

**PEOPLE'S KNOWLEDGE, ATTITUDE AND PRACTICES ABOUT
SELF MEDICATION AND ITS IMPLICATIONS
IN ILALA MUNICIPALITY, DAR ES SALAAM**

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**Masters of Public Health
Muhimbili University of Health and Allied Sciences
July, 2013**

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By

Gladson Levson Ulendo Monjeza

**A Dissertation submitted in (Partial) Fulfillment of the Requirement for
the Degree of Masters of Public Health of
Muhimbili University of Health and Allied Sciences**

**Muhimbili University of Health and Allied Sciences
September, 2013**

Certification

The undersigned certify that he has read and hereby recommend for acceptance by Muhimbili University of Health and Allied Sciences dissertation entitled *People's Knowledge, Attitude and Practices About Self Medication and its Implications in Dar Es Salaam, Tanzania*, in partial fulfillment of the requirements for the degree of Masters of Public Health of Muhimbili University of Health and Allied Sciences.

Prof. J. Killewo

(Supervisor)

Date: _____

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Acknowledgement

First and foremost, I am so grateful to my supervisor Professor J. Killewo for his advices, contributions and guidance from the first draft of the proposal and throughout the whole process of coming up with this dissertation. Thanks too for granting me permission to conduct my study in DUCS-MUHAS-Harvard Collaboration area of study. You have been so inspirational to the development and completion of this work.

My exceptional and profound gratitude to my beloved wife Jane who has been so supportive and influential throughout my entire MPH course at MUHAS. Thank you so much my dear for your unflinching support, prayers and the financial support we jointly offered for the course.

I am forever thoughtful and appreciative to my parents-Rev. and Mrs. L. Monjeza who instilled in me the spirit of valuing education as a precious investment. Thank you so much for your prayers. Thanks too to my brothers and sisters, I really appreciate so much for your prayers and encouragement throughout my study.

Many thanks to the Coordinator of the MPH programme-Dr. M. Kazaura and all the MPH course lecturers for the immeasurable knowledge which I have acquired from you.

I am indebted to my employer-Malawi College of Health Sciences for granting me the study leave.

My appreciation to Tigistu Gebretensaye (Ethiopia) for his contributions. To my colleagues-Zione Mugala and Omero Mwale; thanks for the encouragement and the social support.

I am thankful to Patrick Kazonda and research assistants; Basil Undole, Rosepela Arthur (DUCS Team), Fabian Basilio and Sia Elius for their commitment and tireless efforts during data collection exercise. Thanks too to all participants in the study for being cooperative.

Above all, I am distinctively so grateful to the **Almighty God** for being with me all the time, and in particular for His care and protection throughout my entire study at MUHAS, and for taking me this far. I consequently owe all my achievements to Him.

Dedication

With absolute and sincere gratification, it is worthy to dedicate this work to *My Dear Wife Jane and my children (Titus, Meshach and Thandizo)* for their unwavering support, encouragement, prayers and the financial contribution towards my entire MPH course. The expedition looked so rough and tough but your prayers and resolute support prepared me to face the challenges with determination and hope, hence despite all the challenges, I was optimistic and it became so exciting. *“I therefore have the motivation to dedicate this work to you!”* May God continue showering His blessings to you.

Abstract

Background: Self medication has become a public health concern considering the high prevalence of the practice worldwide. Studies have revealed alarming knowledge deficiency about self medication and its implications; likely leading to inappropriate utilization of the medicines. The practice has therefore resulted into abuse of medicines, hence culminating into implications such as harmful side effects; multi-drug resistance and delay in seeking medical care at the health facilities, and children are one of the vulnerable groups to the practice of self medication.

Objective: The study was aimed at determining the people's knowledge, attitude and practices about self medication and its implications amongst caretakers of under five years old children in Ukonga ward in Ilala Municipality-Dar es Salaam, Tanzania in order to have a better understanding of their practice, knowledge and attitude about self medication and its implications.

Materials and Methods: The study was cross sectional in nature with a sample size of 281 subjects selected from the Dar es Salaam Urban Cohort Project's Health and Demographic Surveillance site using convenient non-probability sampling. The study population was caretakers of under five years old children aged from 18-54 years. Data was collected using a questionnaire with structured and open ended questions. Data entry, cleaning and analysis has been done using a computer programmer in SPSS version 20.

Results: The prevalence of self medication was found to be 68.8% and 71.5% for under five years old children and for persons aged 5 years and above respectively despite the negative attitude towards the practice. Community pharmacies were found to be the major source of medicines used for self medication. Thus, 80% (12) of the males self medicated the under 5 years old child while for females it was 71.6%. The AOR was 1.9 with CI of 1.76- 4.76. Thus, females are nearly 2 times more likely to self medicate their children than males. It was also revealed that there is lack of knowledge about self medication and its implications with an

association between age and knowledge about self medication. The AOR was 1.8 with CI of 1.87-3.52; implying that older people are almost 2 times more likely to be knowledgeable about self medication and its implications than the young ones. The study has also depicted an association between keeping medicines at home and age of the respondents. The AOR was 3.07 with CI of 1.29-7.29; implying that older people are 3 times more likely to keep medicines at home than the young ones.

Conclusion and Recommendation: Prevalence of self medication practice in the study area is very high. People are keeping and using prescription only medicines for self medication. Community pharmacies are the major source of the medicines. There is generally lack of knowledge about self medication practice and its implications despite the negative attitude towards the practice. Community awareness on the practice of self medication and its implications would be essential in improving the people's knowledge about self medication practice, thereby curbing it, and consequently averting the implications associated with it.

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Acronyms

ADR	: Adverse drug reaction
AOR	: Adjusted Odds Ratio
AIDS	: Acquired immuno-deficiency syndrome
ALU	: Artemether-Lumefantrine
CI	: Confidence interval
COR	: Crude Odds Ratio
DUCS	: Dar es Salaam Urban Cohort Study
HIV	: Human immuno-deficiency virus
IEC	: Information, Education and Communication
MDR	: Multi-Drug Resistant
MPH	: Master of Public Health
MUHAS	: Muhimbili University of Health and Allied Sciences
OTC	: Over the counter
SPSS	: Statistical Package for Social Sciences
UK	: United Kingdom
USA	: United States of America
WHO	: World Health Organization

Definition of Operating Terms

Adverse drug reaction : Severe undesired effects of medications

Anaphylactic shock : Severe (serious) allergic reaction to medications, sting or bite, food or any other chemicals

Health facility : Hospital, health centre or dispensary

Over the counter drugs: Medications which can be purchased from any shop or pharmacy without a prescription

Prescription only drugs: Medications which are supposed to be dispensed or sold after a legitimate prescriber's prescription

Respondents : Study participants

Subjects : Study participants

Side effects : Undesired outcome of medications

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Self medication is the selection and use of any medicine for the treatment of self recognized illnesses or symptoms without the physician's prescription (WHO, 1998). This is a non-formal health service and health related decision making which occur in the normal social context of people's everyday lives and has been part of the earliest history of mankind. Thus, people tend to self medicate in order to ensure they remain in good health as good health is a necessity.

Self medication is being practiced worldwide with high prevalence mostly in developing countries. The reasons for its practice vary from place to place (Novignon et al 2011). Though self medication has been adopted and is being practiced worldwide, people are not restricting themselves to OTC drugs only, or if they are, they are using them inappropriately (Omolase, et. al 2007). Most devastatingly, people are also using prescription-only drugs in self medication practice such as antibiotics or anti-malarial drugs, thereby predisposing themselves to the risk of developing resistance (Arikpo & Eja, 2010).

The practice of self medication is said to have reached a crisis, as people are using whatever they think has got medicinal content without knowledge of the implications associated with that particular medicine; thus, lack of knowledge on the implications of self medication is contributing significantly to the practice of self medication. Consequently, people develop severe harmful effects from the medicines and delay themselves in seeking medical care at the hospital, thereby complicating their conditions (Afolabi, 2012).

WHO (2008) emphasizes on the need to use OTC drugs responsibly as inappropriate use predisposes one to deleterious implications. This is a challenge in most developing countries and Africa in particular where illiteracy level is high, coupled by poor exposure

to information, let alone medical information, results into abuse of medicines. (Novignon et al 2011). Knowledge of self medication and its implications is therefore necessary as it will guide and regulate people on how to use medicines cautiously regardless of other factors which facilitate the practice of self medication such as distance to the hospital, availability and easy access of medicines in pharmacies or other shops, poverty, nature or emergency of their illness amongst several factors.

Most studies have shown lack of knowledge of self medication and its implications. (Balamurugani & Ganesh, 2011). Thus, if people have knowledge on how susceptible they are to implications of self medications, the severity of the implications, they will not indulge into self medication carelessly; rather will ensure they seek hospital intervention for proper examination, diagnosis and treatment for their illnesses.

1.2 Problem Statement

Although OTC drugs are meant for self medication and are of proved efficacy, their improper use due to lack of knowledge of their side effects and interactions pose serious implications, especially in extreme ages and special physiological conditions like pregnancy and lactation. Furthermore, self medication delays people in seeking hospital intervention; thereby complicating their illnesses. (WHO, 2008).

Self medication is being practiced worldwide and it is of public health concern due to its prevalence which is quite high. For instance, the prevalence of self medication in Greece was 77.9% (Skliros, et. al, 2010), 98% in Palestine (Sawalha, 2008), 71% in India (Balamurugani & Ganesh, 2011) and 76% in Pakistan (Zafar, et. al 2012).

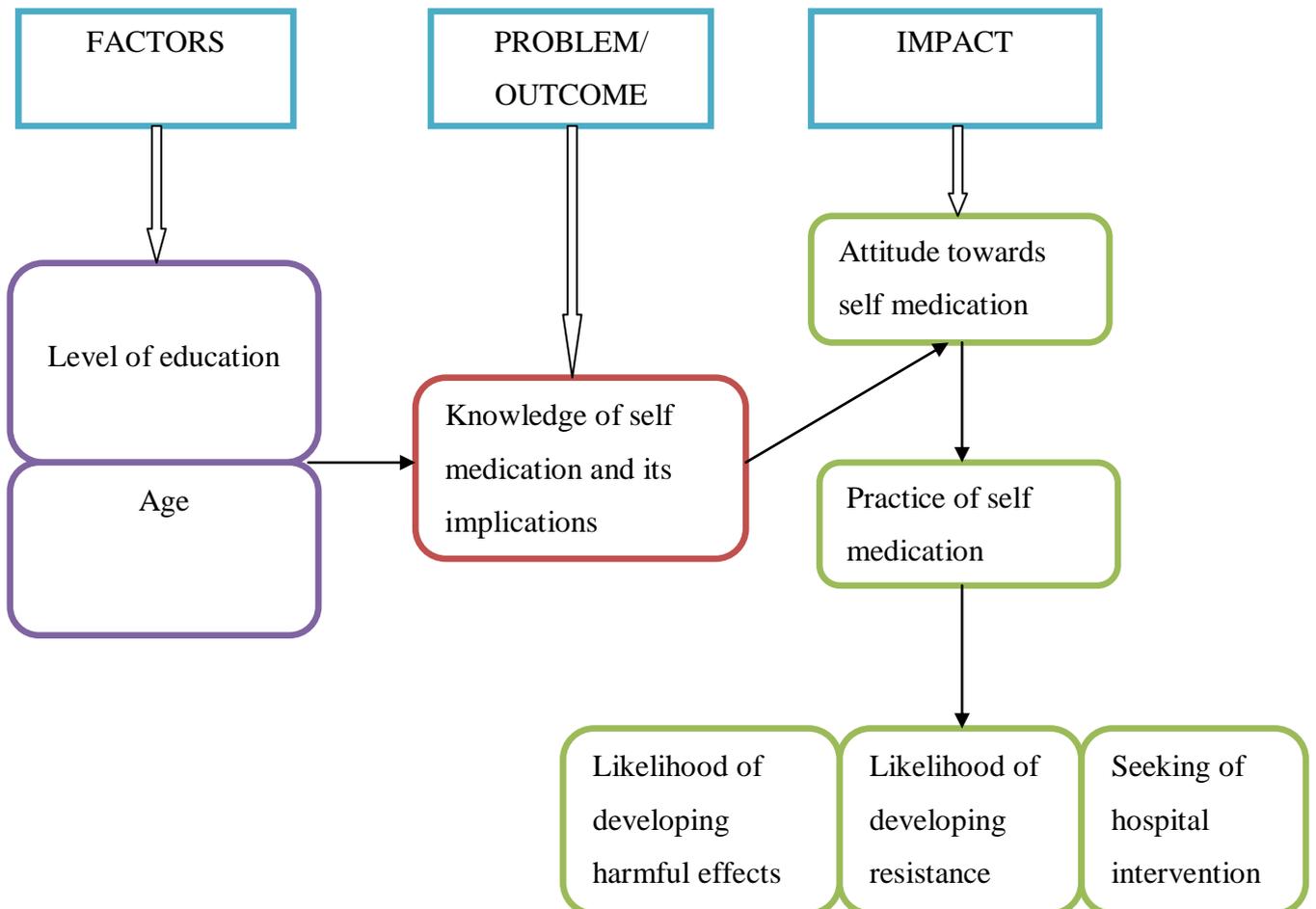
In most African countries, self medication is said to have reached a crisis as people tend to treat themselves with any medicines without considering its toxic or harmful effects; hence it was revealed in Nigeria that the prevalence of self medication was 99.4% (Arikpo and Eja, 2010) and 72.4% for pregnant women (Abasiubong et. al. 2012). In Tanzania, the prevalence of self medication for eye patients attending eye clinic was found to be 58.9%.

(Kagashe and Msela, 2012), while in Malawi it was found to be 56% (Novignon et. al. 2011). In Kenya, prevalence of self medication with antibiotics was 53.5% (Misati, 2012).

High illiteracy rate and poor exposure to medical information in most developing countries could be some of the contributing factors to the high prevalence of self medication (Afolabi, 2012). People's awareness of self medication and the implications associated with it would therefore be crucial in reducing the prevalence of self medication.

Conceptually, knowledge of the practice of self medication and its implications has impact on whether one should self medicate or not and how to self medicate; hence influence on the development of harmful effects/ADR, resistance and health care seeking behaviour, eventually affecting ones' condition and prognosis. Understanding of people's practices, knowledge and attitude towards self medication and its implications is therefore crucial as it may have an impact in developing strategies that will be deployed in addressing the high prevalence of self medication.

1.2.1 CONCEPTUAL FRAMEWORK



The above conceptual frame work describes that one's level of education and age can determine whether one has knowledge about self medication and its implications or not. Knowledge of self medication practice and its implications will necessitate one to either have negative or positive attitude towards self medication practice; hence decides whether to practice self medication or not. Self medication practice will expose one to the likelihood of developing harmful effects or resistance to medications and may affect one's decision in seeking medical care at a health facility.

1.3 Rationale

Self medication predisposes one to potential harmful effects of medicines and also results into delay in seeking hospital intervention, consequently complicating ones' condition. Surprisingly, regardless of all the harmful effects and implications associated with self medication, people are still practicing it, hence the high prevalence which is quite devastating.

The high prevalence of self medication as observed in most of the studies could be attributed to lack of awareness of self medication practice and its potential deleterious effects and other implications. Thus, people could be practicing self medication without taking any precautionary measures; thereby exposing themselves to the harmful effects of medicines, resistance and delaying themselves in seeking health facility intervention; hence the need for much more to be done to ensure the reduction in the prevalence of self medication.

Studies have shown high prevalence of lack of knowledge of self medication and its implications, depicting that people are self medicating without prior knowledge of the practice itself and its implications. Nevertheless, no study on people's knowledge, attitude and practice of self medication and its implications has been done in Ilala Municipal, in Tanzania. As factors influencing self medication vary from country to country and place to place, the study would like to establish the extent of the practice itself, knowledge, attitude about self medication and its implications amongst care takers of the under 5 years old children in Ilala Municipal.

Knowledge is said to influences attitude and attitude is said to influences practice, hence knowledge of the practice of self medication will be crucial in influencing the practice of self medication, consequently reducing the prevalence of self medication.

Results of this study will therefore be critical in facilitating development of strategies that will be deployed in addressing the high prevalence of self medication. Thus, building up on the people's knowledge by intensifying awareness messages on the practice of self medication and the implications associated with it to ensure that the prevalence is reduced. It

is anticipated that the study findings will open up for other areas of further study that will be aimed at reducing the high prevalence of self medication in Tanzania as a whole.

Research questions

1. What extent of knowledge do people have about self medication and its implications in Ilala?
2. To what extent do people self medicate the under five children in Ilala?
3. What proportion of people have ever observed adverse effects after self medicating the under five children in Ilala?
4. What prompts people to self medicate the under five children in Ilala?
5. What are the sources of the medicines used in self medicating the under five children in Ilala?
6. What drugs are commonly used for self medicating the under five children in Ilala?

1.4 Objectives

Broad Objective

- To establish people's knowledge, attitudes and practices about self medication and its implications in Ilala Municipal-Dar es Salaam

Specific Objectives

1. To determine the people's knowledge about self medication and its implications on health and health care seeking
2. To determine the people's attitude and practices about self medication in under five years old children and in those aged 5 years old and above
3. To determine the proportion of those who have ever observed adverse effects as a result of self medicating the under five children
4. To determine sources of the medicines used and reasons for self medicating the under five children

CHAPTER TWO

2.0 LITERATURE REVIEW

The concept of self medication has been adopted and is being practiced worldwide. Thus, self medication is being practiced worldwide and it is of public health concern considering the implications associated with the practice. Globally, prevalence of self medication is quite high, but varies from place to place as reasons or factors which facilitate the practice are diverse. For instance, the prevalence of self medication in Greece is 77.9% (Skliros, et. al, 2010), 98% in Palestine (Sawalha, 2008), 71% in India (Balamurugani & Ganesh, 2011) and 76% in Pakistan (Zafar, et. al 2012).

Though the practice of self medication is generally high globally, in developing countries and Africa in particular, it is quite alarming and has reached a crisis. People are treating themselves with any medicine or any substance they may think of without considering its toxic or harmful effects which may arise. (Tillement & Delaveau, 2007).

People rarely consult physicians, instead, they resort to self medication using all sorts of drugs which include antibiotics, pain killers, herbs and other chemicals as remedies; hence it was revealed in Nigeria that 99.4% of the population was using self medication (Arikpo nd Eja, 2010). The above study supports Afolabi (2008) findings that revealed a prevalence of 95% in a study conducted amongst marketing women in a sub-urban community in Lagos, Nigeria and that of Sudan which revealed a prevalence of 73.9% (Abdelmoneim, Eltayeb, & Matowe, 2005). Malawi and Kenya have a prevalence of 56% (Novignon et. al. 2011) and 53.5% (Misati, 2012) respectively.

There are recommended drugs called over the counter drugs which are supposed to be used in primary health care. But surprisingly, people are not restricting themselves to over-the-counter drugs (OTC) only, or if they are, they are using them inappropriately; but most devastatingly, they are also using prescription-only drugs such as antibiotics in self medication. This predisposes people to the risk of developing resistance (WHO, 2008). Thus, antibiotics and other types of medicines which are supposed to be prescribed-only

drugs are easily accessible to everyone as most pharmaceutical shops are selling drugs without prescription. Coupled by people's lack of awareness, this means that there is poor knowledge of self medication as a primary health care concept, its potential deleterious effects and other implications; hence people are self medicating without any precautionary measures (Zafar et al., 2008).

Though WHO acknowledges and recommends self medication in primary health care, there is need for one to be cautious and responsible when self medicating; hence requires a certain level of knowledge and health orientation regarding self medication. Studies have reported that OTC drugs have been even associated with adverse health reactions and fatalities (Sawalha, 2007).

Despite its effectiveness in primary health care if appropriately utilized, self medication has resulted into inappropriate drug use such as misdiagnosis on the illness, taking either high or low doses, lesser or longer period of taking the medicines not as recommended (Ali, Ibrahim, & Palaian, 2010). These practices have resulted into irrational drug use resulting into increased side effects, drug interactions, and delayed in seeking health facility care or advice; hence complicating the patient's condition (Novignon et. al. 2011)

Apart from the above implications, the consequence of incorrect diagnosis and incorrect dosage as a result of self medication is the growing resistance to drugs. (Grigoryan et al., 2006). Thus, antimicrobial resistance is currently a problem worldwide, more especially in developing countries where people are accessing antibiotics without a prescription (Verma, Mohan, & Pandey, 2010)

Though the problem of the antibiotic resistance is a worldwide problem, it is more common in developing countries where there is easy access of medicines without a prescription (Abasiubong et. al. 2012). The practice also includes antimalarial drugs which are also being abused and this has resulted into resistance to the malaria parasite due to its inappropriate use (Abdelmoneim et al., 2005).

Tanzania, being one of the developing countries, it is also experiencing a high prevalence of self medication. For instance, the prevalence for eye patients attending eye clinic was found to be 58.9% (Kagashe & Msela, 2012). Malawi and Kenya have almost similar prevalence of self medication; thus, 56% (Novignon et. al. 2011) and 53.5% (Misati, 2012) respectively. Self medication in Tanzania is partly attributed to escalation of pharmacies as most of the pharmacies sell medicines without prescription, enabling patients to access drugs without difficulties, hence promoting self medication (Kagashe et al. 2010). It is of great concern when people use medications without prescription from the legitimate prescriber as they may take inappropriate drugs for their conditions, in inappropriate doses, frequency or duration which may result into development of harmful effects, resistance and even delay them in seeking for hospital intervention, thereby complicating their conditions. For instance, some patients in the eye clinic developed blindness as a result of self medication for eye infections (Kagashe & Msela, 2012).

The implications of self medication still remains a challenge as most of the implications are quite devastating. Nevertheless, despite all the implications associated with self medication, its prevalence is so high (Gutema et al., 2011). For instance, the use of over the counter drugs for treatment in children is also being highly practiced despite lack of evidence of efficacy of the medicines used and the potential for its implications (Abasiubong et. al. 2012). Thus, people are not aware that self medication makes up a high percentage of poisoning admissions in under five years children than any other chemicals available in homes (Allotey, Reidpath, & Elisha, 2013).

Self medication is posing serious and potential life threatening implications as studies have reported convulsions, reduced consciousness level, rapid heart rate, even death as a result of inappropriate use of drugs (U.S FDA, 2008). The abuse of self medication has resulted in people delaying in seeking for hospital intervention, thereby complicating their illnesses as self medication may treat the symptoms not the underlying disease (Yousef, et. al. 2008).

There are of course several factors which are associated with self medication which include socio-cultural, poverty, lack of knowledge on the implications of self medications,

previous experience with similar symptoms, high charges by hospitals, lack of time to go to the health facility, lack of accessibility to health care facility, distance to the health facility, urgency of the problem (emergency use), bureaucracy, congestion (overcrowding in hospitals), stock outs of drugs in most public health facilities and trivial/minor illnesses; these factors vary from place to place (Gupta, Bobhate, & Shrivastava, 2011).

As observed from different studies, there is high prevalence of lack of knowledge of self medication and its implications. For instance, in India, the prevalence of lack of knowledge of self medication and its implications was found to be 93.5% (Balamurugani and Ganesh, 2011), 75% amongst pregnant women in U.S (Marek & Antle, 2011), 79% in Netherlands (Fishman et. al 2011).

It is surprising to note the high deficiency of knowledge of self medication and its implications in the developed countries considering the literacy level in developed countries which is quite high unlike in developing countries. But contrary to that, there is also high inadequate knowledge about self medication and its implications (Hsiao et al. 2006). Thus, level of knowledge of self medication and its implications was expected to be high in the developed countries; but on the contrary, as observed from the studies conducted, there is high prevalence of knowledge deficiency even in developed countries. This demonstrates that people are self medicating without knowledge of the practice of self medication (Aoyama, Koyama, & Hibino, 2012). This is really a threat to people's health as they may consequently develop harmful effects, drug resistance or complicate their illnesses by using inappropriate medication as well as delaying themselves from seeking appropriate health care at the health facility.

Knowledge of self medication and its implication is therefore essential in reducing the prevalence of self medication; though surprising to note that even medical students were self medicating without knowledge of self medication and its implications (Sharif et. al. 2012). If the medical students who are expected to have adequate knowledge of medicines do not have the knowledge about self medication and its implications, what more with people who are non- medical, let alone illiterate people? This indicate high knowledge

deficiency amongst the people; hence liable to the implications of self medication. (Ezz, 2011)

Even in developing countries where illiteracy level is so high, self medication concept remains a challenge with its high prevalence, depicting rampant abuse of self medication as most people do not know the dosage, frequency and duration of taking the drugs (Frøkjær et al.2001). Thus, the deficiency of knowledge could be worse unlike in developed countries. When people have the knowledge of self medication and its implications they are likely to self medicate with caution. (Aishwaryalakshmi et al.2012). Thus, people may likely ignore other factors which facilitate self medication such as the distance to the hospital, or the easy accessibility of the medicines for fear of developing the harmful effects and other implications like resistance and complication of their conditions/illnesses as a result inappropriate use of medications or delay in seeking for hospital intervention. Consequently, people will be using the health facilities when they fall sick for proper examination, diagnosis and appropriate treatment.

The high prevalence in the practice of self medication requires urgent attention, as medicines comprise different chemicals which have both beneficial and harmful effects to human health (Omolase, et. al 2007). These harmful effects include; dangerous drug interactions when different interacting drugs have been combined, severe adverse drug reactions such as anaphylactic shock, inflammatory bowel syndrome which involves the gastrointestinal system organs, damage to the kidneys, drug intoxication to the liver. For instance, paracetamol which is an OTC drug is one of the drugs which are metabolized by the liver, hence taking it inappropriately can cause liver failure (liver toxicity). Liver toxicity is the most common cause of acute liver failure in USA and UK associated with paracetamol intake (Sonam, J. et al. 2011).

Self medication poses high risk in extreme ages and physiological conditions such as pregnancy and lactation as most households in both urban and rural communities seek medical interventions at the health facilities after taking or initiating the patient on medication at home regardless of the age or state of the patient. For instance, when giving medication to children, dosage depends on their weight; but in self medication there is no checking of the

weight or age in relation to the drugs to be given. This could lead to over dose or under dose leading to complications such as drug intoxication, complication of the illness itself and resistance as a result of the inappropriate utilization of the medicines (WHO 1998).

In pregnant women, inappropriate medication may cause complications such as abortion, fetal congenital malformation, still birth or preterm labour; hence the need to take pre-cautionary measures before taking any medications as some drugs are contraindicated in pregnancy and lactation or they are given with caution. (Marek & Antle, 2011). But if pregnant women self medicate without knowledge of its implications, then they are likely to take any drugs which may eventually result into these devastating implications.

The other danger of self medication is concealing of illnesses. Thus, self medication can conceal serious infections or conditions such as tuberculosis, cancer, hypertension, diabetes, HIV and AIDS and many other illnesses which could have been treated or well managed if they presented to the hospital on time (Afolabi, 2012).

Despite the harmful effects and implications attributed to self medication, many people are still practicing it. This could be attributed to lack of knowledge of self medication and its devastating effects. Therefore, assessing the people's knowledge, attitude and practice of self medication is quite essential as it will guide in the formulating strategies to be used in addressing the high prevalence of self medication in most developing countries.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study area

Description of Study area

Ilala District is one of three districts in Dar es Salaam, Tanzania, the others being Temeke to the South and Kinondoni to the North. The 2002 National Tanzania Census states the population for Ilala as 634,924. The area is 273 km². Ilala is commonly referred to as 'Downtown Dar', where much of the commerce, banking, and national offices are located. Ilala District is subdivided administratively into 3 divisions which are Ilala, Kariakoo and Ukonga divisions, with 26 wards and 102 streets.

The study was specifically conducted in Ukonga Ward. Thus, it took advantage of the existing Dar es Salaam Urban Cohort Study (DUCS)-a MUHAS-Havard Collaboration Study which is currently under way in the area under Professor J. Killewo as its Principal Investigator to identify one of the streets amongst the streets under DUCS. This made entry into the area of study to be more convenient as DUCS has permission already of conducting study in the area.

Ukonga is one of the 26 wards of the Ilala Municipal Council and has a total of seven streets of which Mazizini is one of them. The population of Ukonga is estimated to be 102, 066; thus, 51,075 women, 50,991 men and 16,410 households. (Regional profiles 2011).

People in Ukonga ward, just like in many other parts of the city, were likely to be exposed to the practice of self medication due to several factors considering the high prevalence of self medication worldwide.

Study period

The study was conducted in June 2013 and the duration was one month. The study commenced immediately after being approved by MUHAS research publication and directorate that include members from schools of medicine and public health and social sciences.

3.2 Study design

The study was cross sectional in nature. The design was ideal in assessing prevalence, association of variables and it provided quick and easy data gathering with regard to limited time allocated for the study to be accomplished. The design was also reasonable for the allocated budget. Though it does not establish causal inferences, it was able to capture the required data necessary for analysis based on the outlined objectives of the study.

3.3 Study population

The study targeted the population in Ilala Municipality in Dar es Salaam. The study population was care takers of under five years children aged 18 -54 years from Mazizini Street in Ukonga Ward that were sampled using the existing DUCS data base.

Inclusion criteria

- Resident of Mazizini Street who has an under five years old child within the household
- Aged 18-54 years

Exclusion criteria

- Those who did not consent to be study participants
- Those who were not feeling well/sick

3.4 Sample size

The sample size was calculated based on the following formula;

$n = Z^2 P (100-P)/d^2$; then adding 10% for anticipated subjects who would refuse to participate in the study after being randomly selected and for the null and void questionnaires.

n=Required sample size

Z=1.96 (at 95% confidence interval)

P=Prevalence of self medication

d²=Margin of error

Proportion =79% (Prevalence in Netherlands; Fisherman et al. 2011) and **d**² of 5

Therefore, $n = 1.96^2 \times 79(100-79)/ 5^2$

$$\begin{aligned}
 &= 254.92 \\
 &= 255 \\
 \text{Add 10\%} &= 25.5 + (255) \\
 &= 281
 \end{aligned}$$

3.5 Sampling technique

Convenient non-probability sampling was used to acquire study participants (care takers of under five years old children) in Ukonga ward-Ilala district. This sampling technique was deployed due to the limited time which was allocated for the study to be completed; thus, it offered expediency in identifying and accessing the respondents as it took advantage of the existing study (DUCS) in the area by conveniently sampling the subjects and one of the streets in Ukonga Ward. This street was Mazizini. Thus, respondents were conveniently sampled from the DUCS health and demographic surveillance data base by identifying households which had under five years old children.

3.6 Data collection tools, procedures/methods

3.6.1 Research tool/ instruments

- ❑ Swahili translated questionnaires for data collection during an interview session
- ❑ Computers for data entry, analysis and report writing.
- ❑ Pen and Pencils for questionnaire numbering and ticking during an interview.

3.6.2 Data collection

To ensure that the data collection exercise should be completed in time, four research assistants were hired and trained. The training focused on the objectives of the study, overview of data collection, selection criteria, importance of obtaining consent, interview techniques, understanding of the questions and clarification on why and how each question should be asked, and how responses were supposed to be recorded on the questionnaire.

The researcher together with the trained assistants made house to house visits in Mazizini and approached the head of household to explain the purpose of the study and to request for interviews. Swahili translated questionnaires (see Appendix 2) was used to collect data

about demographics, socio-economic and knowledge, attitude and practices of self medication and its implications. To every research participant, the outlined information in the questionnaire was collected during an interview.

The principal investigator made intensive supervision of the data collection process, to ensure that necessary corrections if any were done there and then in order to minimize null and void questionnaires.

Questionnaires were pre-tested in order to validate the acceptability to the intended audience; thus, assessing if the data collection tool would be able to generate the desired information, checking the sequence of the questions and to estimate the time to be taken per each interview for planning purposes. No major corrections were made apart from the few editing on spellings.

3.7 Variables

3.7.1 Independent variables

Age

Sex

Level of education

Occupation

3.7.2 Dependent variable

Attitude towards self medication

Knowledge about self medication practice and its implications

Practice of self medication

3.8 Data management and analysis

The data collected was being tallied and recorded at the end of each day's work. Thus, questionnaires were checked for completeness and accuracy. Data was then recorded and entered on the computer and back up; then the study tools were being transported using

public transport and were locked for safety. Meetings with research assistants were being conducted at the end of each day's work to address any hiccups during data collection process.

Data analysis on attitude was done based on a 5 point Likert scale with alternative responses of; 'strongly agree', 'agree', 'neither agree nor disagree', 'disagree', and 'strongly disagree' with points 4, 3, 2, 1 and 0 respectively. A score of 51% was said to be positive attitude while a score of 50% and below was said to be negative attitude. Thus, the highest score was 16 which was converted to percentage as 100%; cutoff point score was 8 which was converted to 50%; while the lowest score was 0. Knowledge was assessed using participants' alternative responses of; 'true', 'not true' and 'don't know' with scores of 2 for the correct response and 0 for the wrong response and 'don't know' response. The highest score was 12 which was converted to percentage as 100% while the lowest score was 0. A score of 75-100% was said to be high knowledge, a score of 50-74% was said to be moderate knowledge, while a score of below 50% was said to be low knowledge.

The data entry, cleaning and analysis was done using a data entry screen which was prepared by a computer programmer using statistical package for social sciences (SPSS) version 20. Cross tabulations were done for frequencies and proportions in order to find out if there was any association between the variables by obtaining both crude odds ratio (COR) and confidence interval (CI). Thereafter, regression analysis was done in order to address for any confounders by finding the adjusted odds ratio (AOR) and CI. Comparison between the COR and AOR was done in order to observe if at all there were any confounders on the findings in the association of the variables in question. AOR with CI which excluded 1 was said to portray a significant association between the concerned variables. Thereafter, the results were presented in tables and graphs and then interpreted during report writing for discussion, conclusion and recommendations.

3.9 Ethical Consideration

- ❑ Ethical clearance to conduct the study was obtained from MUHAS Directorate of Research and Publication Ethical Review Board
- ❑ Permission to conduct the research in Ukonga Ward-Ilala District was requested from the DUCS which already had permission to collect health and demographic data in the area.
- ❑ To every interviewed care taker, an informed consent was asked before active participation in the interview and participant confidentiality was assured by using code numbers on each questionnaire instead of names and participants were isolated from other research participants during information gathering.

3.10 Limitations of the Study

- ❑ The study used non-probability sampling (convenient sampling method) hence the results could be bias and may not be generalized.
- ❑ It was difficult for some subjects to mention the names of the medications which they used for self medication because of the difficulty associated with names of most of the medicines. Despite using the colour and size of the medications during the interviews, it was still difficult for some of the subject to mention the medications which they used.
- ❑ Recalling of the medications used for the past six months was also another limitation. Some of the subjects could hardly remember the medications which they used for self medication. Thus, leading to recall bias. This could have an impact on the medications which were mostly used for self medication.
- ❑ Many people seemed to be aware that self medication practice is not encouraged, hence could be observed withholding some information despite may be practicing it. This may have an impact on the prevalence of self medication as observed in this study.

4.0 Results

Table 1: Socio-Demographic Characteristics of the Respondents in Ukonga Ward, Ilala District, Dar es Salaam- June 2013 (n=281)

Characteristics	Categories of the Characteristics	Frequency	Percent (%)
Age	18-24	74	26.3
	25-34	139	49.5
	35-54	68	24.2
Sex	Male	29	10.3
	Female	252	89.7
Marital Status	Single	52	18.5
	Married	223	79.4
	Divorced and Widowed	6	2.2
Education level	Not attended	15	5.3
	Primary	202	71.9
	Secondary school and higher	64	22.8
Occupation	Housewife	149	53.0
	Businessman/woman	63	22.4
	Unemployed	27	9.6
	Casual labour/employed/ farmers and others	42	15.0

Table 1 shows socio-demographic characteristics of 281 subjects from Mazizini Street in Ukonga ward who were enrolled in the study with mean age of 31.2 and standard deviation of 7.7. The participants whose age ranged from 18-24 years were 26.3% (74), 25-34 years were 49.5% (139), and 35-44 years were 17.1% (48) while for 45-54 years range were 7.1% (20). Out of the 281 subjects interviewed, males were 10.3% (29) while females were 89.7% (252). 18.5% (52) of those interviewed were single, 79.4% were married, and 2.2% were divorced and widowed. Those that did not attend any formal education were 5.3% (15), those who attended primary were 71.9% (202), secondary school or higher 22.8% (64). On occupation, 53% (149) were housewives/househusbands, 22.4% (63) were businessmen or businesswomen, 9.6% (27) were unemployed while 15% (42) were employed, farmers, casual labourers and those doing other activities.

Table 2: Self Medication practice towards Under 5 Years Old Children and or to Persons aged 5 Years Old and above

Self Medication Practice	Response	Frequency	Percent (%)
Towards Under five Years Old Child (n=256)	Yes	176	68.8
	No	80	31.2
Towards Persons Aged 5 Years old and Above (n=281)	Yes	201	71.5
	No	80	28.5

Out of the 256 respondents, 68.8% (176) gave unprescribed medication to the under five years old children who fell sick for the past six months, while 71.5% (201) of the 281 respondents admitted to have practiced self medication to persons aged 5 years and older at some point in time. It was however not known in what conditions were these medications being stored and for how long were they stored before being used. It was therefore not known whether the medications were expired or not.

Table 3: Association between Respondents' Socio-demographic characteristics and Self medication Practice to under 5 years old Children

Socio-demographic Characteristic	Number in Study	Frequency	Per-cent (%)	Self Medication Practice			
				Crude Odds Ratio	95% CI	Adjus-ted Odds Ratio	95% CI
Age							
18-34	193	139	72.0				
35-54	63	37	58.7	0.55	0.31-1.00	0.45	0.18-0.99
Sex							
Male	15	12	80.0				
Female	229	164	71.6	3.15	1.40-7.10	1.90	1.76-4.76
Education Level							
Not Attended	14	7	50.0				
Attended	242	169	69.8	2.32	0.78-6.84	2.29	0.72-7.38
Occupation							
Not Working	159	115	72.3				
Working	97	61	62.9	0.65	0.38-1.11	0.33	0.13-0.83

Analysis were initially done for the crude odds ratio and then later for the adjusted odds ratio. Variables which were adjusted include age, sex, education level and occupation. A large proportion, 72% (139) of the respondents aged 18-34 practiced self medication while 58.7% (37) of the respondents aged 35-54 years were the ones who practiced self medication to the under 5 years old children. Males self medicated more than the females

with 71.6% (12) and 44.4% (164) respectively with COR of 3.15 and CI of 1.40-7.10; AOR of 1.9 with CI of 1.76, 4.76. Half of the respondents 50% (7) who did not attend any formal education practiced self medication while 69.8% (169) Of those who attended formal education practiced self medication. Respondents who were not working were observed to be practicing self medication more than those who were working; thus 72.3% (115) and 62.9% (61) respectively.

Table 4: Association between Respondents' Socio-demographic characteristics and Self medication Practice to Persons aged 5 years old and above

Socio-demographic Characteristic	Number in Study	Frequency	Per-cent (%)	Self Medication Practice			
				Crude Odds Ratio	95% CI	Adjus-ted Odds Ratio	95% CI
Age							
18-34	213	148	69.5				
35-54	68	53	77.9	1.55	0.82-2.95	1.32	0.70-2.47
Sex							
Male	29	23	79.3				
Female	252	178	70.6	0.63	0.25-1.60	0.65	0.23-1.81
Education Level							
Not Attended	15	11	73.3				
Attended	266	190	71.4	0.91	0.28-2.94	0.97	0.28-3.29
Occupation							
Not Working	176	126	71.6				
Working	105	75	71.4	0.99	0.58-1.69	0.79	0.31-2.02

Out of the respondents aged 18-34 years old, 69.5% (148) practiced self medication while for those aged 35-54, 77.9% (53) practiced self medication. 79.3 % (23) of the male respondents practiced self medication with 70.6% (178) for the females. Those who did not attend any formal education practiced self medication more than those who had formal education with 73.3% (11) and 71.4% (190) respectively. There was no much difference between those working and not working with 71.6% (126) and 71.4% (75) respectively.

Table 5: Attribute of Knowledge about Self Medication Practice and its Implications

Attribute of Knowledge (n=281)	Number with attribute	Percent (%)
Having moderate to high knowledge level about self medication and its implications in general	160	57.0
Having knowledge about self medication causing other harmful effects	245	87.2
Having knowledge about self medication causing harmful effects on pregnancy	189	67.3
Having knowledge about self medication delaying one from seeking hospital intervention	190	67.6

Generally, 57% (160) had moderate to high knowledge level about self medication and its implications. 87.2% (245) had knowledge on self medications causing other harmful effects, 67.3% (189) had knowledge on medication causing harmful effects on pregnancy while 67.6% (190) had knowledge about self medication delaying one from seeking hospital intervention.

Table 6: Association between Respondents' Socio-demographic Characteristics and Knowledge about Self medication Practice and its Implications

Socio-demographic Characteristic	Knowledge about Self Medication Practice and its Implications						
	Number in Study	Frequency	Per- cent (%)	Crude Odds Ratio	95% CI	Adjus- ted Odds Ratio	95% CI
Age							
18-34	213	113	53.1				
35-54	68	47	69.1	1.98	1.11-3.54	1.77	1.87-3.52
Education Level							
Not Attended	15	12	80.0				
Attended	266	148	55.6	0.31	0.09-1.14	0.32	0.09-1.17

Out of the respondents aged 18-34 years, 53.1% (113) had knowledge about self medication practice and its implications whereas 69.1% (47) of the respondents aged 35-54 years old were the ones who had knowledge about self medication practice and its implications. The COR on age was 1.98 with CI of 1.11-3.54; AOR was 1.77 with CI of 1.87-3.52.

Table 7: Attribute of Attitude towards self medication (n=281)

Aspects of Attitude	Number with attribute	Percent (%)
Positive attitude	250	89.0
Negative attitude	31	11.0

Table 8 shows the attitude of the respondents towards self medication. Thus, out of 281 subjects, 11% (31) respondents showed positive attitude towards self medication while 89% (250) showed negative attitude.

Table 8: Attribute of Attitude towards self medication (n=281)

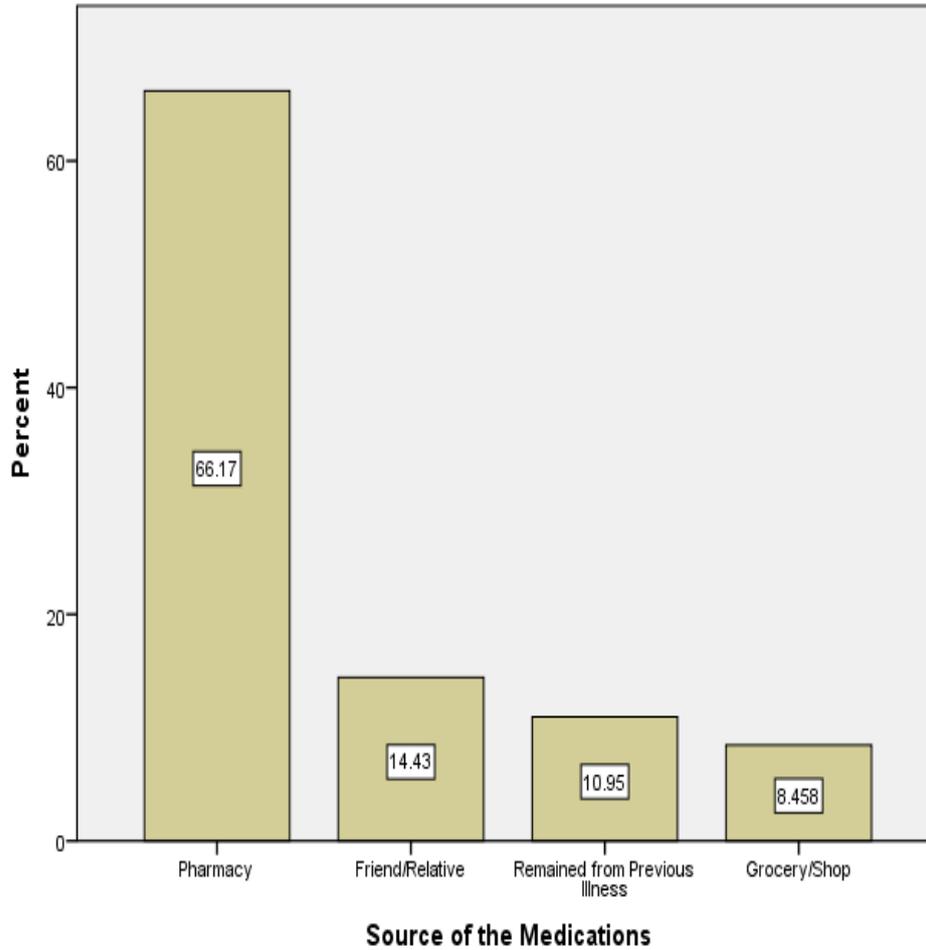
Attribute of attitude	Number with attribute	Percent (%)
Disagreeing or strongly disagreeing with self medication as a practice	250	89.0
Disagreeing or strongly disagreeing with taking self medication whenever one is sick	248	88.3
Disagreeing or strongly disagreeing with self medication is better than hospital prescribed medicines	244	86.8
Disagreeing or strongly disagreeing with sharing of medications	266	94.7
Disagree or strongly disagree the self medication is better than going to the hospital	274	97.5

Generally, most of the respondents; 89% (250) had negative attitude towards self medication as a practice. Thus, 88.3% (248) disagreeing with taking unprescribed medications when they fall sick; 86.8% (244) disagreeing that self medication was better than hospital prescribed medications, and 94.7% (266) were against sharing of medications. Most of them, 97.5% (274) preferred going to the hospital when they fall sick than resorting to self medication.

Table 9: Association between Respondents' Socio-demographic Characteristics and Keeping of Medications at Home

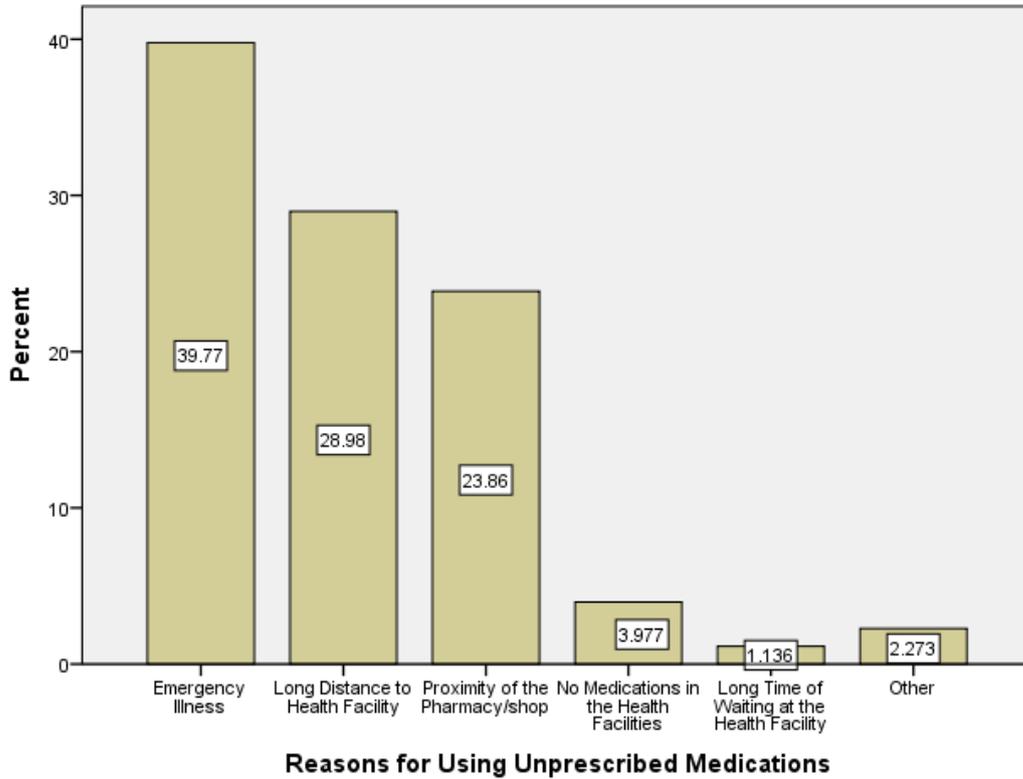
Socio-demographic Characteristic	Keeping of Medicine at Home						
	Number in Study	Frequency	Per-cent (%)	Crude Odds Ratio	95% CI	Adjus-ted Odds Ratio	95% CI
Age							
18-34	213	73	34.3				
35-54	68	15	22.1	1.84	0.97-3.49	3.07	1.29-7.29
Sex							
Male	29	13	44.8				
Female	252	75	29.8	1.92	0.88-4.18	1.72	0.67-4.39
Education							
Level							
Not Attended	15	3	20.0				
Attended	266	85	32.0	0.53	0.15-1.94	0.70	0.18-2.76
Occupation							
Not Working	176	46	26.1				
Working	105	42	40.0	0.53	0.32-0.89	0.55	0.21-1.42

Out of the 281 subjects, 31.3% (88) admitted keeping medications at home. Thus, 34.3% (73) of those aged 18-34 years and 22.1% (15) of those aged 35-54 years old were keeping medications at home with AOR of 3.07 and CI of 1.29-7.29. As regard to sex, 44.8% (13) of the males and 29.8% (75) of the females kept medication at home, with 20% (3) of those who did not attend any formal education and 32% (85) of those who attended formal education keeping medications at home, while 26.1% (46) of those not working and 40% (42) of those working were found to be keeping medications at home with varied reasons.

Figure 1: Source of Medications Used (n=201)

Most of the respondents who practiced self medication, 66.2% (133) sourced the medications from the community pharmacies popularly known as ‘duka la dawa’ in Kiswahili with 14.4% (29) from a friend or relative, 10.9% (22) sourced them from the remains of their previous illness, while 8.5% (17) sourced them from the grocery/shop. This means that access for medications in pharmacies is not restrictive to prescriptions as most of the medicines used were not OTC.

Figure 2: Reasons for Using Unprescribed Medications to the Under Five Years Old Children (n=176)



Reasons for self medication were so many but most of the respondents, thus, 39.8% (70) practiced self medication for emergency illnesses, 29% (51) because of long distance to the hospital, 23.9% (42) due to proximity to the pharmacy/shop, 4% (7) due to unavailability of medications at the health facilities, while long time of waiting at the hospital before they get treatment was 1.1% (2) and other reasons 2.3% (4).

Table 10: Problems Observed After Giving Unprescribed Medications (n=61)

Problem Observed	Frequency	Percent (%)
Body Rash	6	9.8
Severe Vomiting	11	18.0
Condition Worsened	44	72.1

Out of the 176 respondents who practiced self medication, 34.7% (61) observed problems on the child. The majority of the respondents, thus 72.1% (44) reported worsening of their child's condition but could hardly tell what was the exact problem, while 18% (11) observed severe vomiting and 9.8% (6) severe rash.

Table 11: Respondents' Self Medication Practice

Self Medication Practices	Number with attribute	Percent (%)
Keeping medicines at home (n=281)	88	31.3
Keeping only one type of medicine at home (281)	69	24.6
Keeping two types of medicine at home (281)	17	6.0
Keeping three types of medicine at home (281)	2	0.7
Gave one type of medicine without prescription to a sick child (n=256)	115	44.9
Gave 2 types of medicines without prescription to a sick child (256)	65	25.4
Gave three types of medicines without prescription to a sick child (n=256)	30	11.7
Gave four types of medicines without prescription to a sick child (n=256)	8	3.1
Keeping medicines at home for emergency purposes (n=88)	43	48.9
Frequently giving medicines to persons aged 5 years and above without prescription (n=201)	56	27.9
Recovery as outcome of self medication (n=176)	97	55.1
Used Paracetamol for self medication (n=176)	116	65.9
Used Amoxicillin for self medication (n=176)	63	35.8
Used ALU for self medication (n=176)	43	24.4
Used cough syrup for self medication (n=176)	40	22.7
Used Cotrimoxazole for self medication (n=176)	36	20.5
Used Quinine for self medication (n=176)	22	12.5

Table 11 shows that out of the 281 respondents, 31.3% (88) kept medications at home and out of the 88 respondents, 48.9% (43) kept the medication for emergency purposes. 24.6% (69) respondents kept a single drug while 6.7% (19) kept more than one drug. 44.9% (115) gave the child at least a single drug while 40.2% (103) gave more than one drug. 27.9% (56) of the respondents gave the medications frequently with just above half of the children, thus 55.1% (97) recovering after the self medication. The most commonly used medication for self medication by the respondents was paracetamol with 65.9% (116) , while other respondents used even antibiotics such as amoxicillin 53.8% (63), cotrimoxazole 20.5% (36), anti-malarial drugs; ALU 24.4% (43), quinine 12.5% (22) and 22.7% used cough syrup for self medication.

5.0 Discussion

The study was aimed at determining the knowledge, attitude and practice about self medication and its implications among the caretakers of under five years old children. The results of the study show that there is generally high prevalence of the practice of self medication among the caretakers of the under five years old children towards both the under five years old children and towards persons aged 5 years old and above. Thus, the study revealed that 68.8% of the respondents practiced self medication to the under five years old children and 71.5% to persons aged 5 years old and above.

Findings in this study are almost similar to other studies conducted in India Balamurugani and Ganesh (2011) and (Abdelmoneim et al., 2005) which revealed prevalence of 71% and 73.9% respectively. The results in this study are of course higher than those found in the study conducted in Tanzania by Kagashe & Msela, (2012) which showed a prevalence of 58.9%; Malawi and Kenya with a prevalence of 56% (Novignon et. al. 2011) and 53.5% (Misati, 2012) respectively. However, findings in this study are lower than those of the studies conducted in Nigeria by Arikpo and Eja, (2010) and Afolabi (2008) which revealed a prevalence of 99.4% and 95% respectively, and those found in Palestine by Sawalha (2007) which had a prevalence of 98%. and 53.5% respectively.

The variations observed in the findings could however be attributed to the study population enrolled in each specific study, sampling technique and the sample size for the study as most of these studies used a larger sample size. Nevertheless, the remarkable observation in all the studies is that there is high prevalence of self medication practice, not only amongst African countries but even in other parts of the world. This implies that self medication is indeed a worldwide practice and this should be of public health concern as people are exposed to the deleterious effects of medications.

There were varied reasons as to why the respondents used self medication. The majority of them cited emergency illness, thus, 39.8% (70) as the main reason for self medication while others mentioned long distance to the health facilities; 29% (51) and many other reasons.

The above results concur with results found in a study conducted in India by Gupta, Bobhate, & Shrivastava (2011) and in Tanzania by Kagashe & Msela, (2012). Despite the varied percentages in the reasons of practicing self medication, the challenge still remains on whether people are taking the right medications with the right dosages and frequencies or not. This however depends on whether one has knowledge about the specific medications being used or not, as inappropriate use put one's health at highly potential risks.

Although self medication can be of help in treating minor illnesses which do not require hospital intervention, hence reducing pressure on the medical services in most countries with limited health care services, the use of medications like antibiotics without prescription is of great concern. There are potential risks associated to the use of antibiotics which include masking of malignant and potentially fatal diseases and development of resistance to pathogens which is termed MDR (Gupta et. al. 2011). This is also supported by Misati (2012)

In regard to the association between the practice of self medication socio-demographic characteristics, of the respondents, it was revealed that 80% (12) of the males self medicated the under 5 years old child while 71.6% of the females were the ones who self medicated the under 5 years old children. Thus, the AOR was 1.9 with CI of 1.76-4.76. This implies that there is a statistical significant association between sex and self medication to the under five years old. Thus, females are nearly 2 times more likely to self medicate their children than males. Other studies have revealed that males are likely to self medicate than females; thus, a study conducted by Ilhan et. al. (2009) revealed that more males self medicated than females with a P-Value of <0.05 which was statistically significant. These could be due to differences in health seeking behaviours between the males and the females.

Findings in this study are similar to the study conducted among patients in India by Balamuragan & Ganesh (2011), who found out that females were more likely to self medicate more than males with a P-Value of <0.001 . Nonetheless, the above findings are depicting that sex is associated with self medication despite disparities in the sex which is

more likely to self medicate. The disparities in the findings could however be attributed to the difference in study methodologies deployed, sample size or study population as these can influence the outcome of the study. All the other socio-demographic characteristics were found to be statistically insignificant despite having AOR of below or above one.

The study has revealed that there is generally inadequate knowledge about self medication and its implications. Thus, out of 281 care takers, only 57% (160) respondents had moderate to high knowledge about self medication practice and its implications. This coincides with a study conducted in India by Balamurugani & Ganesh (2011) which revealed a very high percentage of lack of knowledge about self medication and its implications (93.5%). These results are also supported by studies conducted among pregnant women in U.S.A by Marek & Antle (2011), and in Netherlands done by Fishman et al. (2011) which revealed 75% and 79% lack of knowledge amongst respondents respectively. These results are however in contrast to the study done amongst medical and non-medical university students in India by Zafar et al. (2007) which found high knowledge (87%). This could however be attributed to their exposure to medical literature as this study was conducted among university students. Nevertheless, most studies reveal an alarming inadequacy of knowledge about self medication and its implications. Notwithstanding the high prevalence of self medication worldwide, the assumption could be that the magnitude of the knowledge inadequacy could even be underestimated in most areas (Afolabi, 2012). Consequently, the lack of knowledge about self medication and its implications may likely contribute to the increased prevalence in the practice of self medication thereby predisposing people to different potential health risks.

As regard to the association between the socio-demographic characteristics and knowledge of self medications and its implication, it was revealed that 53.1% (113) of those aged 18-34 years old had moderate to high knowledge about self medication while 69.1% (47) of those aged 35-54 years were the ones who had moderate to adequate knowledge. The AOR was found to be 1.8 with CI of 1.87-3.52. This implies that there is a statistical significant association between age and knowledge about self medication practice and its implications. Thus, older people are 1.8 times more likely to have knowledge about self

medication and its implications than the younger ones. Despite most studies depicting lack of knowledge about self medication, not much has been studied on its association with other socio-demographic characteristics. Nevertheless, findings in this study portray age as being associated to the knowledge of self medication and its implications.

The study also observed that 31.3% (88) of the respondents were keeping medications in their homes. These medications comprised analgesics or antipyretics, antibiotics, antimalarials and different cough syrups. Antibiotics and antimalarials are prescription only medicines but they are being kept and used without any prescription. Thus, out of the 88 respondents who kept medications at home and 48.9% (43) reported that they kept the medication for emergency purposes. This could be argued as antibiotics or anti-malarial medicines are not supposed to be used for emergencies at home. But as regard to the practice of self medication, it can be concluded that keeping of the medications at home is more likely to influence self medication. Being aware of the OTC medicines could be more feasible as people could be able to distinguish which medications should be kept for emergencies while planning to go to the hospital. If people are keeping drugs like amoxicillin, ALU or quinine, it means they are not using the medications for emergency use only but rather treating themselves.

As regards to the association between keeping of the medications at home and the socio-demographic characteristics, it was observed that 34.3% (73) of those aged 18-34 years old and 22.1% (15) of those aged 35-54 years old kept medications at home with AOR of 3.49 and CI of 1.29-7.29. The AOR and CI findings show a statistical significance of association between a person's age and keeping of medications at home. This entails that older people are 3 times more likely to keep medications at home than the younger ones. As already observed that keeping of medications at home could facilitate self medication, this could be an imperative area to be considered in tackling self medication practice, otherwise curbing it will remain a challenge.

Of all the medicines used for self medication, it was observed that paracetamol was the most commonly used medication by the respondents, thus 65.9% (116), followed by

amoxicillin; 53.8% (63), cotrimoxazole; 20.5% (63), then ALU and cough syrup with 24.4% (43) and 22.7% respectively. Despite the coincidental recovery of 55.1% (97) of the children after self medication, the practice still remains a threat to the public as most people may not be aware of the appropriate medicines for the particular illness one is suffering from, they may even not know the dosage, frequency and period for taking the medications. Some may even take expired medications without realizing that it is expired, thus exposing themselves to implications of medicines.

Despite the high prevalence of self medication, the study revealed that the majority of the caretakers had negative attitude towards the practice. Thus, 89% of the respondents had negative attitude towards self medication. This is similar with other studies but in this study, the negative attitude shows a very high percentage unlike in other studies conducted among caretakers for children in Japan (78%) by Aoyama, Koyama, & Hibino, (2012) and in Egypt (56.5%) by (Ezz, 2011). It could however be argued as to why there is negative attitude about self medication while the practice is so high. This entails that the respondents may be aware that irresponsible self medication is not acceptable, hence could respond negatively towards the practice while they are involved in the practice itself. Thus, the negative attitude they have is not applied in their practice. This could however be due to other influences such as emergency illnesses, proximity to pharmacies and other influences.

The high prevalence of self medication practice which is revealed in most of the literature inevitably prompted the study to find out the source of the medicines used as this could be crucial in the practice of self medication taking into consideration that availability and access to medications have a major impact on the practice of self medication. The study therefore found out that the major source of the medications used was the pharmacies (66.2%). These findings concur with a study conducted in Pakistan by Zafar et al. (2008) and in Tanzania by Kagashe et al. (2010). The observation is that generally, there is lack of adherence to regulations in the selling of medications by most of the pharmacies which tolerate people to access medications without any prescription as observed by Arikpo and Eja, (2010) and Verma et al. (2010). This could be as a result of the authorities' laxity in enforcing the restrictions to the pharmacies. This provides an opportunity for people to

access any medications regardless of their illnesses and implications associated with the medications. Consequently, they expose themselves to resistance and other implications of inappropriate use of medications (Ezz, 2011).

The effects of self medications cannot be over emphasized as this study revealed that out of the 176 respondents who practiced self medication towards the under 5 years old children, 34.7% (61) observed some problems on the child. The majority of the respondents, thus 72.1% (44) reported worsening of their child's condition but could hardly tell what was the exact problem, while 18% (11) observed severe vomiting and 9.8% (6) severe rash. This could however be argued as it is difficult to distinguish these observations from those of the illness itself. Nevertheless, it is evident that inappropriate utilization of medications for one's condition, inappropriate doses, frequency or duration may likely result into worsen one's condition, development of other harmful effects, resistance and even delaying one from seeking hospital intervention, thereby complicating one's conditions (Jain et al. 2011).

It should however be noted that self medication even with OTC medicines can cause serious effects, even death as reported by Rimsza & Newberry (2011) in a study whereby children were found to be dead due to self medication with cough and cold medications which were labeled as OTC medicines.. This implies that there is no absolute safety in self medication practice even with the OTC medications as others may use them inappropriately due to lack of knowledge on the instructions for their use.

6.0 Conclusion and Recommendations

6.1 Conclusion

There is a high prevalence of self medication amongst the care takers for under five years old children and in the general population of Ukonga Ward. Thus, females are nearly 2 times more likely to self medicate their children than the males. Generally, there is lack of knowledge about the practice of self medication itself and its implications. However, older people are 1.8 times more likely to be more knowledgeable than the younger ones. People are also keeping and using prescription only medicines such as antibiotics and antimalarials beside other medicines like paracetamol which is an OTC drug. Older people were observed to be 3 times more likely to keep medicines at home than the younger ones. It was also observed that pharmacies are more utilized as the major source of medication than any other sources; thus, promoting self medication.

6.2 Recommendations

From the conclusions made, the following are the recommendations:

- Information which clearly stipulates the prescription only medications and over the counter medications should be available and let the public be aware of that.
- Enforcement of rules and regulations by which pharmacies are guided and supposed to operate in regard to the selling of medications through frequent supervisory visits by the concerned authorities.
- Need for further study to be conducted with a larger sample size in order to substantiate the findings of this study for possible generalization.

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8.0 APPENDICES

APPENDIX 1

QUESTIONNAIRE FOR DATA COLLECTION

A. IDENTIFICATION

RESEARCH PARTICIPANT: CARETAKER OF UNDERFIVE YEARS OLD CHILDREN

Date of interview:_____/_____/2013 Participant’s ID No.:_____

Number of people in the household_____

Participant’s status:

(A) Household head

(B) Other (Specify relation to the household head).....

Municipality:..... Ward:.....

Street :.....

Instructions: *Use the numbers on the left and fill in the box on the right the corresponding information*

B. DEMOGRAPHIC INFORMATION

1. Age in years

2. Sex

(1) Male

(2) Female

3. Marital Status:

(1) Single

(2) Married

(3) Divorced

(4) Widow

(5) Cohabiting

4. Education level

- (1) Not attended
- (2) Primary
- (3) Secondary
- (4) Tertiary
- (5) Other (Specify).....

5. Occupation:

- (1) Housewife
- (2) Businessman/woman
- (3) Farmer
- (4) Casual laborer
- (5) Employed
- (6) Unemployed
- (7) Other (specify).....

6. Has any child (under five years old) fallen sick for the past 6 months?

- (1) Yes
- (2) No (*If 'no' go to question 9*)

7. What was the age of the child?

8. What was /were the illness(s) the child was suffering from? (can be more than one)

- (1) Fever
- (2) Diarrhoea
- (3) Coughing
- (4) Eye infection
- (5) Skin infection
- (6) Injury/Fracture
- (7) Other (specify).....

9. Do you keep some medication in the house for use when someone falls sick?

(1) Yes

(2) No

10. If 'yes' what medications do you keep in the house?

.....
.....

11. Why do you keep the medications in the house?

.....
.....

12. What medication (s) did you use for self medicating the child? (can mention more than one)

(1) Panadol (Paracetamol)

(2) Brufen

(3) Bactrim (Cotrimoxazole)

(4) Chloramphenicol

(5) Amoxicillin

(6) ALu

(7) Quinine

(8) Indocid (Indomethacin)

(9) Aspirin (ASA)

(10) Magnesium trisilicate

(11) Doxycycline

(12) Metronidazole

(13) ORS

(14) Eye ointment

(15) Cough syrup

(16) Other (specify).....

13. Who prescribed the medications for you?

- (1) Medical personnel from health facility
- (2) Worker in the pharmacy shop
- (3) Other person (mention).....
- (4) None

14. Have you ever given medication to a person aged 5 years and above without a prescription?

- (1) Yes
- (2) No

15. If 'yes' how often have you been giving the medication(s) without a prescription?

- (1) Frequently
- (2) Occasionally
- (3) Rarely

16. What was the source (s) of the medicines which you used or have been using? (can mention more than one)

- (1) Bought them from pharmacy
- (2) Bought them from a grocery
- (3) Bought from the market
- (4) Got them from a friend/relative
- (5) Left from previous illnesses
- (6) Other (specify).....

17. Were you told about the instructions on how the child should be given the medications?

- (1) Yes
- (2) No (*If 'no' go to question number 19*)

18. What was the source of the information if any?

- (1) Pharmacy
- (2) Friend
- (3) Health facility
- (4) Leaflet
- (5) Newspaper
- (6) Books
- (7) Radio
- (8) Television
- (9) Other (specify).....

19. What was the outcome of the medicines which you used?

- (1) Recovered
- (2) Improved
- (3) Did not improve
- (4) Died

20. If worsened, what else did you do?

- (1) Went to hospital
- (2) Went to buy more drugs
- (3) Went to traditional healer
- (4) Just stayed at home
- (5) Other (specify).....

21. Why did you use medication(s) without prescription instead of going to the health facility?

- (1) Emergency illness
- (2) Distance to the health facility
- (3) Proximity of the pharmacy shop
- (4) Health facility charges
- (5) No medicine in the health facilities
- (6) Takes long time of waiting
- (7) Other (specify).....

22. Did you observe any problems after self medicating the child?

(1) Yes

(2) No (*If 'no', go to question number 24*)

23. What problems did you observe on the child after the self medication?

(1) Body rash

(2) Swollen face

(3) Yellowish eyes

(4) Severe vomiting blood

(5) Severe diarrhoea

(6) Severe vomiting

(7) Condition worsened

(8) Other (specify).....

24. Self medication can be practiced on all the drugs?

(1) Agree strongly

(2) Agree

(3) Do not agree nor disagree

(4) Disagree

(5) Strongly disagree

25. Whenever one is sick, should always take medication at home before going to the hospital

(1) Strongly agree

(2) Agree

(3) Do not agree nor disagree

(4) Disagree

(5) Strongly disagree

26. Self medication is better than going to the hospital

- (1) Strongly agree
- (2) Agree
- (3) Do not agree nor disagree
- (4) Disagree
- (5) Strongly disagree

27. Medicine can be shared between two people having different illnesses

- (1) Strongly agree
- (2) Agree
- (3) Do not agree nor disagree
- (4) Disagree
- (5) Strongly disagree

28. Self medication can result into harmful effects

- (1) True
- (2) Not true
- (3) I don't know

29. Self medication can cause damage to body organs

- (1) True
- (2) Not true
- (3) I don't know

30. Self medication can cause addiction

- (1) True
- (2) Not true
- (3) I don't know

31. Self medication can cause harmful effects on pregnancy

- (1) True
- (2) Not true
- (3) I don't know

32. Self medication can delay one to seek for hospital intervention

(1) True

(2) Not true

(3) I don't know

33. Self medication can lead to resistance

(1) True

(2) Not true

(3) I don't know

34. Self medication can complicate illness

(1) True

(2) Not true

(3) I don't know

End of interview. Thank you so much for accepting to participate in the study and for your responses and time.

APPENDIX 2: DODOSO

A. UTAMBULISHO

MSHIRIKI WA UTAFITI: MZAZI/MLEZI WA MTOTO MWENYE UMRI WA CHINI
YA MIAKA MIATANO

Tarehe ya mahojiano: _____/_____/2013 Usajili wa mshiriki: _____

Namba ya nyumba: _____

Idadi ya watu katika kaya _____

Hali ya mshiriki:

(A) Mkuu wa kaya;

(B) Nyingine (Taja uhusiano na mkuu wa kaya)

Manispaa ya: ILALA

Kata: UKONGA

Mtaa: MAZIZINI

Maelekezo: Tumia namba zilizopo upande wa kushoto na jaza taarifa sambamba kwenye sanduku lililoko upande wa kulia.

B. TAARIFA KUHUSU ANAYEHOJIWA

1. Umri katika miaka

2. Jinsia

(1) Mwanaume

(2) Mwanamke

3. Hali ya ndoa:

(1) Hujaoa/olewa

(2) Ndoa

(3) Talaka

(4) Mwanamke mjane

(5) Kimada

4. Kiwango cha elimu

- (1) Hajawahi kusoma
- (2) Elimu ya msingi
- (3) Elimu ya Sekondari kidato cha 4
- (4) Elimu ya juu zaidi ya kidato cha nne
- (5) Nyingine (taja)

5. Kazi:

- (1) Mama wa nyumbani
- (2) Mfanyabiashara
- (3) Mkulima
- (4) Mfanyakazi wa kawaida
- (5) Umejiriwa
- (6) Hana kazi
- (7) Nyingine (taja)

6. Je, kwa kapindi cha miezi sita iliopita, kuna mtoto yeyote chini ya maka 5 aliyeugua?

- (1) Ndiyo
- (2) Hapana (Kama ni hapana hapo, nenda swali namba 9)

7. Mtoto huyo sasa ana umri gani

8. Aliugua kipi kati ya magonjwa yafuatayo? (unaweza kutaja zaidi ya moja)

- (1) homa
- (2) Kuhara
- (3) Kukohoa
- (4) Ugonjwa wa macho
- (5) Ugonjwa wa ngozi
- (6) Jeraha/kuvunjika
- (7) Nyingine (taja)

9. Katika kaya hii mmejiandaa kwa namna yoyote kuwa na dawa za akiba ili mzitumie endapo mtu ataugua

(1) Ndiyo

(2) Hapana (Kama ni hapana hapo, nenda swali namba 14)

10. Kama ndiyo ni dawa zipi mmeweka kama akiba?

.....

11. Ni sababu zipi zinazo kufanya kuhifadhi dawa nyumbani?

.....

12. Je ni dawa tiba ipi /zipi ulitumia kwa ajili ya mtoto huyo aliyeugua? (Unaweza kutaja zaidi ya moja)

(1) panadol (Paracetamol)

(2) Brufen

(3) Bactrim (cotrimoxazole)

(4) Chloramphenicol

(5) Amoxicillin

(6) ALU

(7) Kwinini

(8) Indocid (indomethacin)

(9) Aspirin (ASA)

(10) Magnesium trisilicate

(11) Doxycycline

(12) Metronidazole

(13) ORS

(14) Marashi/dawa ya jicho

(15) Dawa ya Kikohozi

(16) Nyingine (taja)

13. Ulipata ushauri wa dawa tiba hiyo kutoka kwa nani?

- (1) Mtaalam wa hospitali/zahanati
- (2) Mtaalam kutoka maduka ya dawa
- (3) Wataalam wengine taja.....
- (4) Hakuna aliyetushauri

14. Je, umewahi kumpa dawa mtu yeyote hapa nyumbani pasipo ushauri wa kitaalamu kutoka hospitalini au zahanati?

- (1) Ndiyo
- (2) Hapana (Kama ni hapana hapo, nenda swali namba 19)

15. Kama ndiyo katika kipindi cha mwaka mmoja uliopita mara ngapi wewe umewapa watu hao dawa tiba pasipo ushauri wa kitaalamu kutoka kuhospitalini au zahanati?

- (1) Mara nyingi
- (2) Mara chache
- (3) Kwa nadra sana

16. Nini chanzo/vyanzo vya dawa tiba ulizotumia au umekuwa ukitumia? (Unaweza kutaja zaidi ya moja)

- (1) Kununuliwa kutoka maduka ya dawa
- (2) Kununuliwa kutoka duka la dawa
- (3) Kununuliwa kutoka sokoni
- (4) Ulizipata kutoka kwa rafiki/ jamaa
- (5) Zilizobakia katika ugonjwa uliopita
- (6) Nyingine (taja)

17. Je ulielekezwa kuhusu jinsi ya kutumia dawa hizo kwa ajili ya mtoto huyo aliegua?

- (1) Ndiyo
- (2) Hapana
(Kama ni hapana hapo, nenda swali namba 19)

18. Maelekezo ya kutumia dawa hizo uliyapata wapi?

- (1) Duka la dawa
- (2) Rafiki
- (3) Kituo cha afya
- (4) Kipeperushi
- (5) Gazeti
- (6) Vitabu
- (7) Radio
- (8) Televisioni
- (9) Nyingine (taja)

19. Nini matokeo ya dawa tiba ulizotumia au kuwapa wengine pasipo ushauri wa kitaalamu?

- (1) Kupona
- (2) Kupata nafuu
- (3) Kuzidiwa
- (4) Kifo

20. Kama alizidiwa ni kitu gani kingine ulifanya?

- (1) Kwenda hospitali
- (2) Kwenda kununua dawa zaidi
- (3) Kwenda kwa mganga wa jadi
- (4) Ulibaki nyumbani
- (5) Nyingine (taja)

21. Nini kilichokufanya kutumia dawa tiba pasipo ushauri wa kitaalamu badala ya kwenda hospitali au kituo cha afya?

- (1) Dharura ya ugonjwa
- (2) Umbali wa kituo cha afya
- (3) Ukaribu wa maduka ya dawa
- (4) Afya kituo mashtaka
- (5) Hakuna dawa katika vituo vya afya
- (6) Inachukua muda mrefu wa kusubiri
- (7) Nyingine (taja)

22. Je, pamewahi kutokea matatizo yoyote baada ya kutumia dawa tiba pasipo ushauri wa kitaalamu?

- (1) Ndiyo
- (2) Hapana

23. Kama ni ndiyo hapo juu 22, palitokea tatizo gani?

- (1) Upele mwilini
- (2) Kuvimba uso
- (3) Macho ya manjano
- (4) Alitapika damu sana
- (5) Kuharisha sana
- (6) Kutapika sana
- (7) Hali ilikuwa mbaya sana
- (8) Nyingine (taja)

Kwa maswali yafuatayo, Tafadhali niambie kama unakubaliana kabisa, unakubali, au hukubaliani kabisa, kwa kuandika namba 1, 2,3,4,5 katika kisanduku

24. Utumiaji wa dawa tiba pasipo ushauri wa kitaalamu inaweza kufanyika kwa dawa zote?

- (1) Nakubaliana kabisa
- (2) Nakubali
- (3) Sikubali wala sikatai
- (4) Sikubali
- (5) Sikubaliani kabisa

25. Wakati mtu anapougua unatakiwa kutumia dawa tiba nyumbani kabla ya kwenda hospitali

- (1) Nakubaliana sana
- (2) Nakubali
- (3) Sikubali wala sikatai
- (4) Sikubali
- (5) Sikubaliani kabisa

26. Utumiaji wa dawa tiba pasipo ushauri wa kitaalam ni bora kuliko kwenda hospitali

- (1) Nakubaliana kabisa
- (2) Nakubali
- (3) Sikubaliani wala sikatai
- (4) Sikubali
- (5) Sikubaliani kabisa

27. Dawa moja inaweza kutumiwa pamoja na watu wawili wenye magonjwa mbalimbali

- (1) Nakubaliana kabisa
- (2) Nakubali
- (3) Sikubaliani wala sikatai
- (4) Sikubali
- (5) Sikubaliani kaisa

28. Kutumia dawa tiba pasipo ushauri wa kitaalamu kunaweza kusababisha madhara.

- (1) Kweli
- (2) Si kweli
- (3) Sijui

29. Je kutumia dawa tiba pasipo ushauri wa kitaalamu kunaweza kusababisha uharibifu mwilini?

- (1) Kweli
- (2) Si kweli
- (3) Sijui

30. Je kutumia dawa tiba pasipo ushauri wa kitaalamu kunaweza kusababisha mtu kuzizoena vibaya?

- (1) Kweli
- (2) Si kweli
- (3) Sijui

31. Je kutumia dawa tiba pasipo ushauri wa kitaalamu kunaweza kusababisha madhara kwa wajawazito

- (1) Kweli
- (2) Si kweli
- (3) Sijui

32. Kutumia dawa tiba pasipo ushauri wa kitaalamu kunaweza kuchelewesha mtu kutafuta msaada hospitalini na hatimaye kuzidiwa

(1) Kweli

(2) Si kweli

(3) Sijui

33. Kutumia dawa tiba pasipo ushauri wa kitaalamu kunaweza kusababisha dawa kuwa sugu kutibu

(1) Kweli

(2) Si kweli

(3) Sijui

34. Kutumia dawa tiba pasipo ushauri wa kitaalamu kunaweza kusababisha magonjwa mengine

(1) Kweli

(2) Si kweli

(3) Sijui

Mwisho wa mahojiano. Asante sana kwa majibu yako na kwa muda wako.



8.3 Consent form

DIRECTORATE OF RESEARCH AND PUBLICATIONS, MUHAS

INFORMED CONSENT FORM

ID-NO.

Greetings,

My name is, Working for School of Public Health and Social Sciences at Muhimbili University of Health and Allied Sciences in Dar es Salaam.

Purpose of the Study

Dear respondent, I would like to inform you that this is a research study titled **“People’s Knowledge, Attitude and Practices about Self Medication and its Implications Ilaa Municipal in Dar es Salaam”**. I would like to give you information about your participation in the study.

This study is aiming at assessing people’s knowledge on the implications of self medication. Kindly be honest and true for betterment of the results that could lead to better intervention and recommendations in future.

Confidentiality

We will protect and treat the information you will be provided with high confidentiality to the best of our knowledge. We will not write your name on the questionnaire or in any report/documents that might let someone identify you. Your name will not be linked to the research information in any way. The investigators will take care of the data and information collected. However, the final results after the analysis will be shared with national stakeholders and I will submit the manuscript for publication in scientific journals.

Right and withdrawal alternatives

Your participation is voluntary. You may decline from participation to the study at anytime during interview even if you have consented to participate. Your decision to participate or not will not be associated with your right to work in the facility. There is no penalty for refusing to participate on the study. You will not experience any loss if you refuse to participate in this study.

Benefits

The information you provide will help to increase our understanding and give a clear picture on the knowledge people have on the implications of self medication. This can therefore help in providing useful information and contribute to future health care policy formulation and strategic planning.

If any damage will occur

It is not expected that there will be any damage for your participation as the respondent to this study.

Risks

There is no harm for participating in the study. However, you are free to stop participation at any time during this discussion in the event you feel uncomfortable.

Who to Contact

If you ever have questions about this study, you should contact the **Principal Investigator, Gladson Monjeza (+255 689 373 266)** of Muhimbili University of Health and Allied Sciences, P. O. Box 65001, Dar es Salaam.

If you ever have questions about your rights as a participant, you may call **Prof. M. Moshi, Chairman (Research and Publications Committee, MUHAS. P.O. Box 65001, Dar es Salaam – Tanzania, Tel +2552150302-6)**; and **Professor J. Killewo**, from Muhimbili University of Health and Allied Sciences , P.O.BOX 65001 Dar es Salaam, who is the supervisor of this study.

Signature:

Do you agree?

Participant agreesParticipant does NOT agree

I have read the contents in this form. My questions have been answered. I agree to participate in this study.

Signature of participant

Signature of Research Assistant

Date of signed consent

DECLARATION

The above document describing the benefits, risks, and procedures for the research titled "People's Knowledge, Attitude, and Practice about Self Medication and its Implications in Ilala Municipal" has been read and explained to me and I have agreed to participate. I certify that the nature and purpose, the potential benefits and possible risks associated with participating in this study have been explained to me.

Signature or Right Thumb stamp of the respondent..... DATE.....

Signature of Research Assistant..... DATE.....



8.4 Consent form (Kiswahili)

IDARA YA UTAFITI NA MACHAPISHO, MUHAS

Ridhaa FOMU

ID-NO. 00

Salamu,

Jina langu ni, Kazi kwa ajili ya Shule ya Afya ya Umma na Sayansi ya Jamii katika Chuo Kikuu cha Tiba na Sayansi Muhimbili jijini Dar es Salaam.

Madhumuni ya Masomo

Ndugu mhojiwa, napenda kukujulisha kuwa somo hili la utafiti lenye jina la " **Ufahamu wa watu,tabia na mazoea ya utumiaji wa dawa tiba pasipo ushauri wa kitaalamu na athari za matumizi ya dawa tiba pasipo ushauri wa kitaalamu katika Manispaa ya Ilala Dar es saalamu.**"

Utafiti huu ni kwa lengo la kutathmini ufahamu wa watu,tabia na mazoea yanayoweza kutokana na matumizi ya dawa tiba pasipo ushauri wa kitaalamu.

Usiri

Sisi tutalinda na kuziweka taarifa utakazo pewa kwa usiri wa hali ya juu kwa kadri ya ufahamu wetu. Sisi hatutoandika jina lako kwenye hojaji au katika ripoti yoyote / nyaraka ambayo inaweza kuruhusu mtu kukutambua wewe. Jina yako halitakuwa na mahusiano na habari za utafiti kwa njia yoyote. watafiti watatunza takwimu na taarifa zitakazokusanywa. Hata hivyo, matokeo ya mwisho baada ya uchambuzi yatatumiwa na wadau wa kitaifa na mimi kuwasilisha mada kwa ajili ya uchapishaji katika majarida ya kisayansi.

Ushiriki wako ni hiari. Unaweza kujiondoa katika ushiriki na utafiti wakati wowote wakati wa mahojiano hata kama ulikuwa umekubali kushiriki. Uamuzi wako wa kushiriki au kutoshiriki hautohusishwa na haki yako ya kufanya kazi popotekatika kituo. Hakuna adhabu kwa kukataa kushiriki katika utafiti. Hutokuwa na hasara yoyote kama hutoshiriki katika utafiti huu.

Faida .

Taarifa utakayotoa itasaidia kuongeza uelewa wetu na kutoa picha ya wazi juu ya maarifa ya watu kuhusiana na athari zinazotokana na matumizi ya dawa tiba pasipo ushauri wa kitaalamu. Hii inaweza kusaidia baadaye katika kutoa taarifa muhimu na kuchangia katika uundaji wa sera za kiafya na mipango mikakati.

Hatari au madhara ya utafiti

Haitarajiwi kuwa kutakuwa na madhara yoyote kwa ajili ya ushiriki wako katika utafiti huu.

Hata hivyo, wewe uko huru kuacha ushiriki wakati wowote katika mjadala huu katika tukio unalojihisi kuwa na wasiwasi nalo.

Nani wa kuwasiliana naye.

Kama una maswali kuhusu utafiti huu, unapaswa kuwasiliana na Mtafiti, Gladson Monjeza (255 689 373 266) wa Chuo Kikuu cha Tiba na Sayansi Muhimbili, SLP 65001, Dar es Salaam.

Kama una maswali juu ya haki zako kama mshiriki, unaweza kumpigia Prof M. Moshi, Mwenyekiti (Utafiti na Machapisho Kamati, SLP 65001 MUHAS, Dar es Salaam - Tanzania, Tel 2552150302-6.); Na Profesa J . Killewo, kutoka Chuo Kikuu cha Tiba na Sayansi Muhimbili, SLP 65001 Dar es Salaam, ambaye ni msimamizi wa utafiti huu.

Sahihi:

Je, unakubali?

Mshiriki anakubali Mshiriki hakubaliani

Mimi kuwa nimesoma yaliyomo katika fomu hii. Maswali yangu yamejibiwa. Mimi nakubali kushiriki katika utafiti huu.

Saini ya Mshiriki

Sahihi ya Msaidizi wa Utafiti

Tarehe ya ridhaa ya saini

TANGAZO

Hati juu ya kuelezea faida, hatari, na taratibu kwa ajili ya utafiti yenye jina la " **Ufahamu wa watu,tabia na mazoea ya utumiaji wa dawa tiba pasipo ushauri wa kitaalamu na athari za matumizi ya dawa tiba pasipo ushauri wa kitaalamu katika Manispaa ya Ilala Dar es saalamu.**" imesomwa na imeelezwa kwangu na mimi nakubali kushiriki . Nathibitisha kwamba asili na kusudi, faida na hatari zinazowezahusiana na kushiriki katika utafiti huu zimeelezwa kwangu.

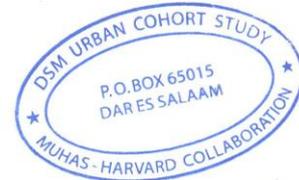
Sahihi au muhuri kwa kidole gumba cha kulia..... TAREHE.....

Sahihi ya Utafiti Msaidizi.....TAREHE.....

Gladson Levson Monjeza
 Muhimbili University of Health and Allied Sciences
 Department of Public Health
 P.O Box 65007
 Dar es Salaam.

4th June, 2013

The Principal Investigator
 Dar es Salaam Urban Cohort Study (DUCS)
 Ukonga Ward-Ilala District



*Permission is granted provided
 he works through the DUCS
 office in Ukonga*
[Signature] 5/6/2013

Dear Professor,

**REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN UKONGA WARD-
 ILALA DISTRICT**

I would like to request for permission to conduct my research in Ukonga Ward and in particular, Mazizini Street in Ilala District.

I have just been granted ethical clearance by the MUHAS Directorate of Research and Publication Ethical Review Board today the 4th of June; hence I would like to start my study on Friday, 7th June, 2013 by pre-testing the questionnaire.

I will appreciate for your prompt assistance.

Yours sincerely,

[Signature]
 (GLADSON LEVSON MONJEZA)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

Directorate of Postgraduate Studies

P.O. BOX 65001
DAR ES SALAAM
TANZANIA.

Website: <http://www.muhas.ac.tz>



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Telefax: 255-(0)22-2150465
E-mail: dpgs@muhas.ac.tz

Ref. No. MU/PGS/SAEC/Vol.IX/

3rd June, 2013

Mr. Gladson Levson Monjeza
MPH
MUHAS.

Re: APPROVAL OF ETHICAL CLEARANCE FOR A STUDY TITLED "PEOPLE'S KNOWLEDGE, ATTITUDE AND PRACTICE ABOUT SELF MEDICATION AND ITS IMPLICATIONS IN ILALA MUNICIPAL, DAR ES SALAAM"

Reference is made to the above heading.

I am pleased to inform you that, the Chairman has on behalf of the Senate approved ethical clearance for the above-mentioned study.

Thus ethical clearance is granted and you may proceed with the planned study.

Please liaise with bursar's office to get your research fund.

Prof. O. Ngassapa
DIRECTOR, POSTGRADUATE STUDIES

/emm

- c.c. Vice Chancellor, MUHAS
- c.c. Deputy Vice Chancellor – ARC, MUHAS
- c.c. Dean, School of Public Health and Social Sciences, MUHAS

