PERSPECTIVES AND PRACTICES OF SELF-MEDICATION IN SHIBUYUNJI DISTRICT, LUSAKA PROVINCE, ZAMBIA

BY

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A dissertation submitted to the University of Zambia, school of public health, in partial fulfillment of the requirements for award of Degree of master in Public Health-Health Promotion and Education

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DECLARATION

I, Alice Sayi declare that, this dissertation submitted to the University of Zambia as partial fulfillment of the award of the degree of Master of Public Health (Health Promotion and Education) is my own work and has not been submitted either wholly or in part for another degree to this University or any other Institute of Higher Learning.

Signed (Candidate)…… **Date…….**

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APPROVAL

This dissertation by **Alice Sayi** is approved as a partial fulfillment for the requirements for the award of the degree of Masters in Public Health (MPH) by the University of Zambia.

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ABSTRACT

The concept of self-medication which encourages an individual to look after minor illnesses with simple and effective medicines has been adopted worldwide. Although self-medication has been reported to have several benefits, it has also been associated with many risks. Self-medication among poorly informed segments of the population may result in a waste of household and government resources. Regardless of the growing research attention in self-medication, little information has been available about perspectives and practices of self-medication especially in developing countries. In Zambia, particularly the study site, little information is available on the subject. The purpose of this study was to explore the perspectives and practices of self-medication.

A qualitative case study design was used. A total number of 63 participants participated in the study, four (4) focus group discussions, six (6) key informant interviews and 22 in-depth interviews were conducted during data collection. The study incorporated free listing and pile sorts in focus group discussions and In-depth interviews. Key informant interviews were also conducted with relevant individuals. Purposive sampling using maximum variation was used to select study participants. Data was analysed using grounded theory to see how emerging issues were related. From the information recorded in each interview and discussion, major themes and sub-themes were identified.

The findings of the study revealed that the study participants did not follow a specific dosage or timeframe when self-medicating. Both health workers and the general population follow the same pattern when self-medicating. However, health workers perceived self-medication as being risk while the general population viewed it as being of benefit to them. The results also showed that diseases that are seen to be relatively minor and common, self-medication would be preferred. On the other hand, if the disease was thought to be severe, unfamiliar or injuries, the patient would much more likely go to the health centre for treatment.

In conclusion, self-medication practices are influenced among others by income, distance to health facility, condition of the disease and disease severity. People don't have a specific dosage and duration to follow when self-medicating. The perceived benefits of self-medication are likely to result in it being a common health seeking behaviour.

Key words: Self-medication, Practices, Perspectives, Responsible self-medication.

DEDICATION

This study is dedicated to my late friend and colleague Nachivya Mukwavi, who died in a road traffic accident, a week before she could enroll in the Master of Public Health Program. Nachivya Mukwavi was a lady of the community even at a very young age, and always believed that every human being has potential, right to be heard and respected. Your memory will always be fresh especially for your hard work and determination. How I wish you were still here to fulfill your dream of doing MPH. I also dedicate this work to my dearest son, Austin Nakanga Jnr, thanks for the love you showed me during moments when I could not be with you due to school and the encouragements you gave me. I pray that this work will inspire you to pursue your dream of becoming a medical doctor. Lastly I dedicate the work to my dear parents Chemist and Jessy Sayi, I thank God almighty for you.

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DEFINITION OF KEY TERMS

Self-medication

Self-medication: is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms.

For the purposes of this study, medicines include herbal and traditional products

Perspectives

A perspective: is a particular attitude towards or way of regarding something; a point of view.

Practices

Practice means to do something repeatedly, out of habit, because it has become an accepted custom, or on purpose to try to get better at the task.

Responsible Self-Medication

This is the practice whereby individuals treat their ailments and conditions with medicines which are approved and available without prescription, and which are safe and effective when used as directed.

It requires that:

1. Medicines used are of proven safety, quality and efficacy.

2. Medicines used are those indicated for conditions that are self-recognizable and for some chronic or recurrent conditions (following initial medical diagnosis). In all cases, these medicines should be specifically designed for the purpose, and will require appropriate dose and dosage forms.

ABBREVIATIONS

ART	Antiretroviral therapy
GT	Grounded Theory
HBM	Health Belief Model
HIV	Human immunodeficiency virus
FGD	Focus Group Discussion
IDI	In-depth interview
LCMS	Living Conditions Monitoring Survey
UNZA	University of Zambia
UNZABREC	University of Zambia Biomedical Research Ethics Committee
WHO	World Health Organisation launch

CHAPTER ONE

INTRODUCTION

1.1. Background Information

The concept of self-medication which encourages an individual to look after minor illnesses with simple and effective medicines has been adopted worldwide (Awad, 2005) cited by (Afolabi, 2009). It is the most common form of health care practiced in most parts of the world (Ocan et al., 2015). The practice of self-medication is common in both developed and developing countries (Fuentes et al., 2008) and may even be more common than the use of prescribed medication (Lam et al., 1989). Self-medication is far from being a completely safe practice, in particular in the case of non-responsible self-medication (Gholap and Mohite, 2013). There are potential risks to self-medication practices such as wrong self-diagnosis, delays in seeking treatment, infrequent but severe adverse reactions, dangerous drug interactions, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse and unnecessary out of pocket expenditure (Kumar et al., 2016).

Self-medication is a global phenomenon and a concern for health authorities worldwide. For example, there is much public and professional concern about the irrational use of drugs (Filho et al., 2004). The prevalence rates are high all over the world; up to 68% in European countries, while it is much higher in the developing countries with rates as high as 92% (Zafar et al, 2008). For example, in the United Kingdom on the average 50% of health care takes place within the realm of self-medication. The government encourages self- reliance, while agencies like the World Health Organisation (WHO) promote individual family and community participation in primary health care (Cutting, 1989).

However, self-medication has a number of limitations. Various studies have shown that self-medication may lead to delay in seeking care which results in increased treatment cost, prolonged hospitalization periods and increase in morbidity due to delay in the diagnosis of underlying conditions and appropriate treatment (Donkor et al., 2012). Self-medication is defined as the use of medicinal products by the consumer to treat self-recognized disorders or symptoms, or the intermittent or continued use of a medication prescribed by a physician for chronic or recurring diseases or symptoms. In practice, it also includes use of the medication

of family members, especially where the treatment of children or the elderly is involved (WHO, 2000).

A number of factors have contributed to self-medication, poor investigative capability compounded by a limited knowledge of suitable management result in the increase of self-medication and low rate of health care utilization (Bexell et al., 1996). Many patients resort to the practice of self- medication instead of contacting professional health care workers because of long waiting periods in hospitals, minor sicknesses, to save money and time, lack of accessibility, shortage of doctors, or a feeling that their illness is beyond the knowledge of western trained doctors (Afolabi, 2009). The practice of self-medication cuts across culture, gender, health and social status, race, occupation or any other social, medical or demographic factors (ibid).

Generally, it is accepted that self-medication has an important role in the care of minor illness (WHO, 1986). In fact, the role of self-care was emphasized by the World Health Organization (WHO) in 1978 in its "Health for all by the year 2000" initiative, which was implemented in many countries of the world. Studies indicate that the use of self-medication is influenced by several personal, organizational and environmental factors (Sawalha, 2008, Versteegen et al., 2007 and Worku et al., 2003). Self-medication has positive benefits in terms of time saving and giving quick relief to pain.

Zambian Context

In the quest to ensure that essential drugs and medical supplies are always available at health facility level and that there is rational use of drugs, the Zambian Ministry of Health developed and adopted the National Drug Policy in 1999. Whose vision is to provide equity of access to all Zambians to good, quality, safe and efficacious medicines which are affordable and rationally used as close to the family as possible (MOH, 1999). In addition, in order to strengthen drug availability and usage, the Ministry of Health undertook a number of activities such as development of the essential drug list, establishment of the Zambia logistic management information system as well as the establishment of the Pharmaceutical Regulatory Authority in 2004 through an act of parliament. However shortages and inappropriate clinical usage of drugs and medical supplies still remain a major problem (MOH, 2005).

The consequences of self-medication practices are increasingly being recognized around the world (Abay and Amelo, 2010). In Zambia, Diop et al., (1998) argued that, the prevalence of self-medication in Zambia is high (36%) and a lot of money is being spent by households on self-medication. A survey by Living Conditions Monitoring Survey (LCMS) (2012) reported that the prevalence of self-medication in Zambia is at 31%, this did not include those who self-medicated and later made consultation. However, reviewed literature indicates that there is little information on the practice of self-medication in Zambia. A detailed search of literature on the research topic did not yield any data on the practice in Shibuyunji District.

Despite some studies being conducted on this topic, self-medication has not received much attention (Alghanim, 2009). For example, in Zambia studies were done on self-medication of uncomplicated malaria (Mulenga and Kawimbe, 2015), Self-Care practices and experiences of people living with HIV not receiving Antiretroviral therapy (ART) Musheke et al., 2013) and Household health seeking behaviour (Diop et al., 1998). Data on the perspectives of and practices of self-medication in Zambia are necessary to help with the planning of interventions to improve the self-use of medicines in the country.

In this study, self-medication was defined as, *obtaining and consuming drugs without the advice of a physician for diagnosis, prescription or surveillance of treatment. It may include the use of herbs (Awad et al., 2005), acquiring medicines without a prescription, resubmitting old prescriptions to purchase medicines, sharing medicines with relatives or members of one's social circle or using leftover medicines stored at home* (Zafar et al., 2008).

Health Seeking Behaviour

A study by Abby et al. (2016) showed that self-medication is due to varying factors. In public health research, theories and models on health-seeking behaviour help explain the underlying motivations for often multifaceted and complex people's healthy seeking decisions (Berry, 2004). In particular the health belief model (HBM) is widely applied to explain health-seeking behaviour (Metta, 2014). The HBM and findings from various studies shows that self-medication is influenced by a number of factors. The HBM centers on four concepts, perceived susceptibility to disease, the perceived severity of the disease, perceived benefits of the treatment actions and perceived barriers to adopting proposed measures. The model posits that, what triggers individuals' decisions regarding health seeking behaviour are general health motivations including internal cues (i.e. symptoms) and external cues (i.e. interpersonal interactions and media communications (Berry, 2004). In this study, the model

will be used to verify the findings of the study and broaden understanding of the perspectives and practices of self-medication. As the model is helps to explain and predict health-related behaviours, particularly in regard to the uptake of health services.

Regardless of the growing research attention in self-medication, little information has been available about perspectives and practices of self-medication especially in developing countries (Afolabi, 2009). It was therefore the aim of this study to add to available literature on self-medication in the country. The outcomes of this study will also add to evidence based information to the body of knowledge, regarding perspectives and practices of self-medication in Shibuyunji District and will be useful in guiding health promotion and education programs in health and related sectors. It could also provide for replication and basis for future research.

1.2. Statement of the Problem

Self-medication is a global phenomenon and a concern for health authorities at global level. The prevalence of self-medication is high in Zambia at 19.7% (LCMS, 2015). Moreover, a lot of money is spent by households on self-medication (Diop, seshamani and Mulenga, 1998).

Self-medication among poorly informed segments of the population may result in a waste of household resources and, eventually, a drain on public resources if illnesses are treated late after ineffective self-medication. Although self-medication has been reported to have several benefits, it has also been associated with many risks that may include misdiagnosis, delays in seeking medical advice when needed, incorrect dosages, masking severe diseases, and maladministration among others (Ruiz, 2010).

Regardless of the growing research attention in self-medication, little information has been available about perspectives and practices of self-medication especially in developing countries (Afolabi, 2009). Particularly in Zambia, reviewed literature indicates that there is little information on the practice of self-medication in Zambia. A detailed search of literature on the research topic did not yield any data on the practice in Shibuyunji District.

1.3. Objectives

General Objective

To explore the perspectives and common practices of self-medication in Shibuyunji district and generate knowledge for action.

Specific Objective

1. To explore illnesses for which self-medication is used and reasons for not consulting a physician.
2. To identify common sources of medications used as well as the source of the information.
3. To define what informs or guides individuals regarding the self-medication process and duration during the course of a particular illness.
4. To identify peoples' perspectives of the benefits and limitations of self-medication

1.4. Research question

1. How is self-medication practiced among men and momen above the age of 18 in Shibuyunji District? '
2. What are the perspectives of self-medication among women and men above the age of 18 in Shibuyunji District?

1.5. Organisation of the Dissertation

This dissertation is organized in 6 chapters.

Chapter one: This chapter consist of background information on the study area, the problem, study objectives and research questions.

Chapter two: This chapter presents a review of literature related to the study topic.

Chapter three: In chapter three the dissertation is presenting details of the methodology used in the study including study limitations.

Chapter four: This chapter presents findings of on the perspectives and common practices of self-medication in Shibuyunji district.

Chapter five: This chapter is comprised of the discussion of the findings that emerged from the study as presented in chapter 4.

Chapter six: This chapter presents the conclusion and recommendations of the study, followed by the appendices.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature related to practices and perspectives of self-medication. The focus is on the gaps in knowledge and practices as well as documenting available literature on the subject. The purpose of this chapter is to provide an insight into what people do as they attempt to treat self-diagnosed illness. Self-medication is an ancient practice (Phalke et al., 2006). It results from among others, the urge of self-care, inaccessibility, patients' attitudes toward physicians, lack of health care professionals, poverty, ignorance, misbeliefs, extensive advertisement and availability of drugs in other than drug shops (Ocan et al., 2015). The aforestated are among the many factors that are responsible for the growing trend of self-medication. WHO is promoting practice of self-medication for effective and quick relief of symptoms without medical consultations and reduce burden on health care services, which are often understaffed and inaccessible in rural and remote areas (WHO, 1988).

The literature to be reviewed was obtained by use of structured and non-structured search from the following data Bases; Google Scholar, Pro-Quest, CINAHL, PubMed, Medline and WHO data base. The search process involved the use of key words and related terms from the focused question which were combined using Boolean operators "AND" and "OR" for structured searches and using the focused question and related key terms directly for non-structured searches. Articles from peer reviewed journals that met the inclusion criteria were selected for use in the literature review. This section presents literature reviewed from different scholars, taking into consideration different views and approaches concerning perspectives and practices of self-medication.

2.0. Illnesses that are self-Medicated

A study conducted in Madagascar by Mattern et al (2016) which aimed at exploring the local terminology related to malaria and health care seeking practices in case of fever, found that malaria was perceived as a disease that is simple to treat and the biomedical term for malaria was not being used, instead the locals had their own terms and according to the local perceptions fevers which were associated to malaria were not caused by mosquitos. Therefore fever management strategies consisted of self-medication or recourse to traditional medicine.

In another study conducted by Shankar et al (2002) on self-medication and non-doctor prescription practices in Western Nepal, found that headache and fever were the most common indications for self-medication. The findings of this study revealed that, self-medication was usually started once the headache or fever did not come down by itself within 24 hours.

Yuefeng et al (2012) in his study on the use of, and factors associated with self-treatment conducted in China, found that Self-Medication is a rapidly growing trend. Another study by Begashaw et al (2016) on health care seeking behaviour in South West Ethiopia found that Perceived condition of a disease is the reason for overall health seeking behaviour. It was further found that monthly income, distance to health facility, disease condition and perceived severity were found to be significant factors for self-medication (Ibid and Chenge et al., 2014). Other studies have indicated that individuals resolve uncomfortable symptoms, influenza and skin discomforts through self- medication (Yuefeng et al., 2012).

The focus of the reviewed studies is similar to the focus of the current study, however, the studies were conducted in countries whose culture is not similar to the Zambian setting and did not give details of how the illnesses where identified to be the commonly self-medicated illnesses. However, the studies were able to bring out more insight on the study topic.

2.1. Sources of medicines used

In a systematic review on non-prescription antimicrobial use in low and middle income countries by Ocan et al (2015) found that, the majority of the studies reported drug sellers or pharmacists and relatives or friends as the sources of medicines used for self-medication. Another study conducted in Porkhara valley in Western Nepal by Shankar et al (2002) found that, the elderly persons in the households possessed knowledge of simple herbal remedies for common illnesses and these remedies were usually tried first. The medical shops also commonly stocked herbal medicines making these drugs easily accessible. Herbs were considered safe and devoid of adverse effects.

Shankar et al (2002) argued that due to the difficulty in accessing health care services, self-medication is often the simplest option for the patient. Since traditional practitioners are easily accessible, people also turn to them for their healthcare needs. However, they also added that traditional practitioners need to be educated about when to refer a patient for more specialized care.

Kumar et al (2016) in a study looking at self-medication practice and factors influencing it among medical students in India found that antibiotics, oral anti-inflammatory agents and antipyretics were the common groups of drugs being used for self-medication. It was also noted that these drugs were being accessed from chemists and shops in the market (Ibid).

The studies reviewed were looking at the medicines used and the sources of these medicines. It was good that a study by Ocan went further to identify why herbal medicine was the most preferred. This could help in educating patients on the disadvantages of using herbal medicine for certain illnesses. However, the other study had a recall period of one year which could have introduced recall bias in the study.

2.2. Source of medical Information

A study conducted in Ethiopia by Etich and Mesfin (2014) found that severeness and prior experience to the disease and or drug and less expensive in terms of time and money informed participants what medication to take. Information was spread through informal information circulation channels (Mattern et al., 2016). When learning about the effectiveness or quality of a product or service, it requires inference over a large-enough number of data points, households might learn not only from their own experimentation, but also from that of others (their neighbors or peers) (Dupas, 2011). For example, Adelman et al. (2009), using a cross-sectional data from rural Tanzania, found evidence that households learn about the quality of care available at multiple facilities from their neighbours' illness experience.

A study conducted by Etich and Mesfin (2014) conducted in Mekelle, Ethiopia found that sources of information were pharmacists and health care providers but, without formal prescriptions, friends, neighbours and relatives and a few traditional leaders. In another study by Alghanim (2009) on self-medication, practice among patients in a public health care system in Riyadh, Saudi Arabia, reported that, the commonest source of information was the private sector pharmacy salespersons (including pharmacists), experiences or knowledge from previous experiences. Health staff was the least common source of information. Other sources of information about medications included were relatives/friends, the internet and advertisements.

The findings on the sources of information in the reviewed studies are consistent with each other despite being conducted in different settings, this will be of value to the current study as there will be a point of reference especially for a study conducted in Tanzania whose cultural and economic setting is similar to Zambia.

2.3. Characteristics of individuals practicing self-medication

In a study conducted in Riyadh, Saudi Arabia by Alghanim (2009) on Self-medication, practice among patients in a public health care system found that, there is a descriptive association between socio demographic characteristics and self-medication behaviour. The results indicated that males were a significantly higher percentage of self-medicaters than females (44.8% as opposed to 23.5%). Similarly, more of the younger respondents and those with a higher level of education were using self-medication compared to the older respondents and those with a low level of education. In this study, a considerably higher rate of self-medication was reported by respondents who perceived their health status as being poor, compared to those who perceived their health as being good. Those having chronic illness versus those who did not; those who reported inconvenient access to health care facilities versus those with convenient access and those who were dissatisfied with the quality of their health care versus those who were satisfied.

A study conducted among medical students in south India to assess the prevalence of self-medication found that a larger number of females were self-medicating (81.2%) than males (75.3%) (Kurma et al., 2013). These findings does not agree with Alghanim (2009) where males had a significantly higher percentage (44.8%) of self-medicaters than females (23.5%).

Yuefeng et al (2012) in their study on, use and factors associated with self-treatment in China found that, there was a significantly larger proportion of respondents opting for self-treatment in the higher age and education categories. Conversely, there were significantly smaller proportions of participants opting for self-treatment in the higher number of family members categories. Significantly greater proportions of working and retired respondents opted for self-treatment compared with respondents who were unemployed or farmers. This study does not agree with Alghanim (2009) ‘s study which found that younger respondents were practicing self-medication more than the older respondents. It can therefore be assumed that demographic characteristics many not be the only contributing factor to self-medication. But many more factors plays a role in why people resort to self-medication hence there is need to conduct similar studies in various settings.

2.4. Conclusion

There are few studies in direct relation to perspectives and practices of self-medication. The majority of these studies focus on either one of the components of the current study, namely, practices of self-medication. Furthermore, most of these studies have been conducted outside

Zambia with cultural and economic contexts that are different from that of Zambia. This study will fill the gap for a locally conducted study whose findings reflect the cultural norms of most Zambians.

The studies have different findings on the same themes; this may be attributed to different contexts and definition of key terms. For example, risk is a subjective term and what is considered to be risk for one person may not be so for another. In order to reconcile some of the findings of the studies in the literature, perspectives of people on the subject should be considered, as perspectives will justify the practices. Some countries have put measures that promote responsible self-medication and Zambia can learn many lessons from such countries.

In addition, most of the studies were using quantitative approaches in data collection, therefore not getting in-depth understanding as to why and how people practice self-medication. A gap, which this study intend to fill.

CHAPTER THREE
METHODOLOGY

3.1. Study Design

This study was a qualitative study which focused on exploring perspectives and common practices of self-medication. It emphasized on describing the meanings of individual perceptions and practices. It included qualitative methods to collect and analyse data. A purposive sample of men and women based in Shibuyunji District aged 18 and above was selected. The study incorporated free listing and pile sorts in Focus group discussions and In-depth interviews to gather data on the practices and perspectives of self-medication. Key informant interviews were also conducted with health personnel from five (5) health facilities in the study area. A case study design was used to explore the state of affairs as it existed through direct interaction with the participants (Cresswell, 2007). This method allowed the respondents to express themselves and used any language they were comfortable with without any restriction.

3.2. Study area

The study was conducted in Shibuyunji District. Shibuyunji is a newly established district which was previously a sub-district for Mumbwa. It has a population of 58 860 people and 8 health post (Shibuyunji District Council statistics). The study focused on five different geographical settings within the district namely; Kapyanga, Mwembeshi. Nampundwe, Shibuyunji and Shabasonje. This study drew 63 respondents from five catchment areas representing five rural health centres in Shibuyunji District, Lusaka province, Zambia. The sites were selected based on their proximity to the 5 heath centres in the district. The selection of the areas was purposively done with the help of the District Health Office who availed the information on their proximity to the health facilities and the number of people being served by each health facility. Shibuyunji is predominantly rural and most of the residents had low income levels and were dependent on subsistence farming for their living. Health services were largely provided by the public sector. Due to this reason, it was of interest to know the perspectives and common practices of self-medication in such a setting especially considering the population size against the number of health posts in the area.

3.3. Study population

The study population included the general population of Shibuyunji, adult males and females who were residents of Shibuyunji District and health care workers (nurses and clinicians) were also part of the study population.

Inclusion and exclusion criteria

The inclusion criteria was only males and females from the general population above the age of 18 years who have been residents of Shibuyunji District for a minimum of three months. Assuming that an individual who would have stayed for at least 3 months would have adapted and adopted the health-seeking behaviour of the indigenous people but also could at least have minimum information on the health-seeking behaviour of the locals and could answer some of the research questions. Healthy facility staff (nurses and clinicians) were also included as key informants.

3.4. Sampling technique and sample size

The sampling approach which was used to select the sample of the study was purposive sampling. Purposive sampling was conducted because participants' characteristics were defined. In this study, the diverse characteristics that were used to select study participants was demographic characteristics and Socio economic status. The study considered the following characteristics, age, married, single(never been married, divorced and widowed), not been to school, been to school (primary school level, basic school level, secondary school level or tertiary level) , formal employment and unemployed. The researcher picked one female and one male per each category. The defined characteristics facilitated collection of wide ranging, in-depth insights with unique and diverse characteristics and shared patterns that cut across cases on the research topic. A total number of 63 participants were enrolled in the study as shown in Table 1. Which is also indicating Data Collection Methods used and Participants.

Table 1

Data Collection Method	Characteristics of participants	Total Participants
2 Focus Group Discussions (FGDs)	Married, Single, Not been to school, Primary School level, Basic School Level, Secondary School level, Unemployed, Formal employment (Males and Females)	17
1 FGD	Married, Single, Not been to school, Primary School level, Basic School Level, Secondary School level, Unemployed, Formal employment (Females only)	8
1 FDG	Married, Single, Not been to school, Primary School level, Basic School Level, Secondary School level, Unemployed, Formal employment (Males only)	10
5 KIIs 1 KII	Health personnel Traditional herbalist	6
22 In-depth interviews	Married, Single, Not been to school, Primary School level, Basic School Level, Secondary School level, Unemployed, Formal employment (Males and Females)	22
Total number of participants		**63**

3.5. Data collection

Data collection was done by the researcher. Interview guides were used for in-depth interviews (IDIs) as well as key informant interviews. Focus group discussions (FGDs) were equally conducted using FGDs guide. Free listing and pile sorts were incorporated in interviews and FGDs. This was done to help identify issues related to self-medication practices in diverse categories of study participants. Also to have a clear understanding of the boundaries of the topic under study (Weller and Romeney, 1998). Face to face interviews were done to one participants at a time to have understanding of individual views and practices of self-medication without participants being influenced by the responses of other people. Interviews were conducted in English and Sala (a local language in the study area), written verbatim and translated into English language.

3.5.1. Free listing and Pile Sorting

Free listing was incorporated in IDIs and FGDs. Conducting a free listing exercise can produce a near-exhaustive list of illnesses and phrases, as well as identify symptoms and treatment strategies. Free-listing is one technique that is particularly useful in accessing culturally relevant vocabulary and in defining the boundaries of a cultural domain. During

IDIs and FGDs, participant were asked to list the illnesses that they self-medicate including illnesses they knew other people were self-medicating. Participants were asked to name (i.e. free list) all the general illnesses they can think of. Some illnesses where mentioned in Local language then interpreted to English. The local language had two or more names for one specific illness it was important to ask again; please, tell us any illness you (other family members, or neighbours) use self-medication on and also name the illness that you heard other people use self-medication.

Responses from free listing were tabulated by counting the number of respondents who mentioned each item, and items were then ordered in terms of frequency of response. Frequencies were used as estimates of how significant each item is within the sample of informants. Pile sorting helped determine informant's perceptions of similarities and differences among items listed.

3.5.2. In-depth interviews

A total number of 22 participants were interviewed. Each respondent was interviewed using an open-ended interview guide. Each interview lasted between 45mins to 1 hour and, for convenience, the interviews were conducted at a venue where the respondent was comfortable. The respondents provided their demographic information and were asked in broad terms about their health-seeking behaviours when experiencing health problems and their perception towards self-medication. They were also asked to freely list medicines used, diseases self-medicated, and reasons for self-medication and then sort the responses according to medicine and disease. All interviews were then transcribed verbatim and audio recorded for the purpose of data analysis and quality control.

3.5.3. Key informant interviews (KII)

Key informant interviews were conducted with 6 participants to collect secondary information concerning self-medication in the district. The KII interviews targeted 5 key informants (Nurses or Clinical Officers) from selected health facilities and 1 key informant offering conventional alternative medicine. The key informant interviews provided information in relation to what the experience has been from the health care provider's point of view.

3.5.4. Focus Group Discussion (FGDs)

A total number of four FGDs were conducted. Two FGDs had mixed categories (males and females) to allow learning, sharing and building on each other's ideas. While two of the

FGDs separated female and male participants so that each group had only one sex to allow freedom of expression on male and female practices of self-medication. Especially when it came to free listing of medicines and diseases self-medicated. FGDs helped to clarify and extend data collected in IDIs by generating information on collective views and meanings lying behind these views.

3.6. Data analysis

The study used Grounded Theory (GT) as an approach for data analysis. GT is ideal for exploring fundamental social relationships and behaviour of groups were there has been little exploration of the contextual factors that affect individual lives (Crooks 2001). Spradley (1979) refers to analysis as a systematic examination of something to determine its parts, the relationship among parts, and their relationship to the whole. While Miles and Huberman (1984) describe data analysis as consisting of three concurrent activities -data reduction, refers to the process of selecting, simplifying, abstracting and transforming the new case data. They argue that data collection and data analysis should overlap to allow for flexibility in data collection procedures so that the researcher remains open to new ideas or patterns which may emerge.

The use of GT in data analysis helped the researcher to get beyond conjecture and preconception to exactly see the underlying processes of what is going on (Glaser, 1978). GT offers a practical and flexible approach to interpret complex social phenomena (Charmaz, 2003); and it provides a strong intellectual justification for using qualitative research to develop theoretical analysis (Goulding, 1998). The approach enabled the researcher to investigate and describe what is on the ground, as it exists through direct interaction with the research participants. It helped uncover diverse perceptions and practices of self-medications and see how these issues relate.

A digital audio recorder was used to record the interviews and FGDs and information was transcribed verbatim. Data analysis was being done simultaneously with data collection, this helped inform the direction of the next interviews and explicitly meant at developing theory. This was being done through Theoretical coding, and line by line coding (Charmaz, 2006) Theoretical coding conceptualizes how the substantive codes may relate to each other as hypothesis to be integrated into a theory (Glaser 1978) Open, axial and selective coding (Strauss and Corbin, 1998).

Ethnographers like Spradley (1980) recommend researchers to consider having a journal where happenings and self to self-interactions about what is observed in the environment and heard could be recorded. The recommendations by Spradley helped in enhancing the data collection process, as well as providing memoirs during data analysis and report writing. To achieve this, the researcher had to bracket her prior experiences, conceptions, understandings, assumptions and previous knowledge about self-medication in order to approach the inquiry with a fresh insight.

Three types of field notes were recorded during the research process, as described by Minichiello and co-workers, (1995); the transcript file, personal file, and analytical file. The transcript file contained raw data in form of notes which the researcher wrote from the interviews. The personal file contained a detailed sequential account of the participants and their settings, and reflective notes on the research experience and methodological issues. The information contained in the personal file enabled reconstruction of conversations in context rather than simply relying on a-contextual verbal recording; this strategy was suggested by Minichiello and co-workers, (1995). The analytical file contained a detailed examination of ideas that emerged in relation to the research questions as the research progressed. It also contained reflections and insights related to the research that influenced its direction.

This study employed modified grounded theory in the analysis proposed by Charmaz (2000). At the core of modified grounded theory methodology, the researcher used Strauss and Corbin (1990) three-step coding process which involved open coding, axial coding and selective coding. The coding was done in an iterative approach (process of repeating and act). This is aimed at increasing the reliability of the analysis most particularly of large bodies of unstructured research data from interviews and focus group discussions. This coding is anchored on the main intellectual tool which is comparison. The method of comparing and contrasting emerging ideas or patterns was used across all participants and focus group discussions to forming themes, establishing the boundaries of the themes, assigning the segments to themes, summarising the content of all the codes.

In order to provide an objective interpretation and descriptions, there was need to reduce the data into an analysable form. The data reduction process involved a consolidation of steps drawn from grounded theory. Below are the steps that were followed up to the development of the theoretical model of how people practice and perceive self-medication.

Step1. **Immersion into the Data**

Preceding the transcription of audio recordings, at the end of every field work, the researcher listened to the audio recordings several times in order to capture a complete picture of the participants' perspectives or views on the subject matter. The process of analysing textual data started with efforts to understand the text as a whole and continued by developing a consistent approach to apprehend the essential features of the texts and to account for the data. This called for being submerged into the data by reading the texts several times and part-by-part interpretation of key thoughts throughout each text to try to interpret the general meaning of units or substantive statements that really meant something.

Step2. Textual Unit

Once the researcher got satisfied with the content of the textual data, all interviews and FGDs were aggregated into files of textual units. A textual unit was taken to be an aggregation of one respondent's data.

Step 3. Open coding:

This was done with a view to identify emerging categories in the textual data. It called for naming them, categorising them through a close examination of content in the text. The researcher did this line-by-line or sentence-by-sentence breaking down the data into substantive units which could be coded (either in vivo codes or sociological constructs) and incidents were compared with one another, for similarities and differences (Glaser, 1978). This was called delineating. Essentially, each line, sentence, paragraph was read in search of the answer to the repeated question "what is this about? What is being referenced here?" What does it represent? What relates to the research question?

In order to show how textual units were coded openly, Figure 3.1 shows the delineations of meaning units from a part of the verbatim speech.

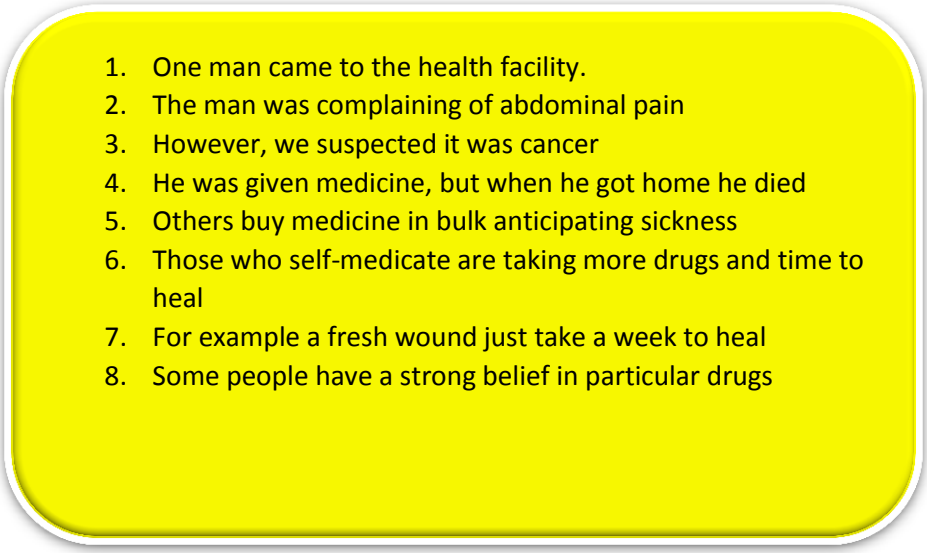

Figure 3.1 Delineating Meaning Units

After delineation, there was need to identify meaning units. This called for explaining the data by looking at those delineated statements that could illuminate the researched phenomenon.

The list of delineated units were then extracted from each textual unit. Each one was carefully analyzed and the clearly redundant units were then eliminated (Moustakas, 1994).

Following this delineation of meaning units within open coding, the researcher was able to look for what was meaningful. These key points were highlighted in italic and given an identifier or indicator attributed sequentially starting at the first interview and continuing on through subsequent interviews. The identifier was assigned a letter P1, P2, P3 and so on, where 'P' indicates 'key Point' expressed in form of the researcher's understanding using the logic of induction which is appropriate when the researcher desires to reduce large data to small data segments or to develop concept indicators (Strauss, 1987). From the memos, it was possible to develop new concepts.

Open coding entailed examining the first text, and then the second text and comparing them at a micro level and the researcher repeated this process with all texts going over every word, phrase, sentence, and paragraph to identify some meaning. Strauss and Corbin (1998) recommend "micro analytical coding" which consists of analysing data word-by-word and "coding the meaning found in words or groups of words" (see figures 3.1 above and 3.2 below) using memos.

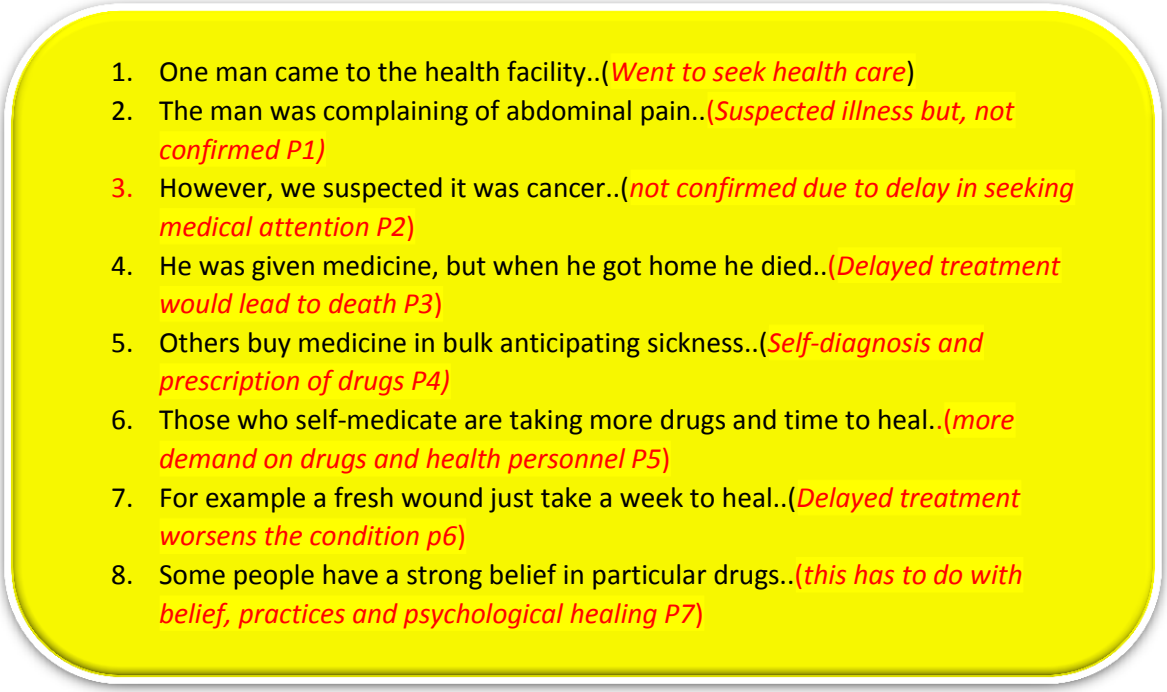

Figure 3.2 Creating memos

When creating memos (see Figure above). The researcher followed the rule of reflexivity to the latter writing down everything. Memos are written theoretically, with no concerns about grammar, spelling and such to minimize writers block. The memos will be modified as more concepts about the study are discovered. The researcher had to interrogate her own feelings and thoughts constantly as she made the interpretation reflexively. Line-by-line coding is a very time consuming and tedious work but at the same time it also helped to build detail structured conceptual data model. When the researcher was not finding any new concepts and saw that she was only repeating the existing labels, she had to stop doing this very detailed analysis at some point. This is the point called theoretical saturation.

Throughout the study, the researcher wrote extensive case based memos and conceptual memos. These memos contained impressions about the participants' experiences. These impressions were also used to systematically question some of the pre-existing ideas in relation to what had been said in the interview conducting constant comparison case by case. From this constant comparison, codes, sub-themes and main themes were developed.

Step4. Selective Coding

With the help of memoirs from open coding, codes, sub themes and categories were created emerging from the inductive reflexive analysis. Selective coding occurs when core variables and major dimensions and properties have been discovered. This is formalizing the relationships established into theoretical frameworks by figuring out the core variable that

includes all the data. This will be done by re-reading the transcripts and selectively code any data that relates to the core variables identified. The codes will be kept active using comparative methods asking the following:

- What is actually happening/what really happens
- Under what conditions does this happen?
- What does this incident indicate? (Glaser 1978)

It became evident that there were concepts that were meaningful and could be grouped together because they were similar with regard to certain phenomena and there were others that could not be grouped together. There were delineated meaning units which showed no meaning in relation to the research objectives. These were deselected or set aside in subsequent analysis. They appear in Figure 3.3 highlighted in blue delineated meaning unit 1 and 2. The delineated meaning units which were retained are called meaning units. It was then possible from the meaning units to create categories Figure 3.3). In this study, categories/main themes thus implied a set of phenomena that were directly derived from a sub theme. Categorising was an interactive process which led to theorisation.

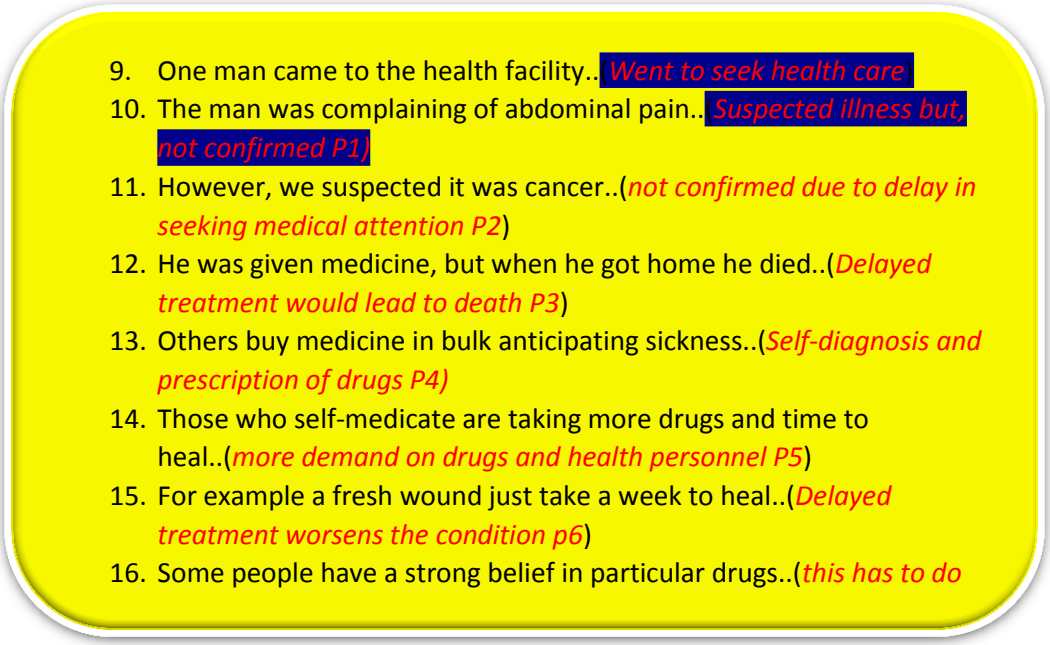

Figure 3.3 Creating categories

Step 5. Axial coding: this is the development and linking of concepts into conceptual families –coding paradigm, this was done by asking the question, what are the connections among the codes? Identifying relationships among open codes using the concepts and

categories while reading the text, to confirm that the concepts and categories accurately represent interview responses and exploring how the concepts and categories are related.

By comparing categories from all textual units, it became evident that there were concepts that could be grouped together because they were similar with regard to certain phenomena and there were others that could not be. Following constant comparison of data, perceived severeness of disease and individual belief appeared to act as building blocks for the phenomena that was being studied. Selective coding became the process of choosing core categories or drivers that impelled the story forward (Glaser, 1978). This is a construct that tied all other categories and welded them into a story line (Glaser, 1998 and Glaser, 1978).

Axial coding allowed assembling data in new ways by making connections between categories (moving from inductive to deductive analysis) Figure 3.3 Shows these relationships and the development of a substantive theory called sickness/pain severeness and individual belief model.

This emerging substantive theory is such that people are motivated to self-medicate based on the severeness of the disease and pain they are feeling. It is also based on these two indicators that they will determine which medication to take and for how long the medicine should be taken. The dosage is discontinued upon the disappearance of the pain. This is regardless of whether one has completed the dosage or not. In instances where the pain does not stop, an individual continues taking the medicine even after completion of the recommended dosage. Individual beliefs equally played an important role in determining the treatment process, duration and type of the drug to be taken during self-medication. If a drug is known to have been used by fore fathers or if it is believed that it is effective, people are more likely to use the same drug every time they fall sick. This theory discusses objective 1 and 3, which want to establish reasons for not consulting a physician and what guides/informs people during the self-medication process. The reason for creating this theory is to help guide program designs in health information and education in the health and related sectors.

3.7. Data dependability and trustworthy

Note taking and voice recording was used to ensure accuracy of information provided by participants. After each interview participants were asked to listen to the audio recording or read what was noted down to confirm what they had said during the interview. The researcher also ensured dependability by comparing the findings with those of other researchers (Alghanim, 2009, Haider and Thaver, 1995, Yuefeng et al., 2012 and Zafar et al., 2008).

3.8. Ethical consideration

Ethical issues were taken into account to minimize potential risks that may arise during the research process. Potential risks that could have arisen in this study included; emotional stress during interviews in cases of bringing to memory some experiences that the participants may have gone through themselves, a close friend or a family member.

The study could also have caused participants to risk losing economic time during the time they sat to participate in interviews and FGDs. In addition the study was conducted in a rural setup and looking at the time of data collection it was a period when participants were busy in crop farming therefore the study participants could have risked their productive time and this may impact negatively on their crop production.

To minimize these risks, the interviewer ensured that interviews were conducted at the participant's most convenient time, the researcher also made counselling arrangements in case of severe emotional stress. The interviewer who is also a fully trained counsellor exercised the required skills in preparing the interviewees for possible emotional experiences. Refreshments were provided to participants and a K30 as transport reimbursement for participants who needed to bound buses.

The researcher obtained permission from the National Health Research Authority, Provincial Health Office and District Health Office and the researcher worked closely with the District health office in carrying out the data collection process on Self-medication in the district while following the best advice that was offered by the concerned office.

Data collection process began with the researcher obtaining formal consent from participants. Each participant was provided with an information sheet and consent form containing all information regarding the data collection procedures, the participant's benefits and risk, the benefits of the community at large from the study, the contact details of the principal investigator, supervisors and of the ethics committee. Individual consents were obtained for FGDs. Translation for non-literate participants was done by independent persons for them to clearly understand the whole purpose of the study and process. Signing or thumb print were being done by all participants, witnesses and translators before they proceed in participating.

3.8.1. Respect for participant's autonomy

When participants expressed unwillingness to participate in the study despite seeking informed consent, they were not being manipulated to participate in the study. If for any

reason a participant decided to withdraw from the study, they were free to do so at any time. The rresearcher respected all individuals and did not use discriminatory or abusive language and ensured trustworthiness and transparence in all processes. In depth, interviews may cause participants to exhibit some unanticipated distressing emotions by bringing up traumatic memories. When this occurred, the researcher momentarily discontinued the interview to allow the participant's distressing emotions to settle. Thereafter, the participant and the researcher would agree upon when to resume the interview, whether immediately or on a later date.

3.8.2. Respect for persons and confidentiality

Permission to record the voices was sought from all participants before doing so and voice recording would only proceed after participant's permission. The researcher ensured that Participants' identification was protected by use of codes and not by any use of names or any description that may cause them to be easily identified. In addition in an event where participants expressed uncertainty over the venue for the interview, participants were allowed to choose where the interview ought to take place for their convenience taking into consideration confidentiality so as to enhance the participation of the participants. Furthermore, the researcher ensured that all written and recorded information gained from the research is protected. Written documents and audio records are being kept under lock and key in order to maximise confidentiality.

3.8.3. Non-Maleficence and Beneficence

The researcher ensured that the study is not only used for academic purposes but benefit other people through practicing responsible self-medication and the community at large. The research objectives and its anticipated benefits were made known to the participants in order for them to make an informed decision regarding their participation in the research. Participants were informed that there are no direct benefits in participating in the study, but that the study could help to contribute to better understanding of views and practices of self-medication among men and women in Shibuyunji district.

3.8.4. Approval

To ensure the safety and rights of the participants, approval and clearance was sought from the University of Zambia Biomedical Research Ethics Committee (UNZABREC) reference number 010-07-2016.

3.8.5. Study Limitations

The study had a few limitations, the first one is that it only focused on the rural setting without considering the urban setting. This might have created a bias towards the source and kind of medicines consumed. However, similar studies conducted in urban settings have been reviewed for comparability of the findings. Secondly, data collection on the kinds of medicines used may not be exhaustive as some medicines may be traditional and not have English names, but also recalling all the medicines used by participants might not be possible. The use of free listing helped minimize this limitation as it is useful in accessing culturally relevant vocabulary (Weller and Ronney, 1998). The use of grounded theory may also limit generalization of the study findings. Despite these limitations, the study findings may be generalized to the study setting and may stimulate more attention to research into the practices of self-medication in other districts in Zambia.

CHAPTER FOUR
FINDINGS

4.1 Findings and interpretation

This chapter presents findings on the perspectives and common practices of self-medication in Shibuyunji district. A brief description of the participants is shown followed by the common self-medicated illness and the kind of drugs used for self-medication as established through free listing and pile sorts. Sub and major themes were generated to help describe the findings of the study per specific objective. Verbatim quotations have been used to help demonstrate sub-themes.

4.2 Socio-demographic characteristics

The majority of the respondents were unemployed 45/63 and married 40/63. The oldest participant was 78 years old and the youngest was 19.

Table 2 is showing the profile of the study participants, see below.

Table 2: Profile of Participants

Description	Frequency
Male	30
Female	33
Employed	18
Unemployed	45
Married	40
Single	23
Formal Education	59
No formal education	4

Free listing of common Illnesses

Table 3 is showing illnesses and symptoms that participant stated that they were using self-medication on.

Table 3: Most common self-medicated illnesses in free listing (*n* = 63)

Illness	Frequency
Cough	53
Flu	51
Colds	48
sore throat	44
Toothache	43
Fever	41
Malaria	41
Headache	38
Stomach pains	31
Snake bites	22
Syphilis	21
Diarrhoea	21
Cholera	19
HIV	13
Genital warts	11
Sugar	11
Back ach	8
Body rashes	5
Asthma	4

A total number of 19 illnesses were named as the commonly self-medicated illnesses. The mentioned illnesses and symptoms were recorded as they were listed. Table 3 shows the frequency of commonly mentioned self-medicated illnesses. It was noted that for certain illnesses self-diagnosis was used. While other illnesses (for example Asthma, HIV, diabetes) health facility diagnosis was used but, participants preferred self-medication to going to the health facility for treatment. However, Injuries, severe wounds and strange illnesses informants reported going to the health facility.

Table is showing the most commonly used medicines during self-medication and their source.

Table 4: Most commonly used medicine for self-medication and their Source

Kind of Drug	Source
Antibiotics	drug stores, shops and left over drugs
Pain Killers	drug stores, shops, left over drugs
Herbs	Family, friends and the bush

The study also wanted to explore the kinds of drugs being used for self-medication and the source of these drugs. The informants named various drugs which were then grouped in three categories antibiotics, pain killers and herbs with the help of the medical personnel. Table 4 is showing the kind of drugs and the source of these drugs.

Table 5 is showing the major themes and sub-themes that emerged from the data.

Table 5: Major and Sub-themes

Objective 1b: Reasons for not consulting a physician	
Major themes	**Sub- themes**
Individual Factor	• Experience • Saving time • Quick pain relief • Easy access to medicines
Community Factors	• Distance to health facilities • Confidentiality at health facilities • Community gossip • Stigma
Objective 2 : To identify the kinds and sources of medications used as well as the source of the information	

Kinds of Medicines used	Sources of information and medicines
Antibiotics	• Drug stores, shops/*tutemba*, left over drugs, Friends and family
Pain killers	• Drug stores, shops/*tutemba*, left over drugs, Friends and family
Herbs	• Family, friends and individual access from the bush

Objective 3: To define what informs or guides individuals regarding the self-medication process and duration during the course of a particular illness	
Major themes	**Sub-themes**
Cultural factors	• Beliefs • Experience

Objective 4: To identify peoples' perspectives of the benefits and limitations of self-medication	
Major themes	**Sub-themes**
Cost/Limitations	• Drug resistance • Referrals • Fatality of Disease • Burden on health facilities
Benefits	• Quick relief • Saving time/Long hours on hospital queue • Distance • Saving money

4.3 Individual related reasons for not consulting a Physician

Participants had different reasons for not wanting to consult a physician. Saving time and money was reported as the main reason for not wanting to consult a physician. The participants reported not wanting to lose time as the main reason for resorting to self-medication. The time factor was interpreted differently based on the individual. It was dependent on the prevailing situation at that particular point. For example, depending on the

time of the year, going to the hospital was considered as a waste of time, participants would rather prioritise going to the field than going to the hospital. Equally when the pain was too severe, the patients resorted to take any form of medication to relieve the pain before going to the hospital.

4.3.1 Quick pain relief

It was reported that going to the health facility would prolong the time in which someone's pain is relieved. People resorted to self-medicate as a way of giving themselves first aid before going to the health facility. This was done with a belief that the longer it takes to get to the hospital, the disease might worsen or a patient might die. When the pain is too severe, the patients resolves to take any form of medication to relieve the pain faster before going to the hospital.

> ***…One informant had this to say, self-medication is the first thing I do before going to the clinic, it cures the disease faster, I get better faster than when I wait until I go to the clinic. It is a good idea of serving life…***
>
> **Another participant had this to say:-**
>
> *…Waiting until you get to the clinic might make the disease to worsen, so it is better to treat yourself so that you feel better…*

4.4 Health systems Factors

4.4.1 Similarity in Drugs/shortage of drugs in health facilities

There was a strong assumption among the informants that, the drugs dispersed at health facilities were similar to drugs found in pharmacies or drug stores. In certain instances patients were asked to go and buy the medicine on their own. Therefore, going to a health facility was seen as wasting time, as the same drugs would be accessed from pharmacies or drug store at the patient's convenient time.

> *…When I fall sick I usually buy medicine for myself because I know it is the same medicine that I will be given when I go to the clinic. Unless I don't get healed that is when I can sacrifice my time going to the clinic, you know, for you to be number one, two or three you have to start off at 05:00hours when I get buy the medicine at whatever time I want…(30 years old man)*

Another participant had this to say:

> *…sometimes there is actually no medicines in the clinic and we are asked to go and buy…(23 years old man)*

4.4.2 Distance to health facilities

Travelling long distances to health facilities was cited as another reason for informants to resort to self-medication. The majority of the informants had to travel long distances to get to a health facility. In addition accessing some health facility was a challenge for some participants due to lack of reliable transport. One participant had this to say:

….I live very far from the clinic and even when I have money for transport, there are no vehicles going to the clinic. Traveling a long distance when you are not feeling well is very difficult. If you are lucky maybe someone can offer an oxcart but it is not comfortable too… (42 years old woman)

4.4.3 Stigma as a reason for not consulting a physician

Stigma and shame was noted as reasons for not consulting a Physician. Participants reported fear of being stigmatised for diseases such as AIDS and STIs, therefore preferring to self-medicate rather than going to a health facility for treatment.

> One respondent said*…I would never go to the clinic when I have a STI. It is very shameful, so I would prefer to treat myself. You know some of these sicknesses makes you look like you slept with everyone in the village, so to avoid the embarrassment you just treat yourself… (49 years old Man)*

4.4.4 Availability of Medicines

Easy access to medicine was another reason for not consulting a physician. Some medicines are readily available in the house and sometimes from friends or the bush (herbs). Often these medicines are accessed at minimal costs or no cost.

4.5 Sources of medications used

4.5.1 Past experience

The study found that past experience with a particular drug or illness played an important role in where the patient would access the drug and which drug to take.

4.5.2 Experience with Disease symptoms

Informants stated that once they have symptoms similar to a disease they had suffered from before, they prescribe themselves the same medication they were given at the health facility.

Then the medicine is accessed from the drug store, family/friends, in the house and from the bush if the symptoms requires traditional medicine. In relation to this, one informant had this to say:

> *...At one point I was sick and lying on the mat at home and my neighbour came and asked me what the problem was, she then told me what medicine to buy. I went to the drug store and bought the medicine I was asked to buy. Since then, every time I get sick I buy the same medicine. Though it is very expensive…*

4.5.3 Belief and Practices

Personal belief in certain medicines equally played an important role in the kind of medicine people decided to take during a particular illness. Certain medicines were reported to have been used and worked from someone's childhood. In addition, informants stated that they would sometimes go for consultation at health facility and used traditional medicine at the same time. Starting with either of the two or combining them.

Every person has their own beliefs on how to treat certain illnesses inherited from their fore fathers or/and from experience. Psychological healing and strong belief played an important role in self-medication. When someone had a strong belief that a certain drug will make them feel better, it was more likely that they would take the same drug each time they were sick. In relation to this, one informant had this to say:

…I trust the medicine I use than going to hospital. I make sure I try to treat myself first before going to the clinic. This is the medicine that my grandparents used to give us when we were young unless it fails, that's when I go to the clinic... (44 years old man).

Another key informant said…*When patients come to the clinic we usually ask them what medicine they took before coming to the hospital and regularly it's Panadol, ibuprofen, indomethacin and metronidazole. And there are others who make it a habit that when they go to town they buy all sorts of medicines thinking that incase wadwala (you fall sick) especially antibiotics, they think that each time they get sick they have to take antibiotics and when they come here you don't give them antibiotics they are not happy…*

4.5.4 Individual Practices

The findings of the study suggests that the general population viewed self-medication to be effective, affordable and accessible. Demographic characteristics such as age, marital status, employment status did not have much influence on the use of self-medication. However,

level of education could have had influence on the type of drug and dosage taken during the process of self-medication.

4.6 Sources of Information

Information sources included friends, family and neighbours' experience with a certain illness and/or medicine and also previous prescriptions. One participant explained that:

> *...At one point I was sick and lying on the mat at home and my neighbour came and asked me what the problem was, she then told me what medicine to buy. I went to the drug store and bought the medicine I was asked to buy…*

4.7 Guidance on the self-medication process and dosage

Individuals were informed and guided on the self-medication process and duration during the course of a particular illness mainly by severity of the illness, past experience, symptoms and pain felt by an individual. These factors determined possible treatment options and duration of taking the medication. The findings suggested that diseases that were seen to be relatively minor and common, self-medication was employed. On the other hand, if the disease was believed to be serious, unfamiliar or an injury, study participants would more likely go to the health centre for treatment. In relation to this one informant had this to say:

> *…I don't have a specific duration or dosage in which to take the medication. I take it for as long as I am not feeling well and make sure I only stop when I feel better, but if the Illness worsens, then I go to the hospital (40 years old woman)..*

> *Another participant said…I keep trying different medicines until I find one which would work for me…and usually when you go to the clinic you are told to take medicine for 3 days, so same to me I do the same.*

4.8 Perspectives on benefits and risks of self-medication.

Self-medication was said to either have benefits or risks based on the informant. Information on the benefits and risks of self-medication was acquired from health facility personnel to give the provider perspective and the general population to provide the receiver's perspectives. Both perspectives were cost related.

4.8.1 Health facility related costs

From the key informants' perspective self-medication doesn't have tangible benefits. They reported that all the patients who went for consultation at health facilities report to have taken some form of medication before going to the health centre. Therefore, if self-medication was effective people would not go to the health facility with the same symptoms, sometimes they

went to the physician with severe symptoms than prior to self-medicating. The findings suggest that self-medication can be costly on the part of the health facility and the government if not properly done or when done irresponsibly. It can lead to drug resistance and worsening of disease. When a patient delays to seek medical attention his/her condition might worsen or even lead to death. This is costly on the health facility as more time and medicine which can be distributed to other patients is spent on one patient. It also leads to unnecessary referrals. Referrals are costly on the health facility level as personnel will have to accompany the patient. For the patients, they equally spend more money when referred to another health facility unlike when the illness is treated in its initial stages. When asked if there are any benefits related to self-medication, one key informant had this to say:

> *...No because it makes patients reject the drugs that we give them saying that they don't work, only because they could have bought a drug which is expired which didn't work for them or the drug might have become resistant due to taking it wrongly...*
>
> *…No, it would cause resistance, it will be difficult for health personnel to know what the problem is and more resources will be wasted when treating such patients…*

Another key informant had this to say when asked if they have received patients with delayed treatment:

> *… Yes, yes there was one man who came complaining about abdominal pains and he had those abdominal pains for several days and was taking some herbal medicine. When he came here he was critical. We gave him medicine, but when he got home, he started vomiting blood and died. According to our assessment, we suspected ulcers but he delayed to come for treatment, if he had come earlier maybe we could have helped…*
>
> *...Others would have a wound and try to treat it themselves by the time they are coming here (health facility)it will be so infected, a wound which would been healed in one week you find it taking several weeks to heal…*

4.8.2 Individual related benefits

The general population reported self-medication as having positive benefits. It helped them save on time, resources and gave them quick relief from pain. However, there were a few participants who knew that self-medication can be harmful especially if wrong medication is taken and the right treatment is delayed.

....It is good because you can treat yourself when the hospital is far away, you can also avoid the long queues at the clinic and sometimes there are actually no medicines in the clinic and we are asked to go and buy...(25 years old man)

4.9 Summary

The chapter has presented findings on the practices and perspectives of self-medication among males and females above the age of 18 in Shibuyunji district. The findings are presented based on the four study objectives. The main focus was on what informs and guides individuals during the self-medication process and what could be the perceived benefits and limitation of self-medication. It was found that self-medication was widely practiced by all the informants. It only varied in the level of the practice, as some informants totally depended on self-medication until they are healed, while others would use it to relieve themselves from pain before consulting a physician. Past experiences, severity of the disease and pain felt by an individual played a major role in guiding the self-medication process and the duration in which to take a particular medicine or dosage. In addition the benefits or limitations of self-medication vary based on an individual's point of view and who is incurring the cost at a particular point in time.

CHAPTER FIVE

DISCUSSION

This chapter is comprised of the discussion of the findings that emerged from the study as presented in chapter 4. It discusses the findings of the study in answering the research questions; how is self-medication practiced among men and women above the age of 18 in Shibuyunji District? and the question on What the perspectives of self-medication are among women and men above the age of 18 in Shibuyunji District? The aim of the study was to explore the perspectives and common practices of self-medication in Shibuyunji Distirct. The analysis of this study revealed some of the perspectives and reasons for the common practices of self-medication in Shibuyunji District.

5.1. Individual related factors

Individual related factors played an important role in the way self-medication was viewed and in the common practices of self-medication. The treatment of illnesses and disease symptoms were mainly based on self-diagnosis. This may lead to the irrational use of drugs. The irrational use of drugs is a cause of public and professional concern (Filho et al., 2004). Irrational use of drugs may result in accidental drug poisoning (Kurma et al., 2013) The study also found that individuals opted for self-medication rather than consulting a physician because of quick pain relief, similarity in drugs at health facilities/ easy access to medicines and drugs stores, shortage of drugs in health facilities, distance to health facilities and saving time and money. The reasons for not consulting a physician when one was sick were similar with the findings of a community-based, cross-sectional survey carried out in Riyadh city, the capital of Saudi Arabia, which explored self-medication behaviour among the general population by Alghanim (2009). The difference was the study design and the study setting. The former was a quantitative study conducted in the city, while the present study was qualitative and conducted in a rural setting with assumed limited access to drug stores. In the former study access to medical information included internet and mass media which are not easily accessible in the setting for the current study. The individual related reasons for not consulting a physician raise a number of questions relevant to the study setting's context. For example, are patients well-informed on what constitutes mild illness? How knowledgeable are they on drug interaction? Are the waiting times on hospital queues acceptable? These questions may need to be answered in future research. Self-medication as part of self- care can be justified only when there is a judicial use of medicines.

5.2. Community related factors

Some community related factors influenced the common practices of self-medication in the district. Distance to the health facility and gossip by community members. Some patients suffering from sexually transmitted diseases or infections (STDs/STIs) preferred to self-medicate because of not wanting to face community stigma. On the contrary a study by Musheke et al. (2013) found that some HIV patients decided not to start treatment because of the perceived adverse effects of ART and not wanting to remain on the drug for a life time. While others used herbal remedies to 'cleanse' the body of toxins, treat opportunistic infections, 'boost' the immune system and enhance physical functioning, others used the herbs as lifetime treatment.

Instead of walking a long distance to the health facility, drugs were accessed from drug stores, ordinary shops, friends or/and family and the nearby bushes (for herbs). Medicines accessed from friends and family had a higher chance of being expired or putting a patient at risk of taking wrong medication. The findings in this study are similar with the findings in a study by Zafar et al (2008), which reported that drugs were obtained from pharmacy or/and stocks kept at home or from friends. The use of scientifically unproven herbal remedies raises health and safety concerns (Musheke et al.,); therefore, there is need for sensitization campaigns on the benefits of consulting a physician and the risks associated with widespread self-prescription of antibiotics and use of scientifically unproven herbal remedies.

What was interesting in the findings of the current study was that drugs are not being only sold in drug stores/pharmacies, but also in ordinary shops and *tutembas* (makeshift shelters made out of card boxes and grass). In addition people in rural areas are not only self-medicating with herbal medicine but with all forms of other medicines which they are buying from shops and drug stores and stocking them at home.

5.3. Cultural factors

Cultural factors such as beliefs and practices played an important role in the common practices of self-medication in Shibuyunji. People did not have a specific dosage or timeframe to follow when self-medicating except for the pain one is feeling and severity of the pain. In likeness to other studies, Zafar et al (2008), in their study on self-medication amongst University students of Karachi: Prevalence, Knowledge and Attitudes found that dosage was altered based on symptoms and participants intentionally stopped medication when sickness symptoms disappears.

This study also found that every individual had their own beliefs on how to treat certain illness which they inherited from their fore fathers or/and from experience. Psychological healing and strong belief in certain treatment processes also played an important role in self-medication process. It was noted that when someone has a strong belief that a certain drug will make them feel better, it was more likely that they would take the same drug each time they are sick. In an ideal situation the only justifiable reason for self-medication would be urgency of the problem (ibid 2008). This is similar to the study findings conducted on Pakistani mothers, where good past experience with the medicine was the main reason for self-medication (Haider and Thaver 1995). These practices suggested that participants lacked complete knowledge on the risks associated with non-responsible self-medication. Even though most participants stated that they knew that it may be harmful to self-medicate, people have continued to self-medicate without the consulting a physician.

It would be then recommended for future research to consider looking at people's insight on how devastating self-medication could be. In addition a quantitative study to look at the prevalence rates of people who considers self-medication having devastating consequences if a physician is not consulted. The findings would therefore, suggest which areas health education and information may be required. We are of the view that if the participants knew exactly how devastating self-medication could be instead of simply knowing that it is wrong, most people would consult a physician before self-medicating especially with drugs such as antibiotics and/or certain dosage and guidance would be followed during the self-medication process.

5.4. Health care Systems

The health care system was a contributing factor to the common practices of self-medication in Shibuyunji. Insufficient drugs and health personnel in the health facilities, cost of medical care and confidentiality were among the common health system related factors. Although it is true that self-medication can help treat minor ailments that do not require medical consultation and hence reduce the pressure on medical services particularly in the underprivileged countries with limited health care resources (Vucic, 2001), the availability of the more complex drugs groups such as antibiotics without prescriptions is a source of great concern (Nordeng and Havnen, 2005). Additionally, the practice of self-medication often has many adverse effects and can lead to many impairments, including the global emergence of Multi-Drug Resistant pathogens (Bauchner and Wise, 2000), drug dependence and addiction (Calabresi and Cupini, 2005), risk of misdiagnosis (Ashna, et al 2006), complications related

to over or less dosaging (Assael 2006), drug interactions (Neafsay, 2004) and tragedies relating to the side effects of specific drugs (Tackett, 2006). It is also true that more resistant infections in an individual will not just more likely lead to death but, it also means healthcare will get even more expensive.

The findings conversely assume that the general population view the benefits of self-medication as outweighing the risks associated with self-medication. The reason for this view is difficult to explain with the data we collected in our study and it would be an interesting prospect for future research. However, it is important to note that there are potential risks of self-medication practices such as incorrect self-diagnosis, delays in seeking medical advice when needed, dangerous drug interactions, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse (Talevi, 2010 and Souza et al. 2011). However, it is true that self-medication has positive benefits if it is done correctly, but the question remains when should self-medication be considered to be harmful?

CHAPTER SIX
CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

In conclusion, decisions about self-medication practice are influenced among others by income, distance to health facility, condition of the disease and disease severity. Perceived benefits of self-medication are likely to guarantee that it remains an important and common health seeking behaviour. People don't have a specific dosage and duration when self-medicating. That is, when self-Medicating drugs are not taken for a proper duration. Men were assumed to be practicing more of non-responsible self-medication than women. Self-medication and non-doctor prescribing are common in the Shibuyunji district with varying but similar reasons for not consulting the physician. In addition to western medicines, herbal medicines were also commonly used for self-medication. Health information and education to help patients decide on the appropriateness of self-medication is required.

Benefits and risks of self-medication are based on the person reporting them, therefore, though self-medication is promoted by WHO because of affordability and inaccessibility of health services in developing world, benefits must be weighed against adverse effects. The new finding in the current study is that, self-medication may be a common practice in rural areas and that people buy different medicines in bulk anticipating illness. Sometimes these medicines are stored in homes for a long time such that by the time they are being used they could have expired or the labels would have been rubbed off.

6.2 Recommendations

i. Policy makers should ensure drug stores are regulated further by tracking the quantity of medicine ordered against the number of prescriptions filled.
ii. There is a need for healthcare professionals in health facilities to make conscious effort to investigate possible use of non-prescribed drugs by patients who go for medical consultation at health facilities and provide guidance to such patients.
iii. Health information and education should be provided to the general population on the risks associated with non-responsible self-medication.

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APPENDICES

Appendix 1

INFORMATION SHEET

Participant Information Sheet/Consent Form

Reading grade level: 5.1

Study Title: Perspectives and practices of Self-Medication among women and men above the age of 18 in Shibuyunji District

Principal Investigator: Ms. Alice Sayi

IRB No.:

Introduction

I am a student at the University of Zambia, this study is part of my training in Public Health. You are invited to take part in a research project titled; Perspectives and practices of Self-Medication among women and men above the age of 18 in Shibuyunji District. This is because you are a resident of Shibuyunji district and above the age 18. This Participant Information Sheet Form tells you about the research project. Knowing what is involved will help you decide if you want to take part in the research.

Kindly read this information carefully and ask questions about anything that you do not understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with someone you trust. Participation in this research is voluntary. If you don't wish to take part, you don't have to.

Purpose of research project

The purpose of this study is to learn about the Views and practices of Self-Medication among women and men above the age of 18 in Shibuyunji District. To achieve this, I will have find out the source of medicine and medical information and also in particular the factors leading to self-medication among women and men above the age of 18 in Shibuyunji district. When the study is completed, I will share my results with you and the public in general. It is hoped that this study will bring about interventions that will aim at promoting responsible self-medication.

Why you are being asked to participate?

Any woman or man who is above the age of 18 and has been living in Shibuyunji for more than three months can take part in the study. You have been asked to participate because you fit this description.

Procedures

If you agree to participate in the study,

You will be asked to sign a consent form. I will then ask you to take part in a face to face interview with me. The interview will be conducted in place that you are comfortable with and it will last about 30 minutes.

With your permission, I will record the interview to help me capture all that you are going to say, if that is not possible, I will ask your permission to write down details of the interview. The information that I will collect will be typed in full to help me fully understand what you will say. Your name will not be included in any of the documents.

Risks/discomforts

There is no physical harm that you will experience by participating in the research. However, I recognize some information you may tell me may be personal or sensitive to others. However, I would like to assure you that information that I will get from you will not be shared with anyone outside the research team.

Benefits

There are no direct benefits to you by participating in this research. However, by taking part in this study you will contribute to the better understanding of view and practices of self-medication among men and women above the age of 18 in Shibuyunji district. This may benefit other people through practicing responsible self-medication.

Payment

There is no payment for participating in this research. However, depending on the time of interview a drink and a snack will be provided.

Protecting data confidentiality

All information collected in this study will be confidential and used only for research purposes. Your identity will not be revealed under any circumstances. The collected information will be locked in a safe place.

Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

Who do you call if you have questions or problems?

- Call me, Alice Sayi

Cell: +260 976551314 Email: alice.sayi@yahoo.com

Call or contact the University of Zambia Biomedical Research Ethics Committee office for any ethical concerns. The Ethics Committee contact information is:

Address: Chairperson of the Biomedical Research Ethics Committee at University of Zambia, Ridgeway Campus, 50110, Lusaka.

Telephone: 260-1-256067 Fax: 250753 Email: unzarec@zamtel.zm

Appendix 2

Informed consent form

Study title: Perspectives and practices of Self-Medication among women and men above the age of 18 in Shibuyunji District

Principle investigator: Alice Sayi

The purpose of this study has been explained to me and I understand the purpose, the benefits, risks and confidentiality of the study. I further understand that, if I agree to take part in this study, I can withdraw at any time without having to give an explanation and taking part in this study is purely voluntary.

I.....
(Names)

Agree to take part in this study designed to explore perspective and practices of self-medication among men and women above the age of 18 in Shibuyunji district.

Signed/Thumbprint.....Date.....
(Participant)

Signed/Thumbprint.....Date.....
(Witness)

For more information you may contact the principal investigator Alice Sayi on 0976-551314 or through email, alice.sayi@yahoo.com

Appendix 3

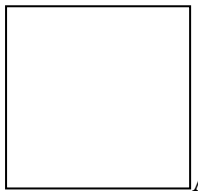
AGREEMENT TO RECORDING

_____ *(participant initials)* I agree to allow the interview I participate in to be recorded.

_____ *(participant initials)* I do not agree that the interview I participate in to be recorded.

_____ _____

Signature of participant Date

 Ask the participant to mark a "left thumb impression" in this box if she is unable to provide a signature above.

Signature/ thumb print of Witness (if participant is illiterate)

_____ _____

Printed Name of Witness Date

RESEARCH TOOLS

Appendix 4

GUIDE FOR IN-DEPTH INTERVIEW

Study Title: Perspectives and practices of Self-Medication among women and men above the age of 18 in Shibuyunji District

Date of Interview: …….

Place of Interview: ……

Interview Number: ……

INSTRUCTIONS

Participants must read through, understand and sign the consent form provided before they participate in the interview. Remember to probe and get concrete examples. Let the informant speak at length and make sure that you use this only as a true guide in the interview process, and not as a list of questions to be covered one after the other.

There are no right or wrong answers in this discussion. Please feel free to be open and share your point of view. It is very important that we hear your opinion.

A. Socio-demographic characteristics

1. Age
2. Sex
3. Education level
4. Employment status
5. Marital status

B. Perspectives of self-Medication

1. Have you ever heard about self-medication?

2. What do you know about self-medication?
3. Would you self-medicate? / why? Why not?
4. What do you think about self-medication in general?
5. What are the possible benefits/risks?

C. Illnesses that are self-medicated

1. How is your health status?
2. Do you visit a health service provider each time you are not feeling well? why and why not?
3. How often do you visit a health provider institution. Why?
4. Generally, which illnesses do you self-medicate and which ones to you take to the hospital/clinic?
5. Have you heard of other people self-medicating?/which illnesses do they self-medicate? List them.

D. Kinds and sources of medicines as well as source medical information

1. What kinds of medicines do you use when you are ill?
2. What Kind of medicines do others use to self-medicate? Can you name them?
3. Who provides these medicine
4. How did you come to know about these medicines i.e. for each medicine metioned?
5. Do you know other people who are self-medicating? Where do they get their medicine from?

E. What informs or guides individuals on the self-medication process and duration of medication.

1. In an instance where you do not go to the clinic/hospital for medical assistance, how do you determine the type of medication to take and the duration of taking that medicine?

This is the end of our interview; do you have any questions for me?

Thank You for your time.

Appendix 05

Guide for Focus Group Discussion

Copies of Consent/Assent and confidentiality to be provided to each participant and read aloud for the benefit of those that cannot read. Participants will be provided with an opportunity to ask any questions.

Before we start, I would like to remind you that there is no wrong answer in this discussion. We are interested in learning from you what your perspectives are on self-medication and what the practices in this community are. Therefore, you should all feel free to be frank and to share your point of view regardless of whether you agree or disagree with what you hear. It is important that we hear the general situation.

1. How many of us know what self-medication is? Those involved in the practice?
2. What do you think is the reason for our topic today? What do you think cause people to self-medicate?
    - Contributing factors that you know?
    - What stories have you heard as reasons for people to self-medicate?
3. What forms of medicines to people use in this community? For which illness?
4. Where are these medicines accessed from?/ who provides these medicines?
5. What are the benefits of self-medication? What are the risks?

Appendix 6

Interview Guide for Key Informant Interviews

I would like to thank you for accepting to take part in this interview talking self-medication in Shibuyunji District.

My name is Alice Sayi a Public Health student at The University of Zambia carrying out a research on Practices and Perspectives of Self-Medication in Shibuyunji District.

I am carrying out this interview with you because you are involved in providing health care to the people in this area and that you have information on what benefits and risks are associated with self-medication.

There are no wrong answers, please feel free to share your point of view on the subject matter.

I have a recording device and I would like to request that you allow me to record this interview because I may not be fast enough in taking notes and I do not want to miss any important part of this discussion.

1. So generally what is your understanding on Self-Medication?
2. Do you receive patients with delayed treatment/wrong diagonosis due to safe-medication? If yes, what has been the experience?
3. What information do you have generally regarding what leads to people to self-Medicate?
4. What do you think is the most used medicine for self-medication?
5. What is the source of this medicine?
6. Where do they access to information on which medicine to use?
7. Has Self-medication benefited you as health provider?

- Yes/ How

- No/why

8. Do you have programs that aim at raising awareness on non-responsible self-medication? If yes, how are they conducted?

   End of Interview.

   Thank you again for participating.