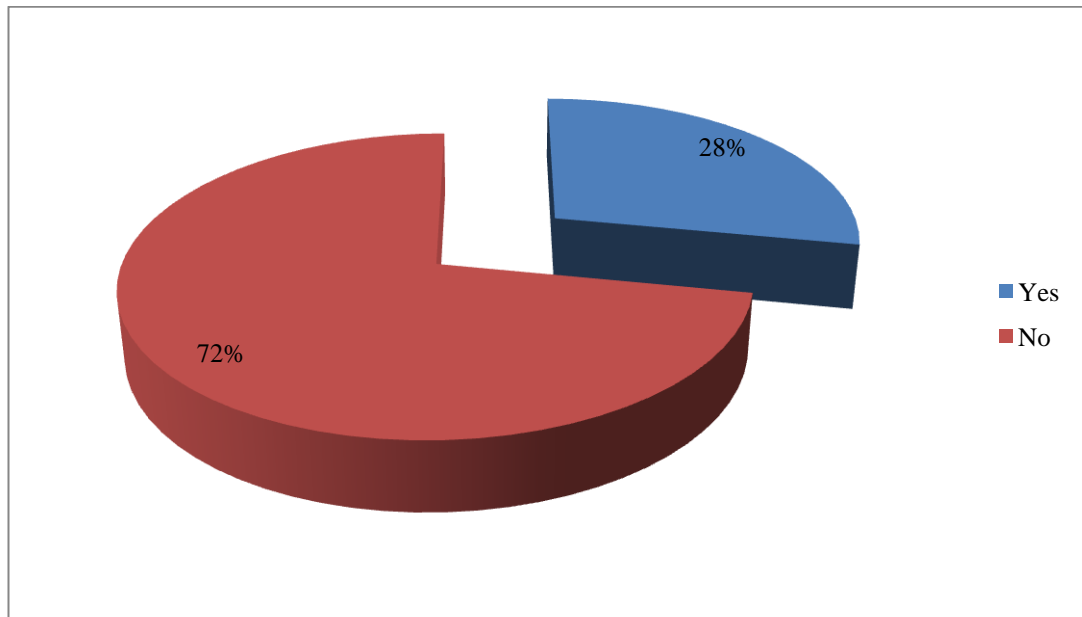
Characteristic		Frequency	Percent
Gender-	Male	50	55
	Female	37	41
	Missing	3	3
	Total	90	100
Age-	15 – 25	24	27
	26 – 35	28	31
	36 – 45	18	20
	45+	17	19
	Missing	3	3
	Total	90	100
Education level-	Primary	23	26
	Secondary	31	34
	Certificate	8	9
	Diploma	15	17
	Degree+	10	11
	Missing	3	3
Total	90	100	
Occupation-	Teacher	8	9
	Farmer	13	14
	Business man/woman	10	11
	Doctor/Nurse/pharmacist	28	31
	Other	28	31
	Missing	3	3
	Total	90	100
Marital status-	Single	22	36.7
	Married	31	51.7
	Separate	4	6.7
	Missing	3	5
	Total	60	100

Source: field data 2016/2017

4.2 Perception of Self- medication.

Perception of self- medication refers to a way of regarding, understanding, or interpreting something or a mental impression towards self- administration of medicines by an individual. Each individual has his own way of considering things; this implies that each individual has his own level of considering things which varies with another person. Below, is the perception of Kakonko residents towards self- medication as found from the respondents.

Figure 4.1 Perception on Self- medication.



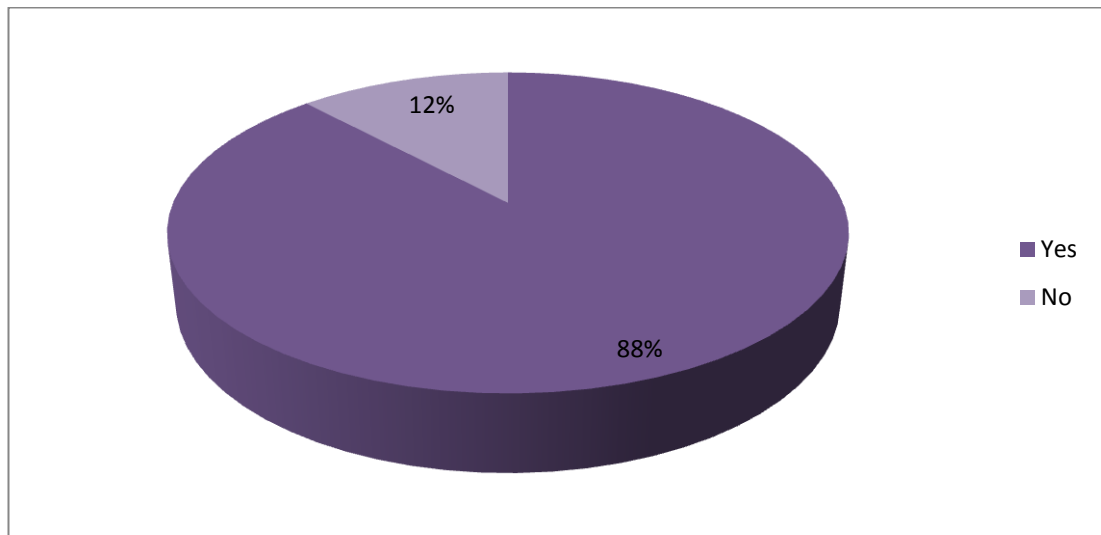
Source: Field data 2016/2017

A total of 60 questionnaires were distributed among respondents who were required to fill them before they were retrieved by a researcher. Out of all (60) questionnaires only 57 were returned filled completely while the remaining 3 were returned half-filled hence they were excluded from data analysis. Response on the returned questionnaires shows that 16 (28%) respondents were aware of the concept of self-medication (definition and meaning). Majority of them defined as simply “the use of medicines not prescribed by authorized medical personnel” while the remaining 41 (72%) had no idea what self- medication is, even though it is a common practice among residents of this particular area. Levels of knowledge and awareness of self-medication shape people’s perceptions regarding self- administration of medicines (medicines). A study carried out in a rural Coastal community in Tanzania shows that perception of people towards self- medication varies depending on different factors which include age, occupation, gender and education level (Komanya, 2002). However in this case, the issue of occupation and education level may have been the major determinants of low perception towards self- medication.

4.2. Practice of Self- medication.

Practices of self- medication refers to the process of carrying out or performing self- administration of medicines habitually or regularly by an individual without clinical evaluation of medical practitioner. The process involves individual self- evaluation of body condition to determine the illness, choice of medicines for treatment and self- surveillance of body condition after starting medication. The practice of self- medication among residents of Kakonko District Council is explained below.

Figure 4.2: Practice of self- medication.



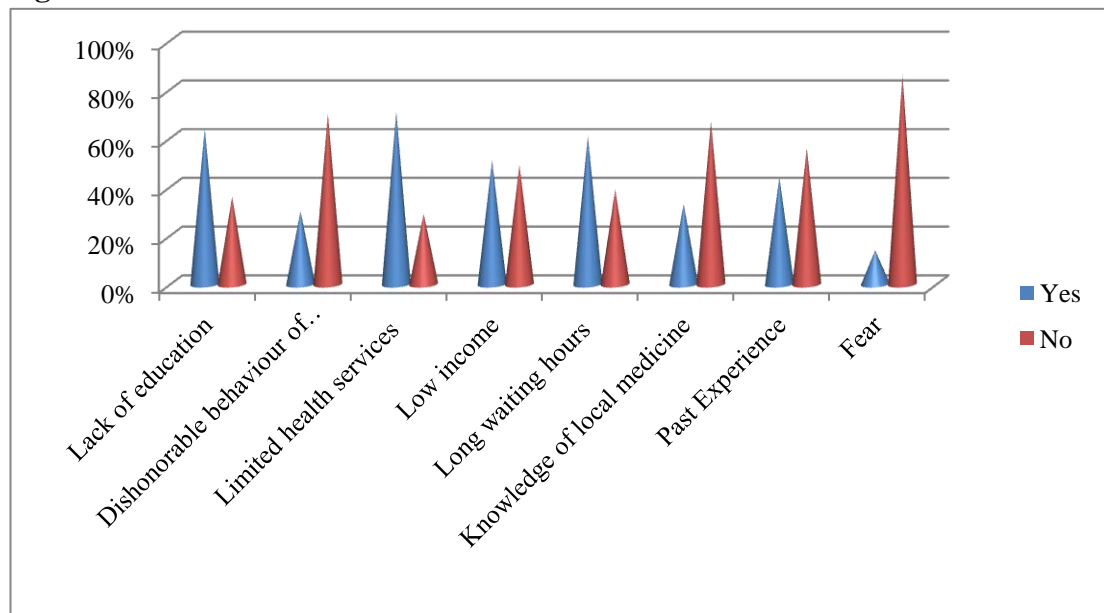
Source: Field data 2016/2017

From the questionnaire, 50 (88%) of overall 57 respondents who were provided with questionnaires agreed that they were practicing self- medication frequently (many times when a person get sick). The remaining 7 (12%) respondents claimed that they had never in their entire life used medicines without consulting medical personnel for advice. This shows that prevalence of self- medication in this particular is far greater and alarming such that initiatives to rectify the situation should be done. Other studies show that self- medication practice is mostly influenced by health seeking behavior, (Metta, 2013), while other have shown that inadequate information on the side effects of self- medication results to improper use of medicines, (Shankar, 2002).

4.3 Risk Factors for Self-medication.

A risk factor for self- medication is any attribute, characteristic or exposure of an individual that increases the likelihood of developing a disease or injury resulting from self- administration of medicines. When it comes to self- administration of medicines, different individual are influenced differently. Finding risk factors for self- medication was one of the main focuses of this study. From information gathered from the field the following factors were mentioned as risk factors for self-medication.

Figure 4.3 Risk Factors for Self- medication.



Source: Field data 2016/2017

Regardless that majority of Kakonko residents are not aware of the concept of self-medication as well as there is high prevalence of self-medication practice among residents, when asked about risk factors (reasons) that influence them to use medicines without concerting a medical practitioner (personnel) response from questionnaires which target the general population and interview which targeted health services providers revealed the following;

4.3.1 Lack of Education

This was mentioned as a risk factor for self-medication by 56 (64%) respondents out of the total 87 who were interviewed and distributed with questionnaires. Lack of basic education on medicines specifically on use, storage and side effects of the medicines were mentioned as one of the major risk factors for self-medication among residents of this particular area. However when asked whether it was safe to use medicines without consulting a medical personnel a question which was asked in questionnaires the following results were obtained, 49 (86%) said it was not safe to use medicines without consulting a medical personnel since sometimes a person may treat a wrong disease without knowing. The other 4 (7%) said they did not know the answer while the remaining 4 (7%) said it was safe and reasonable since it saves time and money. The study carried out on perception and practice of self-medication among student of Yaba college of Education, showed that less than half of the participants read the drug leaflets before using medicines.

4.3.2 Dishonorable Behavior of Service Provider

This was mentioned as a risk factor for self-medication by 26 (30%) respondents among 87 respondents. Hard language, disgraceful and disreputable behavior of service providers specifically on public health facilities was mentioned as a driving force towards self-medication among residents of Kakonko District. One of the respondents mentioned this in detail as follows,

‘Behavior of service providers especially nurses has been discouraging people from seeking proper medical care. Just imagine you are sick and you decide to go to the hospital for proper medical care but while you wait to meet with the doctor, a nurse offends you what would you do, the only option is just to return home and buy medicines from shops/pharmacy’.

However when asked whether she had reported such an incident to the proper authority, the respondent said “No” since all workers are the same and tends to protect one another when such incidents occur.

4.3.3 Limited Health Services

Results from questionnaires and interview shows that among all 87 respondents who were consulted, 62 (71%) of them mentioned limited health services found in Kakonko District as a driving force for self- medication. Lack of enough health facilities, medical personnel, medicines and equipment, distance from residential areas to health facilities were mentioned as the main factor that lead people to self-medication. In an interview with one of the private pharmacy seller, he said,

'We do not have enough health facilities in this area, so many people are afraid of going to the available health facilities because they are forced to travel a long distance to the town (Kakonko) where sometime they return back home without being treated because the facility runs out of medicines frequently.'

These conditions usually leave people with no other option of being treated other than seeking medicines from small shops or to use local medicines. This finding is not very much far from what Keshar (2014), reported that about 45% of rural areas residents in Barabanki (India) practiced self- medication as a result that doctors were not available in time when they were needed, thus the only option was to self-medicate.

4.3.4 Low Income

This was mentioned as a risk factor for self-medication by 43 (49%) respondents out of all 87 respondents. Hard life and low income earned by majority of residents in this particular area has been mentioned as one of the hindrance towards seeking proper health services. Some respondents said the following,

'We prefer self-medication simply because we do not have enough income to cover proper health care from proper facilities. Each service from diagnosis, consultation, getting medicines as well as travelling to the health facility requires money which honestly only few of us can afford'

When asked whether they are aware of Community Health Fund (CHF) majority of them said “Yes” although they are not satisfied with the services provided to the members. Other respondents said that they self- medicate because of their low income since they fear that sometimes they may be advised to be admitted to the hospital something which they cannot afford as a result of poverty.

4.3.5 Long Waiting Hours

This was mentioned by 22 (39%) respondents among 57 who were provided with questionnaires. Many of them complained that following proper procedure of treatment especially in public health facilities consume a lot of time and great risk of not being treated on time. They argued that, sometime a patient may be forced to return to the facility the next day to complete the treatment hence the only way to escape this is to buy medicines from private shops or pharmacies. One respondent provided a brief answer which says,

‘When I go to the health facility, I postpone all my activities for such day since the chance of coming back home early is very low, that why some people do not go to the health facilities and decide to buy (vidonge) medicines from nearby shops’.

According to Pandya et al, (2013); in his study he mentioned that at least 42% of all those who practice self- medication do it because of time saving. Many people find themselves resistant to proper medical care from hospitals and other health centers because of the time consumed when they seek such services.

4.3.6 Knowledge of Local Medicines

This was mentioned by 29 (33%) respondents out of all 87 who were interviewed and provided with questionnaires. Some respondents argued that they prefer self- medicating using local medicines (*dawa za kienyeji*) because they believe it is more safe and effective than modern medicines provided at health facilities. However when asked which local medicines they were using majority of them mentioned ‘*mwarobaini and mgagana*’. When asked on the dosage of the ‘*dawa*’ they revealed

that every respondent had his own dosage depending on how he considers the seriousness of the diseases.

4.3.7 Past Experience

38 (44%) respondents out of 87 argued that they self-medicate based on past experience which includes symptoms and medicines used. They believed that if they had symptom 'X' and used medicines 'Y' to cure it and get cured then next time if they experience same symptoms they will consider using same medicines they used previously. When asked if it is safe to use experience for treatment, majority of them said 'Yes' since they always get same results.

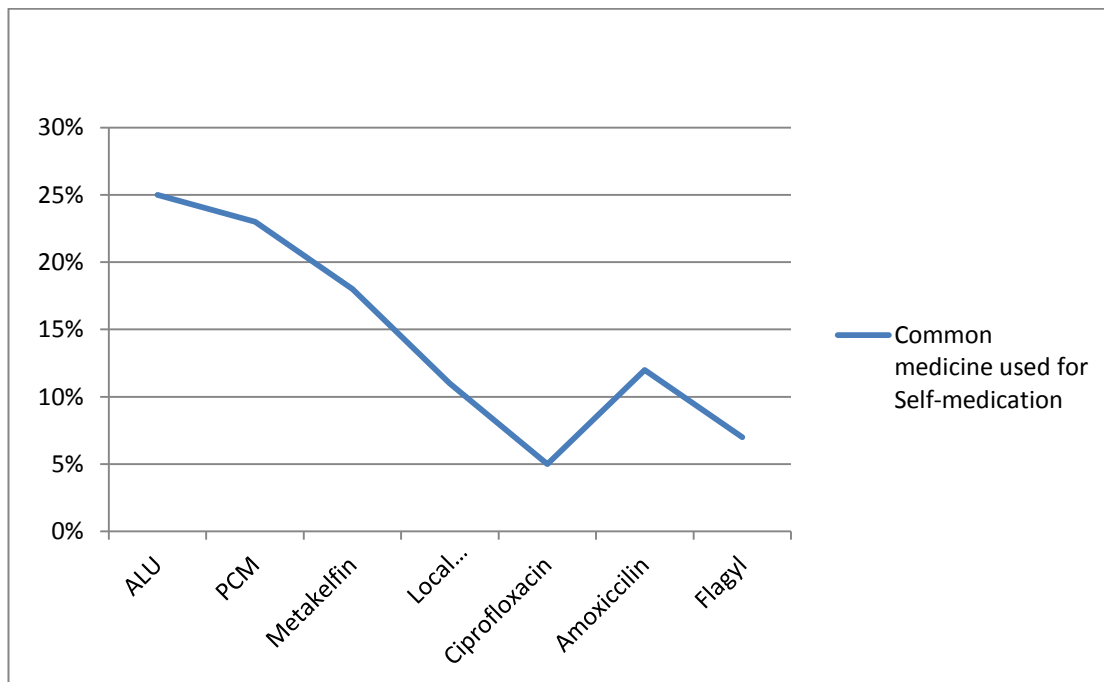
4.3.8 Fear from Seeking Care From Health Facilities

Apart from past experience, fear to seek medical care from health facilities was mentioned by 8 (14%) of respondents who were provided with questionnaires out of 57 respondents. The issue of fear for breach of medical confidentiality was mentioned as the driving force for self-medication among residents of Kakonko District. Some respondents said that they fear to seek proper medical care especially when they contract sexual transmitted infections and early pregnancy, thus they prefer to self-medicate so as to protect their secrets from being known by others.

4.4 Common Medicines Used for Self-medication.

Common medicines (medicines) used refers to kinds of medicines which are often used for self-medication among people in a particular area. They depend on number of factors to be common in a particular area such as disease burden of the place or sometime individual choice. This question was asked so as to identify the very common medicines (medicines) preferred to be used by residents of this area. **Figure 2.4** below shows the common medicines used by Kakonko residents for self-medication.

Figure 4.4: Responses on Common medicines used for self-medication.



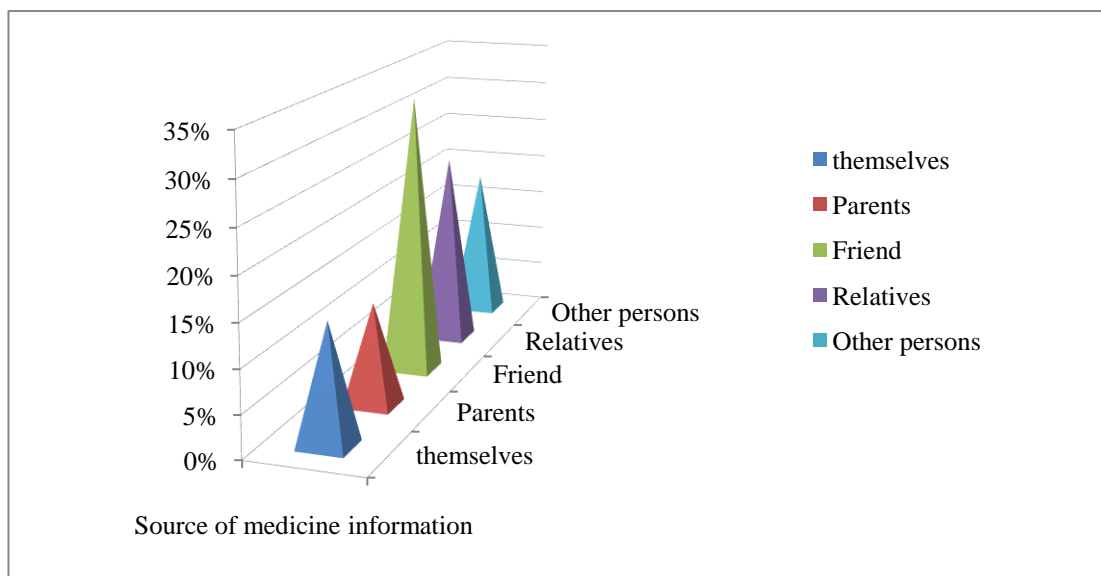
Source: Field data 2016/2017

The matter of common medicines used for self-medication by Kakonko residents was asked in both questionnaires and interview whereby responses were as follows; 14 (25%) respondents said that they usually use ALU for self-medication, 13 (23%) respondents said they have been using PCM for self-medication, metakelfin was used by 10 (17%) respondents, local medicines by 6 (11%) respondents, ciprofloxacin by 3 (5%) respondents, amoxicillin by 7 (12%) while fragyl was mentioned to be used by 4 (7%) respondents. Some respondents used such medicines singly while others used them in combination to cure their ailment. According to Hughes (2001), the common medicines used by people for self- medication are; pain relievers (paracetamol and aspirin), antimalarials (fansidar, coartem), antibiotics (ampicillin and flagyl) and cough mixtures which majority believe to be safe for use without even consulting a medical professional. On the other hand, headache, common cold, skin rashes, diarrhea, STIs, common cold and flu, malaria and UTI were common diseases that most of respondents had in mind which led Kakonko residents to self-medicate.

4.5 Sources of Medicines Information for Those who Self-medicate.

Source of medicines information for those who practice self- medication refers to a place, person, or thing from which medicines information comes or can be obtained. Majority of people when become sick try to gather information from various sources on which medicines or medicines they can use so as to cure their ailments. Due to various reasons some people dived to find different means of to acquire their desired information from various sources. Below are the main sources of medicines information as provided by Kakonko District residents who participated in this study.

Figure 4.5: Sources of medicines information for those who practice self-medication.



Source: Field data 2016/2017

The question of source of medicines information for those who practiced self-medication was asked in questionnaires and the following were revealed by respondents; 8 (14%) had never asked anyone for the information when they decided to self- medicate this implies that they have been deciding on which medicines to use by themselves whenever they become sick. On the other hand 7 (12%) asked their parents which medicines they should use when they fall sick. About 19 (33%) respondents asked their friends for the advice on which medicines may be appropriate to them depending on the body condition they have been experiencing.

Almost 13 (23%) asked their close relatives which medicines they are supposed to use when they become sick while the remaining 10 (18%) said they asked other people for the information on which medicines may cure their disease and remove suffering. These findings are not very much far from the finding that were revealed out on the study carried out at Kilosa which focused to determine the prevalence of self- medication with ant malarial medicines despite the decline of malaria as reported in that particular area. According to Chipwaza (2013) it was then revealed that, the main source of medicines information for self- medication among Kilosa Population was pharmacies/drug shops whereas other participants used left over medicines at home or from neighbors, relatives or friends. Another study done in rural area of Barabanki has shown that previous doctor's prescription was the main source of self-medication information. In the study, doctors were found to be the most common source of drug information followed by chemists and advertisements (Keshar, 2013).

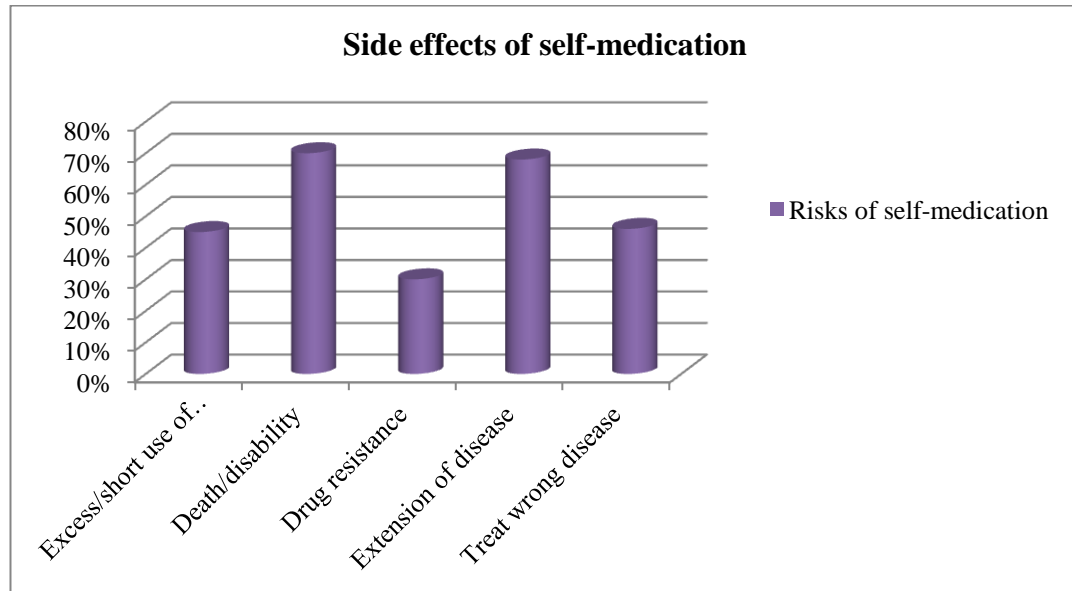
On the question of whether they had ever read instructions on how to use, store and side effects of the medicines they purchase; 25 (47%) respondents said yes they do read instructions while the remaining 32 (53%) respondents admitted that they had never read instructions attached o the medicines they purchase. When asked for the reasons that hinder them to read instructions attached to the medicines they use for self-medication, majority of them mentioned; lack of basic education, past experience and seriousness of the disease were commonly mentioned.

4.6 Side Effects of Practicing Self -medication

Risk of self- medication is defined as a situation involving exposure to danger as a result of self- administration of medicines. Though recently people are encouraged to take care of their health by making exercise or treating themselves by using OTC, still there are risks that may be encountered by an individual if proper precautions are not considered. The question of side effects that an individual practicing self-medication may encounter was asked to the respondents and the following outcomes

were revealed. The figure below shows the side effects that were mentioned by respondents which can be faced by those who practice self- medication.

Figure 4.6 Side effects of practicing self -medication as.



Source: Field data 2016/2017

Respondents were asked this question so as to determine their awareness on negative side effects that may be associated with self-medication. The following responses were provided by; 25 (45%) mentioned excessive or shortage use of medicines, death or disability was mentioned by 40 (70%) respondents, drug resistance was mentioned by 17 (30%). On the other hand, extension of disease due to the failure of being cured was mentioned by 40 (68%) respondents and lastly treatment of wrong disease was mentioned by 26 (46%) respondents.

However, according to WHO report (2000), there are many risks associated with self- medication which include; incorrect self-diagnosis of the disease, delays in seeking medical advice when needed, infrequent but severe adverse reactions resulting from unprofessional drug administration, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse to medicines, risk of

strokes, drug interaction. On the other hand self-medication by pregnant women may have adverse effects to unborn child causing congenital anomalies and birth defects. Hence by comparing risks mentioned by Kakonko residents to those mentioned by World Health Organization, it is obvious that the level of awareness on risks of self-medication among residents of this area is very narrow and therefore there is a need for the relevant authorities to take immediate actions to make the public aware of the effects.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.1 Summary

This study aimed at assessing perception, practice and risk factors for self-medication among residents of Kakonko District Council. The study focused on exploring their knowledge and understanding on factors that determines the practice of self- medication, common medicines used for self- medication and their knowledge towards side effects that results from self- administration of medicines.

This study was conducted at Kakonko District Council where by 2 villages were randomly selected from 6 randomly selected wards (Kakonko, Kasanda, Muhange, Gwanumpu, Nyamtukuza and Kiziguzigu). A total of 90 respondents participated in this study, during the assessment it was revealed that majority of Kakonko residents were not very much aware of self- medication. Among 60 respondents who were provided with self- administered questionnaires, only 16 (28%) of them were aware of the concept of self- medication.

The study found that 50 (88%) of respondents were practicing self- medication in this particular area. The main risk factors for self- medication mentioned were; lack of education, limited health services, dishonorable behavior of health service providers, low income, long waiting hours at health facilities, past experience of disease, fear and knowledge of local medicines. The study also focused on the source of medicines information for those who practice self- medication whereby it was revealed that; some dependent on their relatives, friends or themselves. When asked about what they think may be the major effects of self- medication, the following were mentioned; excessive or short use of dose, death or disability, drug resistance, treating wrong disease as well as extension of disease.

5.2 Conclusion

This study reveals that self-medication practice is very common among Kakonko residents. This indicates that there is a need for the community members to get access to correct and wide-ranging information about the effects associated with self-medication practices. A national commitment to solving the problem of irrational use of medicines is urgently required. This would require strengthening of the regulatory control for dispensing of medicines particularly in rural areas. On the other hand, health education aimed at behavioral change so as to promote rational use of medicines is required at all levels. It is hoped that findings from this study will add to the already existing information for planning effective intervention strategies to help the promotion of rational use of medicines.

5.2 Recommendations

From the field findings, this study recommends the following in order to reduce the problem of self-medication in this particular area;

- There should be increasing awareness and education at all levels regarding the importance of professional consultation before medicines use, the implications of self-medication and emphasis on responsible self-medication should be made clear to the population.
- Strict policies need to be implemented by the Government and other stake holders on the advertising and selling of medications to prevent this problem from growing.
- Strategies should be formulated and policies enforced to prevent the supply of medicines without prescription by pharmacies and traditional healers (witch doctors) proper regulation should be made frequently to look progress.
- Strategies should be put in place at all sectors of health care delivery to ensure efficient health services such that receiving health care becomes much less difficult and time consuming.
- Further researches should be carried out, probably on larger scale on this global phenomenon as it is a problem that should not be ignored since it brings a lot of suffering and disasters to the population.

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APPENDICES

Appendix 1: Questionnaire for General Population

Greeting.!

Firstly, I would like to thank you for taking time to meet me and talk about your experiences concerning *'Perception, practice and risk factors for self- medication among residents of Kakonko District Council'*, as I am making its assessment.

My name is **Marcelly S. Lusinge**, a post graduate student at Mzumbe University. As I am conducting this research I would appreciate for your active participation with an inclusion of the correct answers in accordance with your participation and understanding. The information you provide will be used for writing a report which will be shared among different stakeholders and beneficiaries from all levels for improvement. All responses will be kept confidential. This means that your responses will only be shared with research team members who are going to be involved in the completion of this report and we will ensure that any information we include in our report does not identify you as the participant. Remember, you don't have to talk about anything you don't want to and you may end the process at any time. Thank you.

Do you have any question about what I have just explained?

Are you willing to participate? Yes (), No ()

Instructions:

Please put the appropriate number you have selected in the space written code for the option and for the open ended question write in the space provided in each question.

S/N	QUESTION	CODED RESPONSES	CODE FOR THE OPTION
A	Background and personal information		
1	Age	
2	Gender	1. Female 2. Male	
3	Occupation	1. Teacher 2. Farmer 3. Businessman 4. Police/army 5. Doctor/Nurse/pharmacists 6. Human Resources 7. Any other specify	
4	Education level	1. I have not attained any education 2. Primary 3. Secondary 4. Diploma 5. Degree /Master/PHD	
5	Marital status	1. single 2. married 3. divorced 4. widow/widower	
B	PERCEPTION TOWARDS SELF- MEDICATION		
6	Do you understand what self-medication is?	1. No 2. Yes	
7	If 'YES' what is it?	
8	What do you think are the reasons that influence people to self-medicate?	1..... 2..... 3..... 4..... 5.....	
9	In your views, what do you consider the safety of self- medication?	1. Safe 2. Unsafe 3. Don't know	
C	PRACTICE WITH SELF-MEDICATION		
10	Have you ever taken medicines without consulting a medical professional?	1. Yes 2. No	
11	Have you ever been advised to use certain medicines by anyone who is not a medical professional?	1. Yes 2. No	
12	If YES what is your relationship with him or her?	1. Parents 2. Friends 3. Family members 4. Any other person	

13	How often do you take medicines without consulting a medical professional when you fall sick?	1. Very rarely 2. Very often 3. Never	
14	Have you taken medicines without consulting a medical professional for the past three (3) months?	1. Yes 2. No	
15	If YES, what conditions forced you to use medicines without consulting a medical professional?	1..... 2..... 3..... 4..... 5..... 6.....	
16	What medicines did you use last time you fall sick without consulting a medical professional?	
'''' '''' '''' D	RISK FACTORS ASSOCIATED WITH SELF- MEDICATION		
17	Have you ever read the instruction on how to store, use and side effects of the medicines you purchase for use without consultation with a medical professional?	1. Yes 2. No	
18	If 'No' what is/are the reasons that hindered you from reading the instruction?	1..... 2..... 3..... 4..... 5.....	
19	Do you think it is safe to use medicines without consulting a medical professional?	1. Yes 2. No	
20	If 'No' what do you think are the risks associated with self-medication?	1..... 2..... 3..... 4.....5...6.....	
21	If there are 'risks' of self-medication, what do you think should be done to avoid those risks?	1..... 2.....3... 4..... 5..... 6.....	

Appendix 2. An Interview Guide for Health Care Providers

Dear respondent,

My name is **Marcelo Said Lusinge**, a student of **Mzumbe University** pursuing **Master of Health System Management**. Here in is a list of questions based on information intended to collect on the *'Perception, practice and risk factors of self-medication among residents of Kakonko District Council'* purposely for academic use only and not otherwise. I would be very grateful if you would spare some few minutes to answer these questions. The information that you give will be treated confidential and your identity will not be exposed.

- 1) Age
- 2) Education
- 3) Occupation level
- 4) How do you consider the rate of self- medication in this particular area?
- 5) As a service provider, what do you think are the reasons that influence residents of this particular area to participate in self-medication?
- 6) What medicines/medicines are commonly used for self- medication in this particular area?
- 7) As a service provider, have you ever came across/treat any case which resulted from self- medication?
- 8) As a service provider, what do you consider the perception of Kakonko residents towards self- medication?
- 9) Do you think those who practice self- medication in this area have enough information of the dosage and side effects of the medicines they are using?
- 10) What initiatives do you take to ensure that the risks associated with self-medication are eliminated among patients/customers?
- 11) What do you think should be done to solve this growing global issue?

Appendix 3: Work plan

Activity	Months 2016/2017											
	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Consultation												
Research concept writing												
Proposal write up												
Submission of proposal												
Data collection												
Data analysis												
Thesis writing and defending												

Appendix 4: Budget plan

Item/ Activity	Description	Cost	Total cost (in Tshs).
Accommodation	During data collection, analysis and thesis writing	4 months @ tshs 50,000/=	200,000/=
Transport	Travel to the field	50,000/=	50,000/=
Meals	Food and Refreshment	30 days for 2 months @Tshs 8,000/=	480,000/=
Stationeries	Printing questionnaires and thesis and binding thesis	Estimation	Tshs. 200,000/=
Miscellaneous	Any other emerging issues	Unknown	300,000/=
Grand Total			1,230,000/=