THE ROLE OF ETHNOMEDICINE IN THE PROVISION OF PRIMARY HEALTH CARE: THE CASE OF IGUHU LOCATION, KAKAMEGA SOUTH DISTRICT, KAKAMEGA COUNTY, KENYA

BY

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University or any other award.

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We confirm that the work reported in this thesis was carried out by the candidate under our supervision.

Sign:..... **Date:** 11/11/2012

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DEDICATION

This thesis is dedicated to my wife Caroline, my children, and most importantly to my father and mother for making it all possible.

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Completing this thesis was not an easy task. The challenges were many but I wish to thank God Almighty for giving me the strength to see it through. I also wish to acknowledge my supervisors Prof. Achola and Dr. Kerre for their guidance and patience. I extend my gratitude to all the lecturers and staff at the Sociology Department for their support.

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OPERATIONAL DEFINITION OF TERMS

Primary Health Care

This is defined as the point at which an individual makes a decision to consult a professional or semi-professional health care worker about a health problem he or she believes the professional may help to solve.

Biomedicine

This is defined as a science that includes different fields of knowledge and explains diseases especially based on the conceptualization of biological causal factors.

Ethnomedicine

Ethnomedicine may be defined as a set of beliefs and practices concerning health and illness in different human populations. It observes and describes hygienic, preventive and healing practices taking into account temporal and spiritual references.

Pharmacological Therapy

The pharmacological therapy involves the use of medicinal plants and animal extracts for treatment.

Non-pharmacological Therapy

Non-pharmacological is a kind of therapy that depends on the illness and the perceived cause.

ABBREVIATIONS AND ACRONYMS

DRO	-	District Records Office
SDH	-	Sub-District hospital
DSO	-	District Statistics Office
CORPs	-	Community Own Resource Persons
NHS	-	National Health strategic
HBM	-	Health Belief Model
WHO	-	World Health Organization
GOK	-	Government of Kenya
KDHS	-	Kenya Demographic Health Survey
WHA	-	World Health Assembly
NDP	-	National Drug Policies
NHSP	-	National Health strategic Plan
NHPF	-	National Health policy framework
NHP	-	National Health Policy
TBAs	-	Traditional birth attendants
IMF	-	International Monetary Fund
HBM	-	Health belief model
SPSS	-	Statistical Package for Social Sciences

ABSTRACT

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-determination. Ethnomedicine is widely recognized as an important element of primary health care. However, there seems to be little understanding of its actual role, with most studies focusing on the therapeutic value and the efficacy of herbs and other pharmacopoeia, rather than the social, cultural and psychological aspects of the same. Thus, ethnomedicine has still not been given its proper place in health care provision especially at the policy-making level. This study set out to investigate the role of ethnomedicine in the provision of primary health care. Specifically, the study sought to investigate the factors that determine the utilization of ethnomedicine; to find out the preventive and treatment procedures used by ethno medical practitioners; and to investigate the role of pharmacological and non-pharmacological therapies of ethnomedicine in the prevention and cure of common illnesses and injuries. This study was conducted in Iguhu location, Kakamega South District, in the Kakamega County of Kenya. The study relied mainly on survey research techniques but supplemented this by observation and secondary data. The sampling unit was the household from which one member was purposively selected. Ethnomedical practitioners were selected purposively through the snowball technique. After data collection, a codebook was developed, and then the data was analyzed using the Statistical Package for Social Sciences. This study established that the overall influence of the level of educational attainment on the utilization of ethnomedicine is skewed, with respondents at both extremes of the level of education reporting a high rate of utilization, as opposed to those who have attained only secondary school education. The study also established that religious affiliation, the level of income and occupational activities did not have a significant influence on the patterns of utilization of ethnomedicine. However, the study revealed that age, sex and marital status had a significant influence on the utilization of ethnomedicine. The study also found that illnesses and injuries perceived to have been caused by biophysical factors may be prevented and cured by both biomedical and ethnomedical practitioners. However, illnesses and injuries perceived to have been caused by superhuman factors may be prevented by ethnomedical practitioners only employing both pharmacological and non pharmacological therapies. The study detected a very high rate of reported success rates of ethnomedicine. The study concluded that utilization of ethnomedicine remains strongly prevalent in the study area. The study also showed that most respondents mix biomedical and ethnomedical remedial therapies in their health seeking practice. Therefore, ethnomedicine is an integral part of the primary health care system in the study area and other similar rural settings. The study concludes that both ethnomedical and biomedical practitioners show a willingness to cooperate and expressed a desire to learn more from each other.

CHAPTER ONE

INTRODUCTION

This study aims at examining the role played by ethnomedicine in primary Health Care. In so doing, the study intends to critically analyze three key areas of health care: prevention, cure and utilization of ethnomedicine. In this first chapter, the study provides a historical overview of both ethnomedicine and biomedicine in Africa and more specifically, in Kenya. It also briefly examines the phenomenal revival of interest in ethnomedicine in Africa with special reference to Kenya. Further, the problem statement and objectives of the study are stated in this chapter. In addition, the research questions which the study seeks to answer are posed. Finally, the justification, scope and limitations of this study are also highlighted in this chapter.

1.1 Background to the Study

Primary health care may be defined as that point at which an individual makes a decision to consult a professional or semi-professional health care worker about a health problem he or she believes the professional may help to solve (Gambrill, 1980). The World Health Organization (WHO & UNICEF, 1978), defines primary health as follows: "Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self- determination."

The components of primary health care include the following: Education concerning prevailing health problems and the methods of preventing and controlling them,

Promotion of food supply and proper nutrition, An adequate supply of safe water and basic sanitation, Maternal and child health care, including family planning, Immunization against major infectious diseases, Prevention and control of locally endemic diseases and appropriate treatment of common diseases and injures.

The decision to consult a professional is interconnected with the choice of medical system. There are two broad medical systems; the biomedical and the ethnomedical system. Bio-medicine can be defined as a science that include different fields of knowledge and explains diseases especially based on the conceptualization of biological factors.

Bio-medicine has evolved over a long period of time. In Eighteenth century Europe, medicine was based on a large number of rival systems or "schools of thought" about disease which had their roots in Greek Human Pathology. Then, the task of medicine was not only to identity localized lesions but also to explain illness in terms that embraced the total mental and physical disposition of the patient. The doctor had to take into account how the specific temperament, social back ground and psychological characteristics of the patient shaped and modified the general illness process (Lawrence, 1996).

In the nineteenth century, biomedicine increasingly shifted its focus to specific anatomic lesions that could be correlated with felt symptoms of illnesses. The feelings and sensations of the patient, which previously formed the focal point, were now secondary to signs of internal pathology (Jewson, 1976). This approach was followed in the twentieth century by "Laboratory Medicine" in which doctors relied more and more on laboratory tests in making diagnosis.

However, determinants of health cannot be limited to biological factors. According to Lee and Franks (1977) there are four broad determinants of health. These are Biological, Behavioral, Environmental and Socio–cultural. It is this broad conceptualization of the determinants of health that captures the ethnomedical approach. Ethnomedicine may be defined as a set of beliefs and practices concerning health and illness in different human populations (Genest, 1978). It observes and describes hygienic, preventive and healing practices taking into account temporal and spiritual references (Guerci, 1995).

Throughout human history, human beings have adopted different therapeutic strategies depending on their specific climatic, phytogeographic and faunal characteristics and upon their respective cultural and socio- cultural typologies (Nichter, 1992). Every human culture builds a specific view of the world from which view stems specific views of health and illness. Thus, every culture frames and passes on a specific knowledge on health and illness in terms of etiology, nosology, prophylaxis and management of illnesses. As De Rosny (1985) puts it, every culture has its own medicine.

Biomedicine in Africa therefore was not introduced in a vacuum. However, the coming of colonialism, Christianity and "Westernization" in Africa was accompanied by the "Centers of Excellence" approach to medicine. The emphasis was on "modern" hospital based care embracing the prevailing technologies and meeting international standards (Sindiga, 1995). The colonial government actively discouraged the practice of ethnomedicine, equating it to witchcraft, which was outlawed (Thairu, 1975). Recourse to ethnomedicine was considered backward and primitive.

The emphasis on costly, hospital-based medical care has placed biomedicine out of the reach of many in Africa. The emphasis on meeting international standards also means that biomedicine can only serve a small proportion, or at the very best, offer adequate care for some and minimum care for the rest, due to high levels of poverty, rapid urbanization, high morbidity, poor infrastructure and rapid increase in population.

Bio-medicine alone cannot adequately cope with health demands in Kenya. For example, according to the Kenya Demographic Health Survey, 60 percent of the population in Kenya lives below the poverty line (Government of Kenya, 2009). Life expectancy has dropped from 60 years in 1993 to 45 years in 2008. The Infant mortality rate has gone up from 64 per 1,000 children in 1993 to 72 children per 1,000 in 2009. On average, 36 percent of all children in Kenya die before their fifth birthday. Maternal mortality, estimated at 590 per 100,000 births in 1998, was approximately 27 percent of all deaths of women aged between 15 and 49 years in 2009. Morbidity rates also continue to increase fundamentally as a result of parasitic, respiratory and waterborne infections (Sindiga, 1995). Added to this is increased malnutrition and its related health complications. All this is compounded by the fact that only 42 percent of the population in Kenya has access to health facilities within a four kilometers radius. More than 25 percent of all Kenyans live more than 25 kilometers away from the nearest health facility (Government of Kenya, 2010). Despite the fact that less than 30 percent of the population lives in urban areas, health expenditure in Kenya is badly skewed in favour of urban areas at close to 70 percent of total health expenditure (UN, 2010). The ratio of doctors to the population in Kenya is 1:1,700 in urban areas and 1:33,000 in rural areas in Kenya (World Bank, 2010).

In addition, health facilities lack adequate personnel, drugs, transport and other amenities. They also lack the financial capacity to embrace technological advancements and enhance training of personnel. According to Sindiga (1995), health facilities in Kenya are encumbered by problems of congestion, low community participation and the high cost of material services placing them beyond the reach of the average Kenyan.

1.1.2 Revival of Interest in Ethnomedicine

Due to the inability of the health care system to meet the health needs of the population and also due to the high cost of health services, interest in ethnomedicine was revived towards the end of the 20th century (Owuor, 1999). However, this study contends that socio-cultural factors have also contributed to the revival of interest in ethnomedicine. In recent years (1990's – 2000',s) there has been an a proliferation of herbalists and other ethnomedical practitioners in all the major towns of Kenya (Ngetich, 2004). This interest is not limited to Kenya alone. According to Kasilo (2000), 80 percent of the population in Africa depends on ethnomedicine.

It is in this light that health stakeholders emphasize the need for the promotion and development of training and research in ethnomedicine to compliment biomedicine. Resolution WHA 30.49 of the world Health Assembly (W.H.A) meeting in Alma Atta in 1977, drew attention to the potential of alternative medicine, urging member countries to utilize traditional medicinal therapies (W.H.O & UNICEF, 1978) in 1978, the W.H.A highlighted the crucial role played by herbal medicine, especially in the developing countries and recommended that member countries give priority to the use of herbal medicine in National Drug Policies (W.H.O,1980). The support for

ethnomedicine by the W.H.O has been consistent since the Alma Atta Conference. Since the Alma Atta conference, the W.H.O. has organized several international symposia on ethno-medicine, including one in Bamako, Mali.

In Kenya, the National Health policy framework of 1994 encouraged research in ethnomedicine in order to provide scientific basis for drugs (government of Kenya, 1994). This position was reiterated in the 1999-2004 National Health strategic Plan (Government of Kenya 1999).

However, the recognition of the role of ethnomedicine continues to be faced with three major problems. The first is the fact that research in ethnomedicine has continued to focus on the therapeutic value and the efficacy of herbs and other pharmacopoeia, rather than the social, cultural and psychological aspects of the same. According to Sindiga (1995), this stems largely from the insistence of physical scientists on the pursuance of only bio-physical solution to all health problems.

The second problem is that of legislation. In Kenya, there is no legislation governing production and registration of herbal medicine, even those proven to work. This is despite official acknowledgement of the therapeutic value of herbal medicine as expounded in the 1999-2004 National Health Strategic Plan (Government of Kenya, 1999).

The third problem is that of integration. There is lack of coordination between biomedicine and ethnomedicine mainly due to mutual mistrust between ethnomedical and biomedical practitioners (Owuor, 1999). There is also little goodwill for coordination and integration efforts. In 1989, a task force was launched to link the activities of ethnomedical and biomedical scholars and researchers in Nairobi but the

committee was unable to begin working due to lack of good will and mutual mistrust (Kimani, 1995). According to Ng'etich (2004), the task force failed because it did not take into account patient's patterns of utilization of both forms of medicine. Efforts are currently being made to integrate ethnomedicine into the mainstream healthcare system. However, these efforts are concentrated on pharmacopoeia.

1.2 Statement of the Problem

Despite the various efforts made at recognition of ethnomedicine, it has still not been given its proper place in health care provision especially at the policy-making level. The focus of most of the research on ethnomedicine has been in the medicinal value and efficacy of pharmacopoeia, ignoring its non pharmacological aspects. The ignored aspects include psychological, ritualistic aspects and the belief system among others. According to Weisz (1972), Good and Kimani (1980); Onyango (1999); Otieno (2001); and Ngetich (2004); the belief system and other psychological factors play a huge part in the decision to utilize ethnomedicine. They argue that Kenyans will resort to ethnomedicine even when biomedicine is available and affordable.

Following this argument, it would seem that ethnomedicine does play a role in primary health care. However, the role of ethnomedicine in primary health care is not documented in Iguhu location. There is a discrepancy between the role of ethnomedicine to the prevention and cure of common diseases and injuries and the priority it has been assigned in the National Health Policy and academic discourse. Indeed, its mention in the National Health Strategic plans appears to be an afterthought, with most of the emphasis laid on biomedical health services. Further, most of the current efforts at integration of ethnomedicine and biomedicine are focused almost exclusively on the therapeutic value of pharmacopoeia. This is largely

a result of the insistence on pursuing only biophysical solutions to health. Thus, this study set out to illuminate the actual role played by ethnomedicine in primary health care in its totality.

1.3 Objectives of the Study

The purpose of this study was to investigate the role of ethnomedicine in the provision of primary health care. In light of the purpose of the study, the specific objectives were as follows:

1. To investigate the factors that determine the utilization of ethnomedicine.
2. To find out the preventive and treatment procedures used by ethno medical practitioners.
3. To investigate the role of pharmacological and non-pharmacological therapies of ethnomedicine in the prevention and cure of common illnesses and injuries.

1.4 Research Tasks and Questions

In view of the foregoing, the study set out to accomplish the following tasks in order to answer the following research questions:

Task 1:

To investigate the factors that determines the utilization the utilization of ethnomedicine

Questions:

1. Does the level of education influence the use of ethnomedicine?

2. Does membership to certain religious denominations influence the utilization of ethnomedicine?

3. Do demographic factors like age, sex and marital status determine the use of ethnomedicine?

4. Is perceived affordability and/ or accessibility of ethnomedicine a factor in determining its utilization?

Task 2:

To find out the diagnosis and treatment procedures used in ethnomedicine

Questions

1. Which illnesses do ethnomedicine practitioners try to prevent and cure?

2. Which procedures are employed in the ethnomedical diagnosis of disease and ailments?

3. What meanings are attached to these procedures by the practitioners and their patients?

Task 3:

To investigate role of pharmacological and non- pharmacologist therapies of ethnomedicine in the prevention and cure of common illnesses and injuries.

Questions:

1. How prevalent is the use of ethnomedicine for the prevention and cure of illnesses and diseases?

2. What are the rate of reported success of ethnomedicine?

3. What are the patterns of utilization of ethnomedicine?

1.5 Justification of the Study

The colonial experience criminalized ethnomedicine practice and utilization. According to Otieno (2001), this legacy still persists. He argues that some people still perceive ethnomedicine as being criminal and primitive. Nonetheless, ethnomedicine has its social role and seems to have a strong appeal among Kenyans, seemingly irrespective of social class (Onyango, 1999; Otieno, 2001; Ngetich, 2004). This study sought to shed light on the actual role played by ethnomedicine in primary health care in Kenya. Knowledge of its actual role may help to de-mystify and de-criminalize ethnomedicine.

According to the Kakamega County Statistics Office (2005), Kakamega South District, where this study was conducted, has the highest number of ethnomedical practitioners. This study therefore sought to establish why this is the case despite the relative accessibility to biomedical health care in the study area considering the proximity to the Iguhu sub District Hospital. This study therefore set out to shed light on factors that influence people to access ethnomedical rather than or in additional to biomedicine.

1.6 Significance of the Study

This study intended to shed light on the factors that determine utilization of ethnomedicine. It also intended to investigate both the pharmacology and non-pharmacological procedures and practices employed by the ethnomedicine practitioners in prevention and cure. In so doing, the researcher hoped to make a

significant contribution towards a better understanding of ethnomedicine in its totality.

This study also sought to investigate the actual role played by ethnomedicine in primary health care in Kenya. The findings may therefore make a significant contribution towards the search for measures that could lead to the formulation of a health strategy that will encompass all the factors that affect health in an African context.

The study may also add to the pool of knowledge in this field and may provide a source of information to prompt further research.

1.7 Scope and Limitations of the Study

This being a survey study, it was highly dependent on the co-operation and goodwill of the respondents. As such the results may not be a 100 percent reflection of the true picture of the phenomena under study since some of the respondents may have provided incorrect information.

This study purposed to focus on only three aspects of health - prevention (prophylaxis), cure and utilization. Thus, the study did not exhaust all areas of ethnomedicine or primary health care.

Further, the study was limited to the geographical area of Iguhu location, Kakamega County. Thus the findings may not be a reflection of the prevailing situation in other parts of the District, Province or country.

This study was also limited by the fact that data was collected with the help of translators. The use of translators for interviews contains the obvious challenge of language barriers and the possible loss of information.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examined related literature on the subject. In so doing, both historical and theoretical analysis of related literature was undertaken. Further, the chapter highlights various theories and concepts that inform this study.

2.1 Historical Analysis of Ethnomedical Literature

Ethnomedical research in Africa can be divided into two broad phases. The first phase dates from the beginning of the 20th Century to the late nineteen seventies, while the second phase dates from 1977 (after resolution W.H.A. 30.49 of the World Health Assembly officially recognized the potential of ethnomedicine and the Alma Ata conference of 1978 (World Bank & UNICEF, 2000).

Pre-Alma Ata Ethnomedicine research did not make any clear distinction between pharmacology, witchcraft, magic and rituals. Indeed, African ethnomedicine was equated to witchcraft (Young, 1975). The focus of the studies was the description of rituals, magic and witchcraft, more or less reducing ethnomedical research to a study of the same. Among the pioneers of African ethnomedical research were British Ethnographers like E.E. Evans Pritchard who found that beliefs about illness among the Azande are personalistic and offer a philosophy of misfortune (Pritchard 1937). He asserts that illness is attributed to witchcraft. And that any treatment is an anti-dote to witchcraft. Rivers and Ackerknecht argue that ethnomedicine relies heavily on magic, religion and witchcraft and is unscientific and has supernatural orientation (Rivers, 1924, Ackerknecht, 1991, 1995). These earlier studies also focused on

specific ethnic groups. In Kenya, some of these studies include Whisson (1964) among the Luo; Gillian (1930, 1931) among the Kikuyu; Mburu (1973) and Weisz (1972) among the Kamba.

After Alma Ata, emphasis was placed on the need to determine the actual pharmacological potential of ethnomedicine and the role and contribution of the latter to health care (Young, (1983, De Jong. 1991). There was a shift from description of ritualistic practices to actual ethnomedical knowledge. Some of these studies, which focused especially on medical knowledge, include those by John Janzen in the Congo (Janzen, 1978 (a)). Harriet Ngubane among the Zulu (Ngubane, 1977), Christopher Roberts on the Batabwa (Roberts, 1979) and Allan Young on the Amhara (Young, 1978, 1982), Michael Dennis Warren on the Techiman-Bono of Ghana (Warren, 1982).

Alma Ata also made the following recommendations:

1. That Dualism be accepted and
2. That, as much as possible ethnomedicine be integrated into the modern health care systems.

The concept of medical pluralism is a recognition of the importance of the various medical systems (Leslie, 1980; Slikkerveer, 1990). It is an acknowledged that there exist different medical systems, which are interconnected and which people use alternatively and or simultaneously. It arose from the need to harmonize the dualistic nature of medicine. Pearce (1982) and Rappaport (1981) urge the need of integration. Davis and Aslam (1979) suggested that Hakims (Indian Folk healers) be integrated into the British National Health Service. However, according to Ng'etich (2004),

integration has in most cases been limited to the incorporation of traditional birth attendants (TBA's) into the National Health Care Systems.

Some studies on medical pluralism are descriptive. Among these are Stanley P. Yoder on the Congo of Zaire (Yoder, 1982); Fredrick Dunn on Asian medicine (Dunn, 1976) and John Janzen (Janzen, 1978(b)). Others examine the interrelation between the various systems (Good 1980; Nyamwaya, 1987; 1992).

2.2 Review of Literature on the Different Ethnomedical Perspectives

According to Yoder (1982) there are three broad theoretical approaches to African ethnomedical research. They include British structural functionalism; American ethnosemantism and cultural ecology (the Chicago School).

British Structural functionalism studies African beliefs about medicine and the social significance of the ritualistic practices. Its origins could be traced to the works of W.H.R. Rivers (Rivers, 1924), E.E. Evans Pritchard (Pritchard 1937) and Erwin Ackerknecht (Ackerknecht, 1991; 1995). The thrust of these approach is that illness behavior is influenced by socio-cultural factors. Their emphasis was on the belief system and its influence on illness behavior. They were not interested in using their observation of illness behavior to explain social relations and as such they neglected crucial aspects of medical systems like nosology, prophylaxis and choice of practitioner (Yoder, 1982).

However, after Alma Ata, there emerged what can be referred to as neo-structural functionalism. These researchers are interested not only in illness behavior but also in using the observed illness behavior to explain social relationships. They consider the relationship between culture and illness behavior, culture and choice of practitioner.

Among these scholars are Nyamwaya (1987; 1992); Kimani (1982); Ikiara and Kimani (1987); Kimani Et al (1990); Mutungi (1977); Fabregas (1975, 1982) and Ng'etich (2004). They argue that demographic and socio-economic factors influence illness behaviour. Kimani (1982) studied the patterns of utilization of health services and found that utilization is determined by socio-cultural factors. However, his study focused on Presbyterian mission hospitals only.

An offshoot of British structural functionalism is cultural determinism. Researchers who subscribe to this school of thought argue that health behaviour is culturally determined. They include Young (1983); Janzen (1978(b)); Kleinman (1980); Robert (1979); Good (1987); Kimani (1982). Otieno (2001) argues that traditional cultural attitudes and beliefs influence both illness behavior and choice of therapy. Wandibba (1995) found that the choice of therapy and illness behavior is determined solely by socio-cultural factors.

The second broad theoretical approach, Ethnosemantism, focuses on how local conceptions of disease are classified. American medical Sociologists, among them Charles Frake (Frake, 1961) and Michael Dennis Warren (Warren, 1982) revealed complex systems of diagnosis and disease classification based on empirical observation and the use of question frames. They concluded that most diseases are naturally caused and their ethnic diagnosis is based upon empirical observation. Other researchers who have taken this approach to ethnomedical research include Maxwell (1987) among the Bambara of Mali; Kite (1992), among the Ibo of Nigeria; and Chibamba (1995) among the Shona in Zimbabwe.

Finally, cultural ecologists are interested in behavior affecting the health of populations while laying emphasis on adaptivity of this behavior. Alexander Alland

Jnr. (Alland, 1990). Fredrick Dunn (Dunn, 1976) and Robert McCracken (McCracken, 1971) studied human efforts to control disease (prophylaxis) as part of cultural adaptation to the environment. They examine how the culture and behavior of a population affects the incidence of diseases. In a study among the Luo of Kenya, Armstrong Onyango revealed that the cultural practice of knocking down the lower front teeth was aimed at combating lockjaw disease (Onyango, 1999). Reynolds (2002) found that cultural practices among the Swahili of Kenya and Tanzania helped in the prevention of Pneumonia.

2.3 Theoretical Framework

In carrying out this study, it was imperative to examine a few sociological theories in relation to the topic under investigation. These include; Structural functionalism, cultural determinism, cultural ecology and the development theory.

2.3.1 Structural Functionalism

Structural functionalists maintain the view that society consists of various structures that determine the way we do things. Some structuralists even argue that sociology is the study of social structures and their impacts on the society (Parsons, 1951, Mechanic, 1978). Early structural functionalists like A. R. Redcliffe Brown; Bronislaw Malinowski and Talcott Parsons argued that social structures like religion, education and the medical system serve the need of the society and sustain the harmonious integration of the society (Giddens, 1993). It is the perspective that shared cultural beliefs are seen as playing an integration function in society (Ogburn and Minkoff. 1947; Redcliffe Brown, 1952; Harris, 1968; Murphy, 1978; Bilton et al,

1992). In this regard, this study shall examine the relationship between illness behavior and culture and use these observations to explain social relations.

2.3.2 Cultural Determinism

Health and illness behavior is culture bound (Fitzpatrick, 1984; Coe, 1970). Thus, this study is proceeding on the assumption that aspects of health examined in it, including prevention, cure and the choice of practitioner are determined by socio-cultural factors. These socio-cultural factors include values and beliefs, laws and institutions, the family, income levels, educational levels, religious affiliation and occupation. These factors will influence or determine the preventive and curative strategies adapted. They also influence the choices of medical systems and determine whether one will choose either the ethnomedical or biomedical system.

2.3.3 Cultural Ecology

Cultural ecology is interested in the health of populations, with an emphasis of prophylaxis as an aspect of cultural adaptation. Thus, this study is proceeding from the assumption that there exist certain cultural strategies of disease prevention that are informed by a need to enhance adaptability and the survival of the society. For example according to Otieno (2001), the Luo of East Africa adapted the practice of knocking off some lower teeth in order to make it easy for those affected by the lockjaw disease to be able to feed.

2.3.4 Development Theory

Early development theories were structuralists. They proceeded from the assumption that in order for a country to achieve economic development, the structures of that economy have to be strengthened and improved (Roston, 1960). These economic

structures include the agricultural system, education, and health among others. However, this structuralist approach was challenged by dependency theorists like André Gunder Frank, Theonito Dos Santos and Osvaldo Sunkel Furtado.

Neo-Dependence theorists argue that the relation between the developed countries and the developing one is one of the dependence by the latter on the former. This relationship militates against the efforts by the latter to develop. Other dependence theorists focused on a basic needs approach to development. Singer (1988; 1989) and Seers (1963) argue that structural change and economic growth alone are not enough to create development. They argue that there's need to improve access to basic needs like food, education, shelter and health.

Contemporary development theory however is neo-liberalist, with emphasis on less government involvement. It focuses on market forces. Thus proponents, including the World Bank and International Monetary Fund (IMF) call for the liberation of all the "structures" including the health sector to market forces.

Friedrich (2001) argues that the neo-liberalist development theory can explain the emergence of ethnomedicine due to the liberalization of the health sector. Thus, other players (traditional medical practitioners) have entered the field offering more affordable medical services. Friedrich (Ibid) argues that liberalization and poverty have led to the resurgence of ethnomedicine. Thus, the following casual model applies.

2.3.5 The Health Belief Model

As mentioned earlier, the objectives of this study are examine ethnomedicine in relation to three aspects of health, including prevention; choice of medical system; and cure. In order to better understand these, it is important to review the health belief model (H.B.M). Rosenstock (1966) and Becker (1974) developed the health belief model to explain health behavior with a view of prevention. The H.B.M. is based on a personalistic interpretation of illness and sickness behavior. Broadly, its premise is that perceived susceptibility to disease, perceived threat of disease and perceived severity of disease result in action that enhances good health behavior. The following causal model applies.

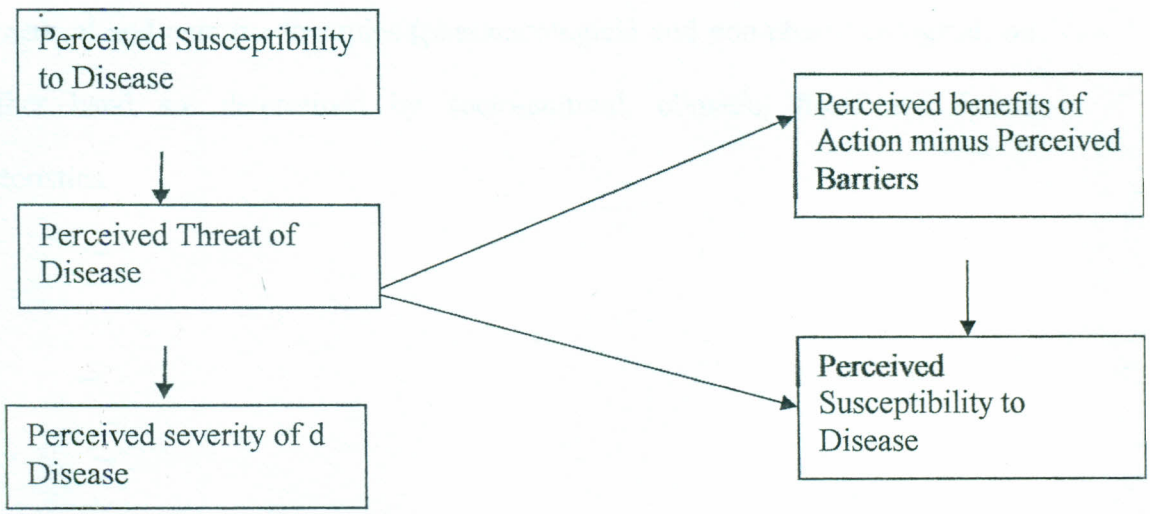

Figure 2.1: The Health Belief Model

Source: Adapted from Becker, (1974)

This model has been variously criticized as being individualistic in focusing almost exclusively on the individual perceptions ignoring socio-cultural factors which could

influence a health action (Mullen and Hersey, 1987). However, it is important for explaining part of the health decision making process.

2.4 Conceptual Framework

Deriving from all the aforementioned, it can be argued that social construction influences the perceptions on the causes of ill health and the choices of medical system. The perception on the causes of ill health will also influence the choices of medical system since those who perceive both illnesses and injuries as not being caused by biophysical factors will not seek biophysical solutions. Further, demographic and socio-cultural factors also influence both the perceptions and the choice of medical system. The choice of medical system is also influenced by the reported success of the same.

Ethnomedical and curative therapies (pharmacological and non-pharmacological) on the other hand are determined by socio-cultural, climatic, floral and faunal characteristics.

Thus, the afro-mentioned theories have guided the following conceptual model:-

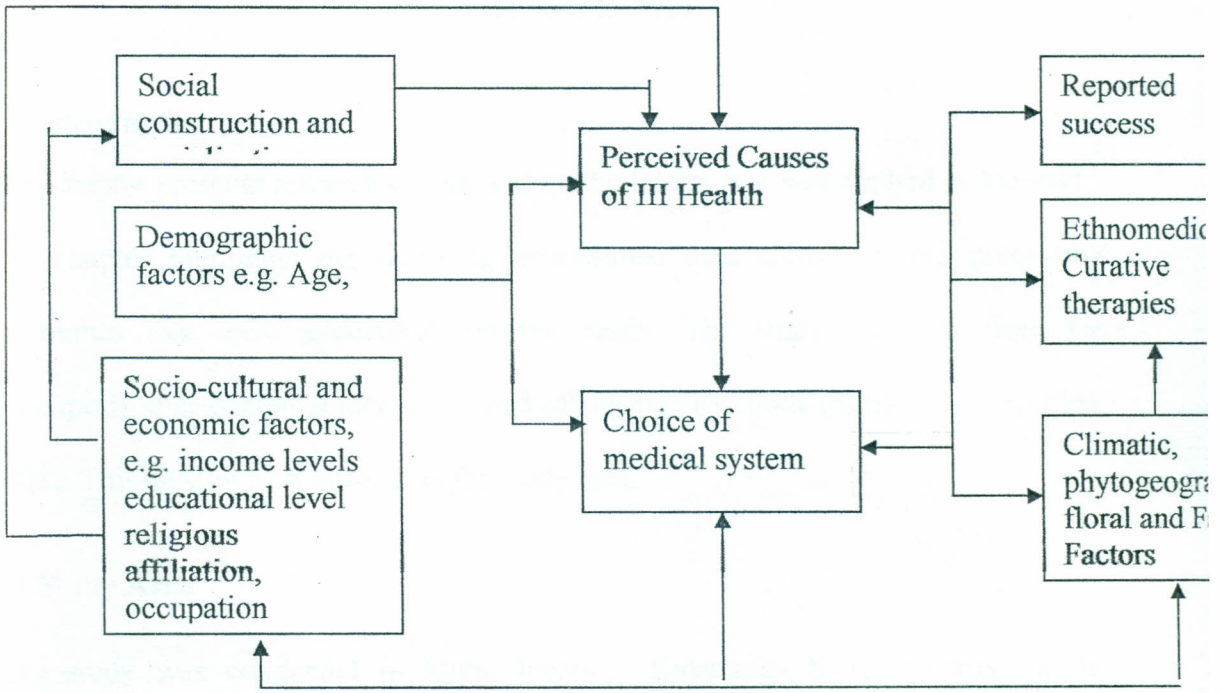

Figure 2.2: The Conceptual model of the study

Source: Author (2012)

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter presents research design and methodology that was applied in the study. The chapter highlights the sampling procedures, data collection and processing techniques that were undertaken by the study. The study proceeds from the assumption that contemporary ethnomedical research is both qualitative (Reynolds, 2002). This chapter also introduces the study area.

3.1 Study Area

This study was conducted in Iguhu location, Kakamega South District, in the Kakamega County of Kenya (please refer to the map in the Appendix). Administratively, the District has two divisions, seven locations and nineteen sub locations (District Records Office, 2005). According to the 2009 census report, Kakamega South District had a population of 203,422 people. The population density in the county was 524 person per square kilometer in 2009. The County has the highest population in Kenya, with Kakamega South District recording a population density of 780 persons per square kilometer 2009 (Government of Kenya 2010).

Iguhu is one of six locations in Kakamega South District. It lies approximately 12 Kilometers from Kakamega town on the Kisumu-Kakamega highway. The choice of Iguhu Location was informed by various factors, major among which are:

a) Centrally located in the location is Iguhu Sub-District hospital (S.D.H) - the only one in the division. The average distance to this hospital is 2 km, (District Records Office, 2002).

b) According to the District Statistics Office (2002) Iguhu Location has one of the 20 government dispensaries in the District, in addition to the S.D.H. there are also 5 privately owned health care facilities in the location.

c) It has a unique blend of both urban and rural lifestyle (government of Kenya 2002). According to the District Records Office (District Records Office, 2002), Iguhu has literacy rate of 63%.

d) The researcher is familiar with the study area and the local language

Thus, from the aforementioned factors, it can be concluded that biomedical care is reasonably accessible in the location. The literacy rate is also fairly high. However, according to the District Records office, Iguhu location has one highest rate of recourse to ethnomedicine (Government of Kenya, 2002).

3.2 Study Design

The study adapted a descriptive research design. According to Kothari, (2003) descriptive research design describes the state of affairs as it exists. This design helped the researcher to collect data from members of target population to determine the current status of that population with respect to study variables

The study made use of both qualitative and quantitative research approaches. According to Polit and Hungler (1995) "Neither qualitative nor quantitative research can, alone, fully deliver on its promise to establish truth about phenomenon of interest. Together, they supply each other's lack through enhanced theoretical insights, incrementality and enhanced validity." This study therefore applied both qualitative and quantitative methods as highlighted in the chapter.

3.3 Target Population

According to Mugenda and Mugenda (2003), a target population refers to all the members of a population to which the researcher wishes to generalize the results of the research. The target population of this study included the general population, Biomedical practitioners, ethnomedical practitioners and key informants. The major key informants including; local administration officials, Community Own Resource Persons (CORPs), biomedical health workers such as Clinical Officer and nurses.

3.4 Sampling Techniques

The study employed both probability and non probability sampling methods. In order to get a representative sample of the population. These are explained next.

3.4.1 Probability Sampling Procedures

The probability sampling was used to get information on utilization of ethnomedicine. This was done to ensure that every member of the population had an equal chance of being in the sample. The key Probability Sampling techniques used in the study included; cluster and simple random sample methods. In cluster sampling, the study area was clustered into the six sub-locations that constitute Iguhu location. These are: Makhokho, Ivonda, Savane, Lirhembe, Shitoli and Shisere. In order to get a manageable sample, the study first randomly selected three of the six sub-locations. The three sub-locations selected were Makhokho, Shitoli, and Ivonda. In each of the selected sub locations, the study targeted the following groups of informants:

- Members of the general population
- Ethnomedical practitioners
- Biomedical practitioners

- Other key informants including Community Own Resource Persons (CORPs)

3.4.2 Sampling the General Population

To get a sample of the general population, the researcher worked in collaboration with the local leaders such us the village headmen in each of the selected sub locations, to draw up a list of householders who had lived in the study area for a relatively long time (five years and above). 30 households were then randomly selected from each of the sub locations. One member from each of the selected households was purposively recruited for the study. Using Mugenda and Mugenda (2003) as a guide, the researcher used a sample size of 300 respondents from the general population.

However, due to the heterogeneous (socio-cultural and demographic) nature of the study area, the target population was randomly stratified to capture this. The population in the three randomly selected sub-locations was divided into the following non-overlapping strata from which a proportionate sample was selected as indicated in Table 3.1.

Table 3.1: Sampling Strata

Demographic information	**STRATA**
Level of education	No formal education Primary level education **Secondary level education** College and above
Economic status	Low income (below kshs. 10,000) Average income (between kshs. 10-30000) High income (over kshs. 30,000)
Age	**18 to 29 years** 3 to 39 years 40 to 59 years 60 years and above
Sex	Male female
Religious affiliation	Catholic Protestsnt Muslim other
Marital status	Married Widowed Divorced Single

3.4.3 Non-Probabilistic Sampling Procedures

This study used non-probabilistic sampling namely, purposive and snowballing techniques. Purposive technique was used to interview the ethno medical practitioners while snowballing technique was used in order to reach as many practitioners as possible. According to key informants, Iguhu location has approximately 400 ethnomedical practitioners. The study therefore intended to interview and observes a minimum of 45 of them. The snowball technique was used to sample ethnomedical practitioners who are known. They in turn recommended others until the list became representative.

Several key informants, including biomedical health workers and local administration

officials were also interviewed. According to the records at the Iguhu SDH the hospital had three Clinical Officers (one of whom was the officer in charge), six nurses and three nurse aides. Therefore, the officer in charge was one of the key informants. Both of the other two clinical officers, in addition to three of the six nurses were also interviewed as key informants. Care was taken to ensure that the key informants selected were representative of the heterogeneity of the group. Other key informants interviewed included the proprietors of the five privately owned health centers, the area chief and three of the six assistant chiefs randomly selected. This made a total of 14 key informants.

3.4.4 Inclusion Criteria

To be included in this study, respondents must have lived in the study area for at least five years. In addition, the individual must have attained the age of 18 years and must have given their informed consent.

3.5 Data Collection Methods

Both primary and secondary data were utilized. Primary Data was collected using three methods namely: Observation, questionnaires and in-depth interviews (IDIs). Observation method was used by the researcher to observe the procedures employed by the ethnomedical practitioners. To complement the observation, the practitioners were taken through in-depth interviews by the researcher. Questionnaires were designed to collect data from the general population. These methods are explained in great detail next.

3.5.1 Primary Data Collection Methods

To collect primary data, the study employed survey questionnaire, In-Depth Interviews and observation methods.

a) Survey Questionnaire

As earlier mentioned, most of the population in the study area is literate. Bearing this in mind, this study employed questionnaires to corroborate the data obtained from IDIs. The use of questionnaire surveys in Social Research is widely recognized. A questionnaire was designed and pre-tested with a small sample in the study area that bore similar characteristics to those of the target population. Pre-testing resulted in a few changes to the final questionnaire (Appendix 2). To maximize response rates, the final questionnaires were personally delivered by the researcher and three research assistants, who explained the purpose of the study to recipients. Where clarifications were sought by the respondents, they were promptly made by the researchers. The respondents were given at least three days to fill up the questionnaires, which were then collected by the researcher and research assistants. The questions were both structured and unstructured.

B) In-Depth Interviews

In-depth interviews were used to gather information that had not been adequately captured by the questionnaires. The interview method was chosen in order to ensure one hundred percent response and also to enable the probing of ambiguous responses. Two categories of respondents were targeted for in-depth interviews: ethnomedical practitioners and other key informants who included biomedical practitioners. A total of 56 interviews were conducted with 45 of the interviewees being ethnomedical

practitioners while the rest constituted other key informants. The key informant interviewees included two doctors, four clinical officers and five nurses.

All the interviews were conducted using semi-structured questions with the help of an interview guide (appendix 3). Each of the interview sessions was also tape recorded. For the ethno medical practitioners the interview sessions also helped the researcher to get referrals to other practitioners known to them.

(c) Direct Observation

The researcher also attended some of the therapy sessions conducted by some of the ethnomedical practitioners. The purpose of attending the sessions was to observe the treatment procedures. This observation also sought to obtain the following information

- The number of patients seeking to be attended.
- The observable socio-cultural and demographic characteristics of the patients.
- The treatment procedures applied.

Observation checklists and schedules were used to get a clearer understanding of the phenomena under observation.

3.5.2 Secondary Data Collection Methods

A content analysis of secondary data was carried out. This entailed examination and documentation of available literature and records in order to get a better understanding of the primary data collected. The study also collected data on general trends of morbidity and information on the health services. Some of the sources included the Provincial General Hospital records; the Iguhu S.D.H records: and the records of the five privately owned health centers. Data was also collected from the

District Statistics Office in Kakamega and Ikolomani. The study also made use of the Internet to get intonation on the issues that arose.

3.6 Data Collection Procedures

This study employed the services of three research assistants (RAs) who worked directly under the supervision of the principal researcher (the author). The RAs were undergraduate students from Kenyatta University's Sociology Department. They were selected based on their ability to communicate fluently in English, Kiswahili and Luhya (the local language in the study area). The RAs were trained by the principal researcher before the commencement of data collection. During the training, the following areas were covered in detail:

- Ethical Issues
- A review of the entire proposal in order to familiarize the RAs with the study
- A review of the data collection tools
- Training on how to collect data using the tools. Emphasis was laid on how to ask questions that bring out the three components of in-depth interviews namely: main questions, follow up questions and probes (Ulin et all., 2002).
- Note taking techniques
- Use of recording instruments
- Observation skills

Before the actual commencement of data collection, a pilot study was conducted in Makhokho sub location to pre-test the instruments for clarity and reliability. In light of the outcome of the pilot study, the instruments were slightly modified.

During the entire period of the data collection, a debriefing session was conducted on a daily basis every evening. The debriefing sessions were facilitated by the principal researcher and attended by all the RAs. During each debriefing session, the principal

researcher and the RAs reviewed the day with a view to identifying problems encountered and discussing ways of solving them and re-strategizing on the way forward. All the data collected on any one day was transcribed and translated the same evening while it was still fresh in the minds of the data collectors.

3.7 Ethical Considerations

Prior to their participation in the study, an informed consent of all the participants was sought. Particular care was taken to ensure that all data was handled with professionalism. All the information was treated with confidentiality while ensuring that the respondents remained anonymous. Additionally, all data collected was kept under lock and key to safeguard this. The principal researcher emphasized and went out of the way to ensure the RAs treated the respondents with dignity and respect.

3.8 Data Processing and Analysis

After data collection, a codebook was developed which clearly indicated the variables being tested and numbering them accordingly. After all the data had been coded, it was entered into a computer and using the Statistical Package for Social Sciences (S.P.S.S.). A frequency run (univariate analysis) was done in order to see how the various categories of values had been clustered for each variable.

This allowed for detection of errors in coding and where necessary some categories were combined. A bi-variant analysis was then conducted to see how the variables related, in so doing; the variables were cross tabulated to see how they associated with each other. The study utilized descriptive statistics to tabulate and summarize data collected from the sample. The qualitative data was analyzed following a four point schema: reading coding, displaying and data reduction. The analysis began by reading, re-reading and reviewing of the transcripts and field notes until the content

became intimately familiar. The data was then coded to group themes emerging from the notes and transcripts. An inventory was then prepared to determine what was known relating to each theme. The purpose was to capture the richness of each theme, to identify sub-themes and the context in which they occur. Finally, the information was distilled to identify the most essential concepts and relationships.

The credibility of the findings was tested by testing rival explanations and seeking explanations for inconsistencies arising from triangulation of informants and theories. The essential conclusions and recommendations were then communicated through the final research report.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS

4.0 Introduction

This study sought to investigate the role of ethnomedicine in primary health care. The findings of the study in relation to the objectives have been presented in this chapter. The first objective of this study was to investigate the factors that determine the use of ethnomedicine. Specifically, the study sought to find the extent to which the level of education, religious affiliation, and the perceived affordability and or accessibility of biomedicine affect the utilization of ethnomedicine. Other variables under study included demographic factors like age, sex and marital status, whose influence on the utilization of ethnomedicine the study also sought to determine.

4.1 Level of Education

On average, most of the respondents had some level of education, with 55%of them having at least secondary level of education. The results shown in Table 4.1 confirm this.

Table 4.1: Respondent's levels of education

Level of Education	Number	Percentage
No schooling	50	16.7%
Primary level	85	28.3%
Secondary level	100	33.3%
College	65	21.7%
Total	**300**	**100%**

4.1.1 Patterns of Utilization of Ethnomedicine in Relation to the Level of Education

The respondents on the two extreme ends of education attainment (those with very low levels and those with high levels) are frequent users of ethnomedicine. Approximately four fifths of the respondents with college education and above do utilize ethnomedicine. This trend is replicated at the other extreme end of educational attainment. However, a large proportion of the respondents who had attained secondary level of education are non-users

This study therefore established that the overall influence of the level of educational attainment on the utilization of ethnomedicine is skewed, as indicated in Table 4.2.

Table 4.2: Patterns of utilization of ethnomedicine in relation to the level of education

Level_of_Education		Utilization_Of_Ethnomedicine			Total
		Do not use Ethnomedicine at all	Use Ethnomedicine Frequently	Use Ethnomedicine Rarely	
College Level and Above	Count	12	34	19	65
	Expected Count	13.4	30.8	20.8	65.0
No. Schooling	Count	7	29	14	50
	Expected Count	10.3	23.7	16.0	50.0
Primary School Level	Count	12	42	31	85
	Expected Count	17.6	40.2	27.2	85.0
Secondary School Level	Count	31	37	32	100
	Expected Count	20.7	47.3	32.0	100.0
Total	Count	62	142	96	300
	Expected Count	62.0	142.0	96.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.971[a]	6	.044
Likelihood Ratio	12.728	6	.048
N of Valid Cases	300		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.33.

The study also found that more than half of the professional ethnomedicine practitioners have a fairly efficient record keeping system as opposed to only one tenth of non-professional practitioners who do not keep any records at all. Most of the

professional practitioners had attained at least primary level of education, thus indicating the important role of education in recording keeping.

4.2 Religious Affiliation

Information was also collected on the religious affiliation of the informants. It was perceived that this variable would influence the use of ethnomedicine. Most of the respondents in the study were protestant Christians. The religious groups which registered very few adherents included Islam and African Traditional Religions. These results are illustrated in Table 4.3

Table 4.3: Religious affiliation of respondents

Religious affiliation	Number of Respondents	Percentage
Roman Catholics	110	36.7%
Protestants	172	57.3%
Others	18	6.0%
Total	300	100%

4.2.1 Patterns of utilization of ethnomedicine in relation to religious affiliation

The study established that religious affiliation and the intensity of religious faith do not have a significant impact on the tendency to utilize ethnomedicine. With the exception of the adherents of one Protestant religious group (the Holy Spirit Church) which forbids its members from seeking treatment of any kind, be it biomedical or ethnomedical. Most of the other respondents utilize ethnomedicine in varying degrees.

Almost half of the respondents across the religious groups utilize ethnomedicine frequently with only one fifth of religious adherents not utilizing it at all. However, the degree of utilization of ethnomedicine was highest among Muslim respondents who all reported utilizing ethnomedicine in varying degrees. Roman Catholics also

reported a high frequency of utilization with approximately 84% utilizing ethnomedicine in varying degrees. The study also found that a large proportion of respondents who don't fall in the mainstream religious groups utilize ethnomedicine in varying degrees. This is presented in Table 4.4.

Table 4.4: Patterns of utilization of ethnomedicine by various religious denominations

Religious_Denomination * Utilization_Of_Ethnomedicine Crosstabulation

Religious_Denomination		Utilization_Of_Ethnomedicine			Total
		Do not use Ethnomedicine at all	Use Ethnomedicine Frequently	Use Ethnomedicine Rarely	
Holy Spirit Church	Count	14	0	1	15
	Expected Count	3.1	7.1	4.8	15.0
Muslim	Count	0	3	1	4
	Expected Count	.8	1.9	1.3	4.0
Other	Count	1	11	2	14
	Expected Count	2.9	6.6	4.5	14.0
Protestant	Count	32	72	53	157
	Expected Count	32.4	74.3	50.2	157.0
Roman Catholic	Count	15	56	39	110
	Expected Count	22.7	52.1	35.2	110.0
Total	Count	62	142	96	300
	Expected Count	62.0	142.0	96.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	59.035[a]	8	.000
Likelihood Ratio	51.051	8	.000
N of Valid Cases	300		

The study sought information on the religious affiliation of the ethnomedical practitioners. It was established that the ethnomedical practitioners are themselves adherents of one religious faith or other with varying levels of intensity of religious faith. Indeed, many of them claimed to invoke the name of God in their treatment procedures.

4.3 Socio-economic Status and Perceived Affordability

The study also collected information on the socioeconomic status of the informants and the perceived affordability of both biomedical and ethnomedical remedies. In so doing, the study sought to determine the extent to which these two variables affected the decision to resort to the utilization of either of the two medical systems. The level of income was identified as one of the variables that determine socioeconomic status and perceived affordability. The study therefore sought to determine the levels of income of the respondents, were grouped into three categories. (Refer to Table 6). The findings show that most of the informants earn a monthly income of Kshs 15,000 and below, as indicated in table 4.5.

Table 4.5: Levels of income of the respondents

Approximate Monthly Income	Number of Respondents	Percentage
Kshs 15,000 and Below	192	64%
Kshs 15,001 to Kshs 30,000	72	24%
Kshs 30,001 and Above	36	12%
Total	300	100%

4.3.1 Patterns of Utilization of Ethnomedicine in Relation to the Level of Income

According to the study findings, the level of income did not have a significant influence on the patterns of utilization of ethnomedicine. More than 80% of the respondents from lower income levels tend towards utilizing ethnomedicine in varying degrees. The number of respondents with a higher income level who also utilize ethnomedicine in varying degrees was equally high at approximately seventy six percent. (Refer to Table 4.6)

Table 4.6: Patterns of utilization of ethnomedicine in relation to levels of income

Monthly_Income * Utilization_Of_Ethnomedicine Crosstabulation

Monthly_Income		Utilization_Of_Ethnomedicine			Total
		Do not use Ethnomedicine at all	Use Ethnomedicine Frequently	Use Ethnomedicine Rarely	
Ksh 15,000 and below	Count	34	89	69	192
	Expected Count	39.7	90.9	61.4	192.0
Ksh 15,001 - Ksh 30,000	Count	19	36	17	72
	Expected Count	14.9	34.1	23.0	72.0
Ksh 30,001 and above	Count	9	17	10	36
	Expected Count	7.4	17.0	11.5	36.0
Total	Count	62	142	96	300
	Expected Count	62.0	142.0	96.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.142[a]	4	.273
Likelihood Ratio	5.202	4	.267
N of Valid Cases	300		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 7.44.

4.3.2 Patterns of Utilization of Ethnomedicine by Occupation

In this study, occupation was also identified as one of the variables which influence socioeconomic status. The study therefore set out to determine the occupations of the respondents and related them to the patterns of utilization of ethnomedicine in order to determine the extent to which former variable influences the latter. The respondents were grouped into three categories of occupational activities, namely peasant farming, trading and formal (white collar) employment. The study revealed that there that there was no significant relationship between occupational activities and the tendency to utilize ethnomedicine. Among the respondents who were engaged in peasant farming as a source of livehood, 82 percent reported utilizing ethnomedicine in varying degrees. The frequency of utilization was also high among respondent engaged in trading and white collar employment as shown in Table 4.7.

Table 4.7: Patterns of utilization of ethnomedicine in relation to occupational activity

Occupational_Activity & Utilization_Of_Ethnomedicine Crosstabulation

Occupational Activity		Utilization_of_Ethnomedicine			Total
		Do not use Ethnomedicine at all	Use Ethnomedicine Frequently	Use Ethnomedicine Rarely	
Peasant Farming	Count	43	81	48	172
	Expected Count	43.0	81.4	47.6	172.0
Trading	Count	6	12	7	25
	Expected Count	6.3	11.8	6.9	25.0
White collar employment	Count	26	49	28	103
	Expected Count	25.8	48.8	28.5	103.0
Total	Count	75	142	83	300
	Expected Count	75.0	142.0	83.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.031[a]	4	1.000
Likelihood Ratio	.032	4	1.000
N of Valid Cases	300		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 6.25.

4.3.3 Perceived Affordability

The findings of this study found that, on average, it is relatively cheaper to consult ethnomedical practitioners that it is to consult a biomedical practitioner. All ethnomedical practitioners charge a down payment, ***(lume)*** on the patient's first visit. On average, the down payment varies from between Ksh.200 to 1000 depending on the nature of the illness. The final payment is made upon recovery or cure and also varies from between Kshs 200 to 1,000 depending on the illness. However, the study revealed a tendency among the ethnomedical practitioners to take into account the perceived socioeconomic status of the client in addition to the nature of the disease while determining the cost of treatment. Clients perceived to be of a higher socioeconomic status are therefore generally charged much more. In addition, the mode and form of payment is quite flexible with non financial payments largely accepted.

On the other hand, the average cost per visit to the Iguhu District Hospital is Ksh 200. The mode and form of payment is fixed with only cash accepted as the form of payment. The mode of payment is also fairly rigid (payments by installments are not allowed). Thus, ethnomedical therapy is generally more affordable not only in terms of the actual cost but also in terms of the flexibility of the mode and form of payment.

4.3.4 Accessibility of Biomedicine

The study also found that biomedical drugs are easily available from the Iguhu Sub District Hospital and the other health centres and dispensaries within and in the proximity of the study area. Biomedical drugs are also available from pharmacies or stores in neighbouring market towns and from mobile traders who visit the study area. The local community in the study area also occasionally obtains free biomedical drugs

through free medical camps and vaccination campaigns among other initiatives by governmental and nongovernmental actors in the region.

4.4 Age of the Informants

The study also sought to establish the age of the informants since age was one of the demographic factors that were perceived to influence the patterns of utilization of ethnomedicine. More than half of all the respondents were above the age of 39 years. This may be attributed to the fact that most of the younger members of the community were reported to be away from the village due to many factors, including migration and enrolment in education programmes outside the study area, among other factors. The age distribution of the respondents is captured in Table 4.8.

Table 4.8: Age Distribution of the Respondents

Age of Respondents	Number Of Respondents	Percentage
18-29 years of age	54	18%
30-39 years of age	84	28%
40-59 years of age	102	34%
60 and above	60	20%
TOTAL	**300**	**100%**

4.4.1 Patterns of Utilization of Ethnomedicine by the Various Age Groups

Most of the respondents aged 30 years and above reported a higher tendency to utilize ethnomedicine, albeit in varying degrees. The frequency of utilization tended to increase with increasing age, and was inversely proportional to the age of the

respondents with younger respondents reporting lower frequency of utilization. (See Table 4.9)

Approximately 88% of the respondents aged above 60 years reported a high tendency to utilize ethnomedicine in varying degrees with almost two thirds of them utilizing ethnomedicine frequently and only one fifth utilizing ethnomedicine rarely. Only one fifth of the respondents in this age bracket (above the age of 60 years) reported not utilizing ethnomedicine at all. Most of the respondents between the age of 40 and 59 years also utilize ethnomedicine in varying degrees. More than half of them utilize ethnomedicine frequently with approximately 30% of them utilizing rarely. Only one tenth of them reported not utilizing ethnomedicine at all. Slightly less than half of the respondents between the ages of 30 and 39 utilise ethnomedicine frequently with some of the respondents in this age group not utilizing ethnomedicine at all.

However, the study found that most of the respondents between the age of 18 and 29 do not utilize ethnomedicine frequently. Almost half of them reported not using ethnomedicine at all with only 20% of them utilizing it frequently. Thus there is a direct and positive relationship between age and utilization of ethnomedicine. This is illustrated in Table 4.9.

Table 4.9: Patterns of the utilization of ethnomedicine in relation to age

Age_Group_Of_Respondants * Utilization_Of_Ethnomedicine Crosstabulation

Age_Group_Of_Respondants		Utilization_Of_Ethnomedicine			Total
		Do not use Ethnomedicine at all	Use Ethomedicine Frequently	Use Ethomedicine Rarely	
18-29	Count	26	11	17	54
	Expected Count	11.2	25.6	17.3	54.0
20-39	Count	17	36	32	85
	Expected Count	17.6	40.2	27.2	85.0
40 -59	Count	12	58	31	101
	Expected Count	20.9	47.8	32.3	101.0
60 and above	Count	7	37	16	60
	Expected Count	12.4	28.4	19.2	60.0
Total	Count	62	142	96	300
	Expected Count	62.0	142.0	96.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	40.831[a]	6	.000
Likelihood Ratio	38.442	6	.000
N of Valid Cases	300		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11.16.

The study also sought to establish the patterns of age distribution among the ethnomedical in order to determine the influence of age, if any, on the practice of ethnomedicine. Approximately three quarters of the ethnomedical practitioners were found to be aged 40 years and above. This may be attributed to the fact that it takes some time for one to master the knowledge and application of ethnomedical cures and procedures. The findings on the age of practitioners are presented in Table 4.10.

Table 4.10: Age distribution of Ethnomedical Practitioners

Age group	Total Number of Respondents	Percentage
18-29	3	7.5%
30-39	7	15.5%
40-59	27	60.5%
60 and above	8	16.5%
Total	**45**	**100%**

4.5 Sex and Marital Status

Marital status was one of the variables that were perceived to influence the patterns of utilization of ethnomedicine. The study therefore sought to determine the marital status of the informants and relate it to the patterns of utilization of ethnomedicine. Thirty seven percent of the respondent to the study were married with children. This was found to be the largest category in relation to marital status. The marital status of the respondents is indicated in the Table 4.11.

Table 4.11: The marital status of the respondents

Marital Status of Respondents	Number of Respondents	Percentage
Never married	55	18.3%
Married without children	44	14.7%
Married with children	113	37.7%
Divorced, separated, widowed, with children	88	29.3%
Total	**300**	**100%**

4.5.1 Patterns of Utilization of Ethnomedicine in Relation to Sex and Marital Status

The study revealed that most of the respondents who were married used ethnomedicine frequently. More than ninety percent of all female respondents who were married with children utilized ethnomedicine remedies with varying frequencies with sixty five percent of them utilizing if frequently and approximately twenty eight percent utilizing it rarely. Only six percent of the female respondents who were married with children reported not to utilize ethnomedicine at all. On the other hand, the number of married male respondents who utilize ethnomedical remedies was lower than that of the female respondents.

The study also revealed that unmarried women below the age of 30 years are less likely to utilize ethnomedicine than their married women below the age of 30 years. More than sixty percent of the unmarried female respondents below the age of 30 years did not utilize ethnomedicine at all. However, female respondents below the age

of 30 years who are married without children reported a higher frequency of utilization of ethnomedicine than those who are not married.

Three patterns therefore clearly emerged from the findings. First, female respondents reported a higher rate of utilization than the male respondents. Secondly, respondents who were married also reported a higher rate of utilization of ethnomedicine than those who were not married. The third was that respondents who had custody of their children also reported a higher rate of utilization than those who did not have custody of their children. This information is captured in Table 4.12.

Table 4.12: Patterns of utilization of ethnomedicine in relation to the level of income

Marital_Status * Utilization_Of_Ethnomedicine Crosstabulation

Marital_Status		Utilization_Of_Ethnomedicine			Total
		Do not use Ethnomedicine at all	Use Ethnomedicine Frequently	Use Ethnomedicine Rarely	
Divorced, Separated, Widowed With Children	Count	10	46	32	88
	Expected Count	18.2	41.7	28.2	88.0
Married With Children	Count	11	70	32	113
	Expected Count	23.4	53.5	36.2	113.0
Married Without Children	Count	18	11	15	44
	Expected Count	9.1	20.8	14.1	44.0
Never Married	Count	23	15	17	55
	Expected Count	11.4	26.0	17.6	55.0
Total	Count	62	142	96	300
	Expected Count	62.0	142.0	96.0	300.0

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	46.797[a]	6	.000
Likelihood Ratio	45.775	6	.000
N of Valid Cases	300		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 9.09.

4.6 Ethnomedical Procedures

The second objective of this study was to determine the preventive and treatment procedures employed by ethnomedical practitioners. The researcher therefore set out to interview the ethnomedical practitioners in the study area. It was established in the cause of the study that the ethnomedical practitioners in the study area may be categorized into two broad categories, which are determined largely by the extent to which the said practitioner relies on the practice of ethnomedicine as a means of livelihood. The practitioners are thus categorized into those who rely almost entirely on the practice of ethnomedicine as the sole source of livelihood (who will henceforth be referred to as the *Professional Practitioners* in this paper) and those who have other means of livelihood (mostly peasant farming) and practice ethnomedicine only because they have a fairly extensive knowledge of ethnomedical remedies. (These will henceforth be referred to as *Semi Professional Practitioners* in this paper).

In order to develop a better understanding of the ethnomedical procedures, the study also sought to establish how the ethnomedical practitioners acquired ethnomedical knowledge. The study revealed three broad ways through which ethnomedical knowledge is acquired. These include divine revelation; apprenticeship; and inheritance. The study revealed that 42 percent of the respondents who were professional practitioners claim divine knowledge of ethnomedical remedies. On the other hand, the majority of the respondents who were semi professional claimed to have gone through an elaborate apprenticeship training program, during which they were under the guidance of an experienced practitioner before venturing out on their own practice. The study also revealed that those practitioners who attributed their knowledge of ethnomedical therapy to inheritance from their parents claimed to have

done so without necessarily receiving any training, and attributed their knowledge of ethnomedicine to genetic factors! (Refer to Table 4.13)

Table 4.13: Ethnomedical practitioners' sources of ethnomedical knowledge

Source of Ethnomedical knowledge	Professional Practitioners	Semi Professional Practitioners	Total Number of Practitioners
Worked as an Apprentice	7 (15.6)*	13 (23.2)*	20 (19.8)*
Divine Calling	19 (42.2)*	10 (17.8)*	29 (28.7)*
Knowledge Inherited from Parents	13 (28.8)*	24 (42.8)*	37 (36.6)*
Others	6 (13.4)*	9 (16.2)*	15 (14.9)*
Total	**45 (100)***	**56 (100)***	**101 (100)***

****Figures in parentheses are percentages***

All the professional practitioners interviewed had apprentices who were undergoing training under their guidance. On the other hand, the study found that the semi professional practitioners did not engage any apprentices.

4.6.1 Conceptualization of Illnesses

The researcher also established that the treatment approach and procedure adapted by the practitioners is based largely on the community's conceptualization of illnesses and injuries. The study therefore sought to understand the informants' conceptualization of illnesses and injuries. The study found that the Iguhu community distinguishes between biophysical and supernatural illnesses. Biophysical illnesses, according to most of the respondents, result from internal or external environmental factors, such as contact with hazardous agents or internally initiated imbalances in body functions and common injuries resulting from a daily interaction with nature in the cause of their livelihood pursuits. Supernatural illnesses on the other hand result from the purposeful superhuman intervention of human or a supernatural proxy. Supernatural illnesses are normally referred to as "cultural illnesses" (***vulwale vwi shimwa'*** in Luhya) and are the result of witchcraft or other forms of intervention by malevolent spirits (or people)

The study also revealed that illnesses and injuries perceived to have been caused by biophysical factors may be prevented and cured by both biomedical and ethnomedical practitioners. However, illnesses and injuries perceived to have been caused by superhuman factors may be prevented by ethnomedical practitioners only.

4.6.2 Preventive and Treatment Procedures for Biophysical Illnesses and Injuries

The study found that according to most respondents, most of the illnesses which are listed as preventable and treatable by biomedicine can also be prevented and be treated by ethnomedicine remedies. The study sought to establish some of these illnesses that are attributed to biophysical factors and which can be treated by both ethnomedical and biomedical remedies. Such illnesses and injuries listed by most of the respondents, including the ethnomedical practitioners, include but are not limited to those in Table 4.14:

Table 4.14: Illnesses attributed to biophysical factors but which can be managed by both biomedical and ethnomedical remedies

Illness and Symptoms	Luhya Name	Perceived Causal Factors
Chronic stomachache	***Indwali***	Unhygienic practices, especially in relation to food preparation
Sexually, transmitted diseases (STDs), especially gonorrhea and syphilis		Unsafe sexual practices
Menstrual disorders	***Indwali***	Hereditary and other factors like unsafe sexual practices and abortion
Skin diseases e.g. scabies, ringworms, acne, eczema	***Makakha or Lwiyeko Vikalango, Vufuma,,***	Exposure to infected persons
Common Bruises e.g. wounds, sprains,	***Makule***	Injuries
Eye infections in babies	***Indwali***	Cross infection from infected mother
Whooping Cough		Micro-organism infections
Toothache	***Mino Khuluma***	Poor oral hygiene, age
Migraine headaches	***Murwi Mukhoma***	Stress
Chest Pains	***Vulwale vwiShiliru***	Micro-organism infections
Colic pain	***Luhima***	Excess fluid in the lungs, Hereditary
Leprosy	***Vuchule***	Inheritance
Tonsillitis	***Shimililo***	Consumption of sugary foods.

Most of the respondents to the study were in agreement that the above mentioned illnesses may be prevented and treated by both biomedical and ethnomedical therapies. The study also found that the illnesses mentioned above are commonly prevented and treated by both non-professional and the professional ethnomedicine practitioners.

The study also revealed that both the preventive and treatment procedures for biophysical illnesses are mostly pharmacological. The practitioners employ the use of plant and animal extracts with medicinal components for prevention and treatment as indicated in Table 4.15.

Table 4.15: Some of the ethnomedical preventive and treatment therapies for common biophysical conditions

Illness	Preventive Therapy	Treatment Therapy
Chronic stomachache	Washing hands, Eating clean & fresh food and chewing on some roots	Use of extracts from plant roots, leaves and tree barks
Sexually, transmitted diseases (STDs), especially gonorrhea and syphilis	Safe sexual practices	Use of extracts from plant roots, leaves and tree barks while avoiding milk
Menstrual disorders	Use of extracts from plant roots, leaves and tree barks	Use of extracts from plant roots, leaves and tree barks
Skin diseases	Proper Hygiene practices	Use of cow urine, and extracts from plant roots, leaves and tree barks for severe cases
Common Bruises and Injuries	Being careful especially with sharp objects, and proper hygiene	Application of cow urine, and extracts from plant roots, leaves and tree barks
Eye infections in babies	Proper Hygiene	Cleaning the baby's eyes with breast milk
Whooping Cough		Ash from plant died and burnt roots, leaves and tree barks
Toothache	Proper oral hygiene including constantly brushing with a specific root	Pounded leaves placed on the aching tooth
Migraine headaches	Avoiding stress and proper diet	Use of extracts from plant roots, leaves and tree barks
Colic pain	Good diet practices	Extraction of the fluid directly from the lungs (very rare and performed only by very experienced practitioners) and Use of extracts from plant roots, leaves and tree barks

It is instructive to note that the practitioners were very reluctant to reveal the actual names of the plants used in the therapies mentioned in Table 4.15 above.

The study also established that some biophysical conditions were reported to respond better to ethnomedicine than they do to biomedicine.

4.6.2 Preventive and Treatment Procedures for Supernatural Illnesses and Injuries

As earlier mentioned, the study revealed that Illnesses and injuries that are perceived to be caused by Supernatural factors are commonly prevented and treated by ethnomedical practitioners only. Some of the supernatural illnesses that ethnomedical practitioners commonly seek to prevent and treat are presented in Table 4.17:

Table 4.17: Illnesses attributed to biophysical factors

Luhya name	Closest English Description	Perceived Causal Factors
Mavimba	Boils in the stomach (Not to be confused with stomach ulcers)	Evil eye
Muma	Severe wasting and accompanied opportunistic infections	Severe ailment afflicting a person who breaks taboo without cleansing
Vuvila	Wasting	Evil eye
Luotokho	Infection in the anterior fontanels of a baby	Infidelity by one or both parents before the babies first birthday
Vusekhu	Severe infections escape biomedical diagnosis and which do not respond to treatment	Severe ailment afflicting a widower who fails to perform certain cleansing rites upon bereavement
Luvoo	Severe infections escape biomedical diagnosis and which do not respond to treatment	Severe ailment afflicting an individual's who has committed murder or homicide and who fails to perform certain cleansing rites after the act upon. This ailment will afflict both the guilty person and all his or her relatives who come into contact with him or her.
Muyeka	Severe influenza common in children and which if misdiagnosed or not managed immediately leads to death	Evil Eye

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Menstrual disorders	Use of extracts from plant roots, leaves and tree barks	Use of extracts from plant roots, leaves and tree barks
Skin diseases	Proper Hygiene practices	Use of cow urine, and extracts from plant roots, leaves and tree barks for severe cases
Common Bruises and Injuries	Being careful especially with sharp objects, and proper hygiene	Application of cow urine, and extracts from plant roots, leaves and tree barks
Eye infections in babies	Proper Hygiene	Cleaning the baby's eyes with breast milk
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Muyeka	Severe influenza common in children and which if misdiagnosed or not managed immediately leads to death	Evil Eye

The study also established that the procedures for the prevention and cure of supernatural illnesses are both pharmacological and non pharmacological. The pharmacological therapy normally involves the use of medicinal plants and animal extracts, while the non pharmacological therapy will vary depending on the illness and the perceived cause as indicated in Table 4.18.

Table 4.18: Preventive and Treatment therapies for Supernatural Illnesses

Luhya name	Pharmacological Therapy	Non Pharmacological Therapy
Mavimba	• Boiled extracts from leaves, roots and tree barks mixed and drank for two weeks (one month in case of severe infection) • Ash from dried and burnt leaves is introduced into the bloodstream through small cuts in specific places.	• The patient is sprinkled with "holy water" • Cleansing through chants and incantations to the spirits
Muma	• Ash from dried and burnt leaves is imbibed. • Boiled extracts from leaves, roots and tree barks mixed and drank for • Ash from dried and burnt leaves is introduced into the bloodstream through small cuts in specific places.	• Cleansing through chants and incantations to the spirits. • The patient is sprinkled with "holy water" • The house and compound of the patient is cleansed with water laced with herbal extracts and smoke from specific herbs.
Vuvila	• Boiled extracts from leaves, roots and tree barks mixed and drank for two weeks (one month in case of severe infection) • Dried leaves, tree bark and roots are placed on hot charcoal and the patient is covered by a blanket to inhale the smoke	• The patient is sprinkled with "holy water" • Cleansing through chants and incantations to the spirits
Luotokho	The therapist chews leaves from specific plants and places them on the fontanel. When the leaves dry up they're replaced by someone who is not sexually	The unfaithful parent is required to stop the practice.

	active	
Vusekhu	• Taking a bath with the bathwater laced with leaves from specific plants. • Ash from dried and burnt leaves is imbibed.	Ideally the patient should bath in the river very early in the morning.
Luvoo	• Ash from dried and burnt leaves. • Boiled extracts from leaves, roots and tree barks mixed and drank for	• Cleansing through chants and incantations to the spirits. • The patient is sprinkled with "holy water" • The house and compound of the patient is cleansed with water laced with herbal extracts and smoke from specific herbs. • All of the patient's immediate family must also be cleansed
Mavimba	Boiled extracts from leaves, roots and tree barks mixed and drank for two weeks (one month in case of severe infection)	• The patient is sprinkled with "holy water" • Cleansing through chants and incantations to the spirits
Muyeka	Ash from dried and burnt leaves	Identify the evil eye and avoid contact with the same. Where the evil eye is unknown the child is kept indoors.

However, the study found that most of the ethnomedical practitioners do not disclose the meanings of the non pharmacological procedures to their clients. They were also reluctant to discuss the meanings of the procedures with the researcher. In addition, the study established that ethnomedical practitioners normally don't disclose the names of the medicine plants to their patients. In fact, most of the professional practitioners interviewed do not show the herb to the patients in its raw form lest they detect the plant. Indeed, the study found that most of the ethnomedical practitioners deliberately mystify some of the medicinal herbs, especially those used for the prevention and cure of supernatural or "cultural illnesses" as one practitioner narrated:

> "One of the most difficult aspects of this job is going to the bush to look for medicinal herbs. This is especially so for the herbs that treat tough to cure diseases like ***muma luboo,*** and ***isila*** among others. Most of the time one will

encounter a huge venomous snake coiled around the plant! Therefore on has to be adequately protected supernaturally before even touching some of these herbs to prevent any mishaps."

It is instructive to note that most respondents informed the researcher that the use of biomedicine in the management of such illnesses that are attributed to supernatural factors is considered counterproductive and generally injurious to the patient. As one respondent put it;

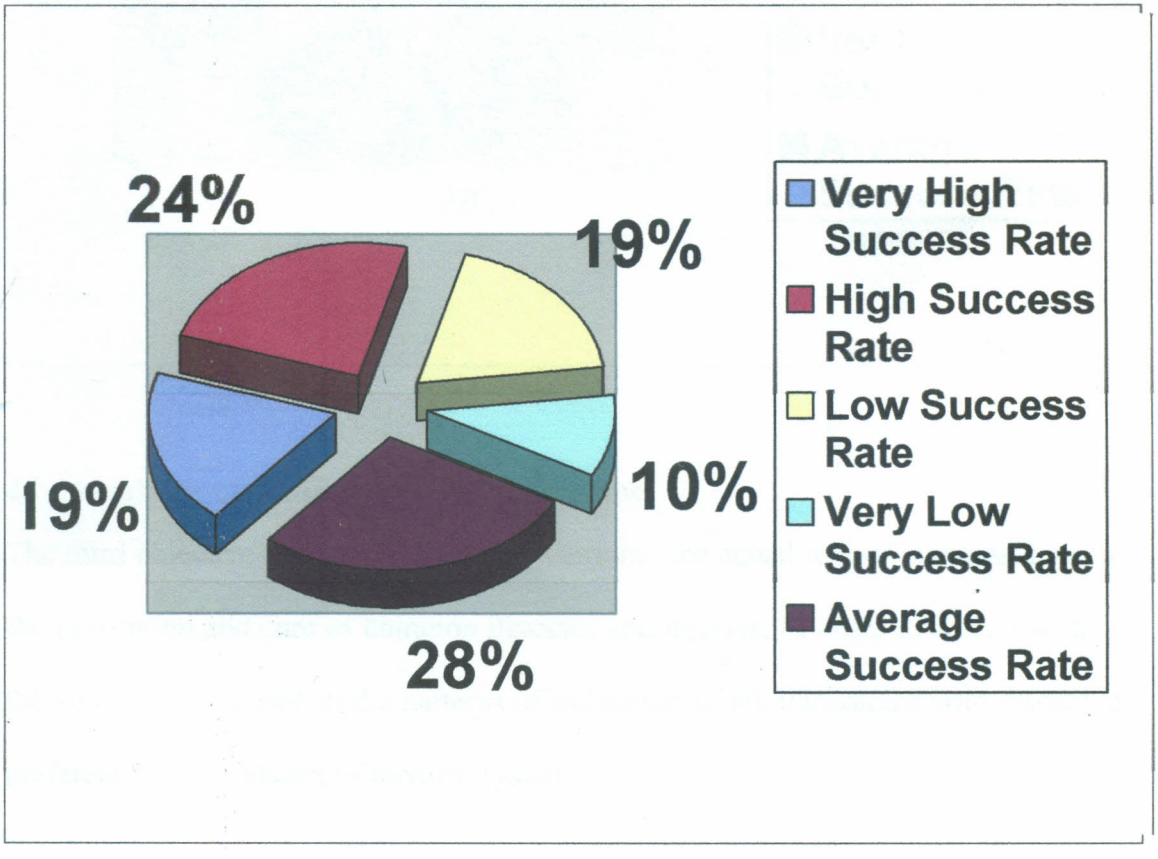
"These ***'cultural'*** illnesses react very badly to biomedicine in general and injections in particular. If a person suffering from a ***'cultural'*** illnesses receives an injection he or she will have jeopardized their chances of recovery and in fact such a person will surely die"

The study also revealed that indeed, even the biomedical practitioners (not only in the study area but also at the Kakamega Provincial General Hospital and the Catholic Church run Mukumu mission Hospital), refer patients who don't respond to biomedical treatment back home to seek ethnomedical remedies. Most of the biomedical practitioners interviewed informed the researcher that there are certain conditions which may easily be worsened by biomedicine but which can only be cured effectively by ethnomedical therapies. The illnesses listed by the biomedical practitioners in respect to this are similar to those in Table 4.17 above.

4.6.3 Reported success

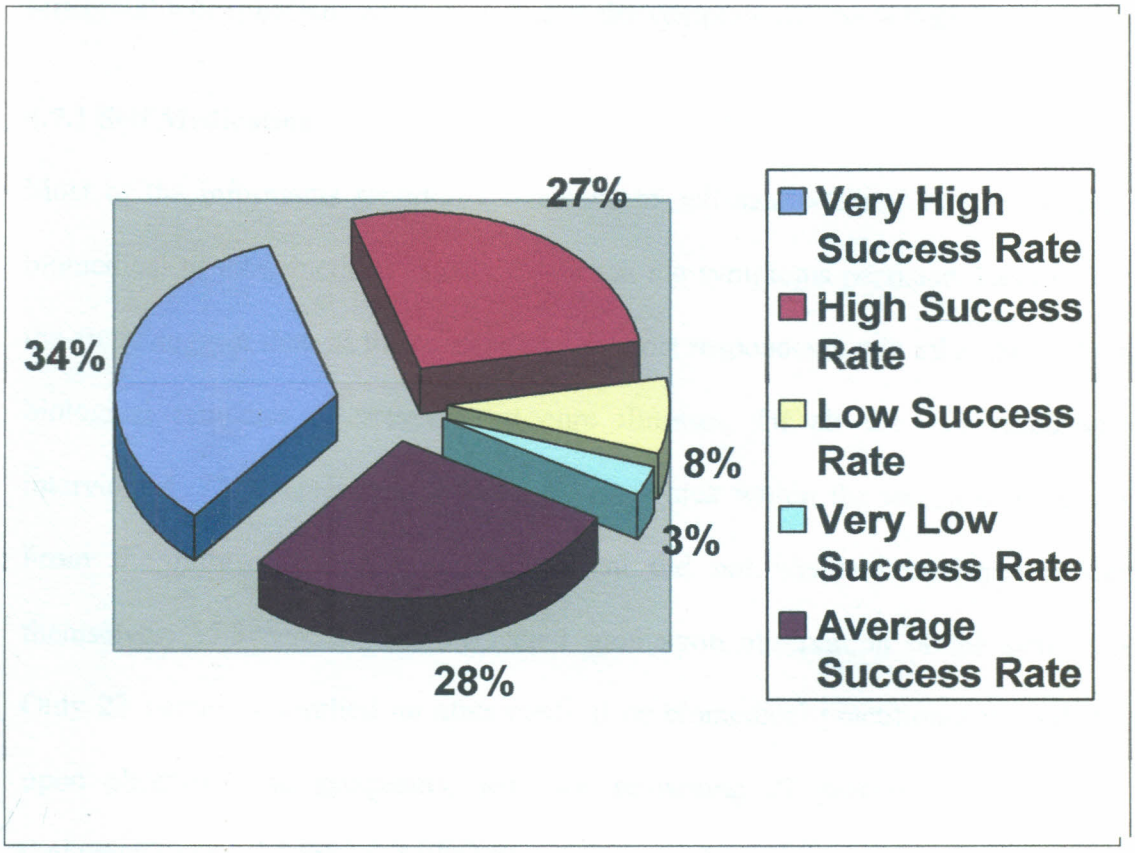
Most of the respondents reported varying rates of success of ethnomedical therapies for illnesses perceived to be caused by biophysical and supernatural factors. For illnesses and injuries perceived to be caused by biophysical factors, 73 percent of the informants reported a rate of success ranging from high to very high while 27 percent reported a rate of success ranging from low to very low as illustrated in Figure 4.1.

Figure 4.1: Ethnomedical preventive and curative remedies for illnesses attributed to biophysical factors



The study however detected a significant increase in the reported success rates for illnesses perceived to be caused by supernatural factors, as illustrates in Figure 4.2.

Figure 4.2: Reported rates of success of ethnomedical preventive and curative remedies for illness attributed to supernatural factors



4.7 Prevalence of Utilization of Ethnomedicine

The third objective of this study was to determine the actual role of ethnomedicine in the prevention and cure of common illnesses and injuries. In order to determine this, the study sort to establish the patterns of utilization of ethnomedicine with respect to preferences in the choice of medical system.

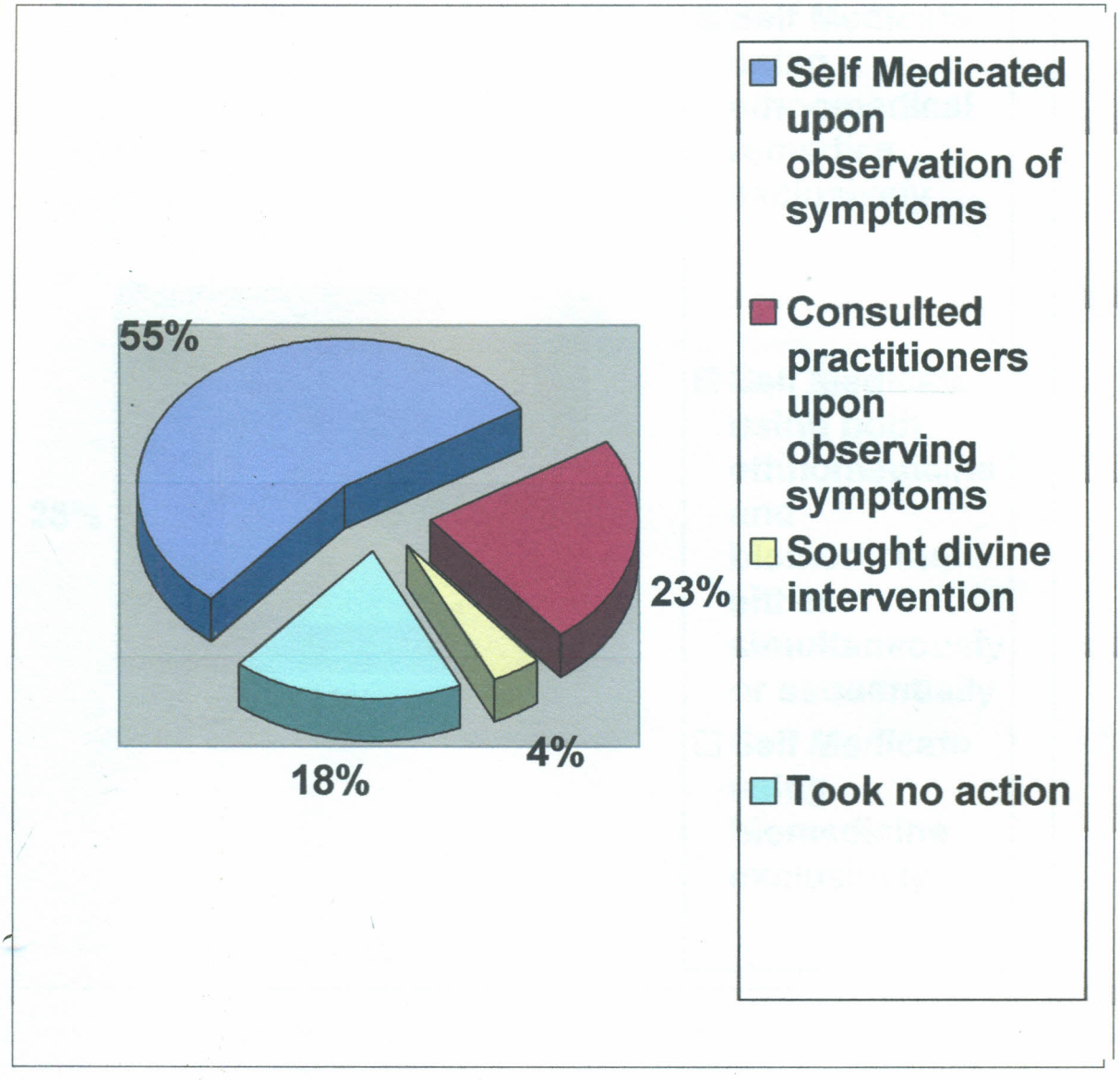
The study established that most of the informants in the study made appropriate preventive and curative choices depending on the perceived causes of their illness. Common illnesses which were perceived to have been caused by biophysical factors

were normally prevented and treated with pharmacological remedies, be they ethnomedical or biomedical. On the other hand illnesses perceived to have been caused by supernatural factors were treated by ethnomedical remedies only. The study also showed that ethnomedical and biomedical remedies are often administered sequentially or simultaneously according to the symptoms of the patient.

4.7.1 Self Medication

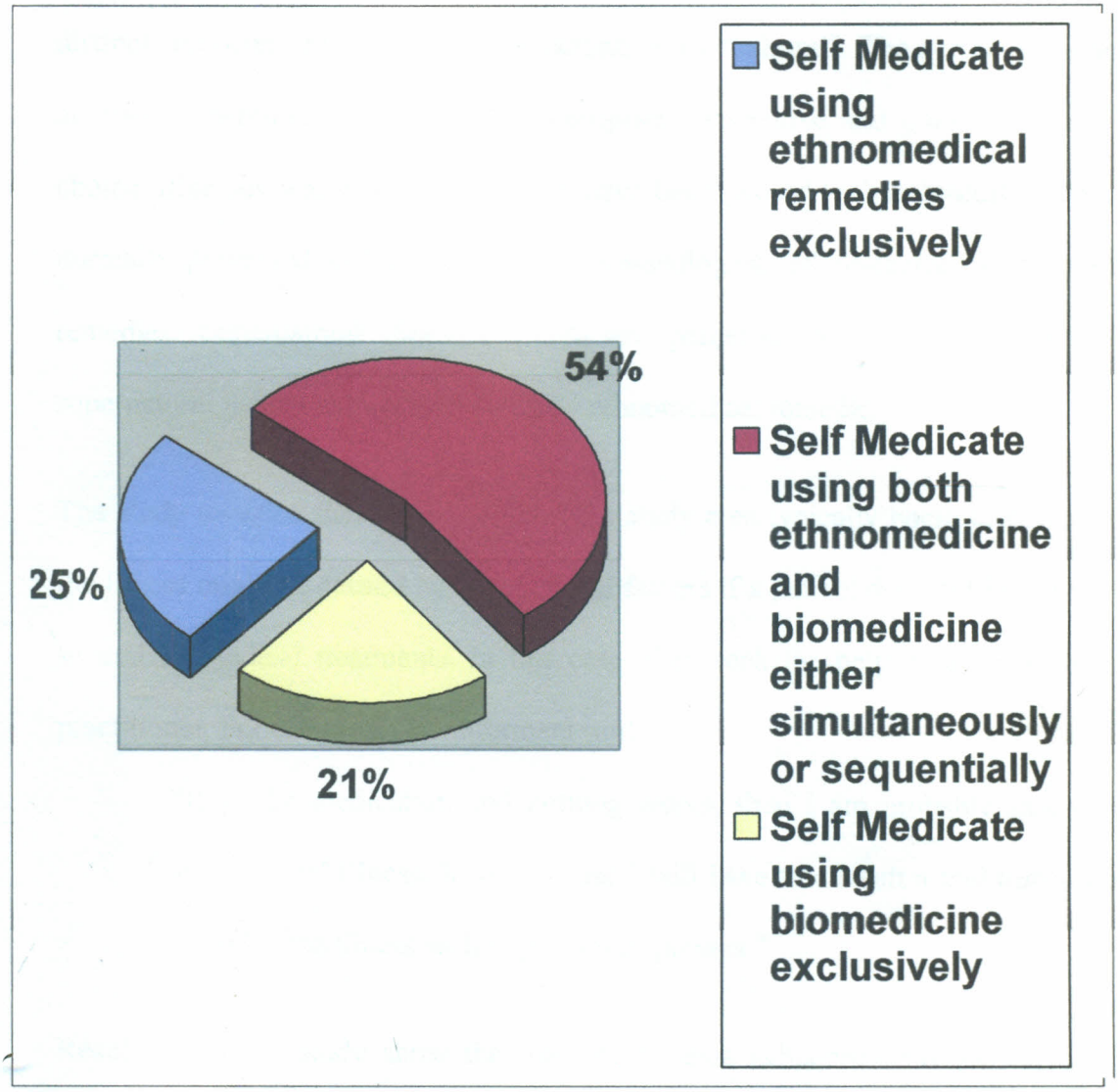
Most of the informants reported a tendency to self-medicate and only consulted a biomedical or ethnomedical practitioner when the symptoms persisted. Results from the study suggest that, at the practical level, most respondents mix ethnomedical and biological remedies to prevent and cure illnesses. Of all the 300 respondents interviewed, 73.5 percent reported having been sick within the month of interview. From the informants surveyed, 18 percent did not use any medicine to cure themselves. 55.3 percent self medicated soon upon observation of the symptoms. Only 23 percent consulted an ethnomedical or biomedical practitioner immediately upon observing the symptoms, with the remaining 22 percent not taking any therapeutic remedial action as illustrated it Figure 4.3.

Figure 4.3: Patterns of self medication



The study also shows that 25 percent of the respondents who self medicate do so using ethnomedical remedies exclusively, with 54 percent of all the informants self medicating on both ethnomedical and biomedical remedies either sequentially or simultaneously depending on the symptoms. The remaining percentage of the informants self medicate using biomedical therapy exclusively as illustrated in Figure 4.4.

Figure 4.4: patterns of self medication in relation to the choice of medical system



These results as indicated in Figure 4.4 above suggest that most respondents have fairly good knowledge of ethnomedicine since self medication assumes that the self medicating individual possesses or thinks the possess some level of knowledge of the therapy.

4.7.2 Choice of Medical System

As earlier mentioned, this study shows that illnesses are conceptualized into two distinct categories, biophysical and supernatural or "cultural". The perceived cause of an illness therefore determines the appropriate preventive and curative therapy of choice. Illnesses which are perceived to have been caused by biophysical factors are normally prevented and treated with pharmacological ethnomedical or biomedical remedies. Supernatural illnesses which are perceived to have been caused by supernatural factors can only be cured by ethnomedical remedies.

The study revealed that most people in the study area typically begin to suspect that the illness might be caused by supernatural factors if a patient does not improve after several biomedical treatments. In this case, they seek the help of an ethnomedical practitioner. For example, one informant said:

> "If I take medication and nothing works, then I am probably sick with a supernatural Illness. In which case I will have to consult a traditional healer to tackle the illness with supernatural powers."

Results from the study show that the respondents subconsciously placed medical therapies into three categories. In the first category, they placed ethnomedical remedies and therapies used to prevent and treat biophysical illnesses. In the second category were ethnomedical remedies and therapies used to prevent and treat supernatural or "cultural" illnesses. In the third category they placed biomedical remedies and therapies used to prevent and cure biophysical illnesses. This suggests that biomedical preventive and treatment remedies are not considered in the same vain as ethnomedical remedies, leading to certain disconnect or subconscious de-linking of the two medical systems.

The study further revealed that the categorization of diseases and illnesses follows the same trend. The respondents listed some diseases and illnesses which they felt can be easily treated by biomedicine as indicated in Table 4.19.

Table 4.19: Common biophysical illnesses and their common treatment

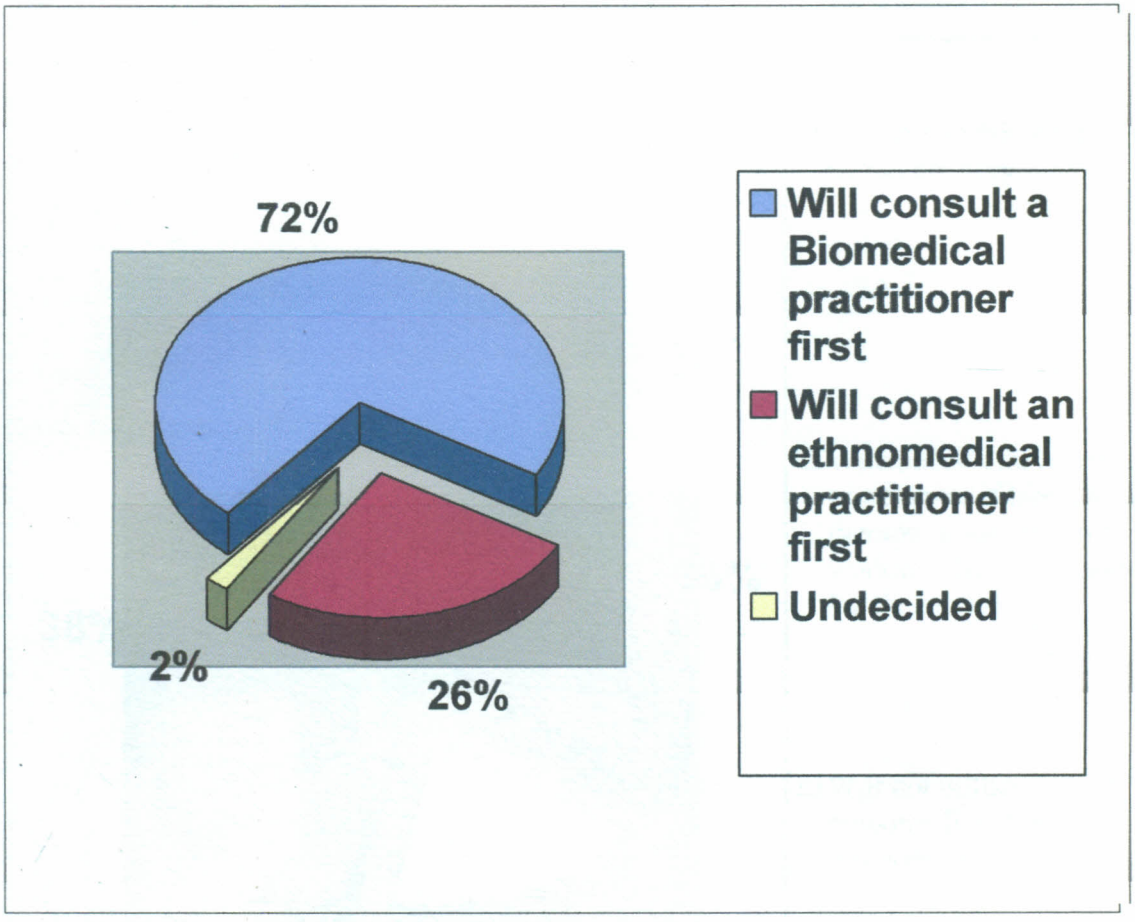
Name of Illness	Perceived Causes	Preventive Therapy	Treatment Therapy
Tooth cavities	Poor oral Hygiene	Good oral hygiene	Extraction or refilling of the tooth
Common cold	Cross infection	Avoiding enclosed spaces	Tablets
Influenza	Cross infection	Rain	Tablets
Gynecological complications	Abortion, unsafe sexual practices, menstrual disorders and inheritance	Abortion, unsafe sexual practices	Tablets
Sexually transmitted infections	Unsafe sex	Safe sexual practices	"capsules" (all drugs in capsule form are considered one and the same and they all treat the same symptoms, mostly used in dressing wounds and treating STIs).
Diabetes	Too much sugar	Avoid too much sugar	Injections and tablets
Hypertension	Stress, weight	Healthy living	Injections and tablets
Asthma	Exposusure to cold and	Keeping warm	Injections, tablets and inhaler

	inheritance		
Pneumonia	Exposusure to cold and inheritance	Keeping warm	Injections and tablets
Stomachache	Food poisoning and poor hygiene	Healthy living	Tablets
Diarrhea/dysentery	Food poisoning and poor hygiene	Healthy living	Injections and tablets
Headache	Malaria	Avoid malaria	Tablets
Malaria	Mosquito	Sleep in a mosquito net, clear bushes	Injections and tablets
Typhoid fever	Dirty water	Always drink boiled water	Injections and tablets

However, the study found that the respondents exhibited an extremely low level of knowledge of biomedical pharmaceuticals remedies. The respondents listed only 12 different biomedical drugs for prevention and treatment of common illnesses and injuries. On average each of the informants listed only 4.6 different medicinal drugs. The shortest list had two items and the longest nine. Nine of the 12 medicinal drugs that appeared in the listings were listed by two or more people and three were listed only by one person each.

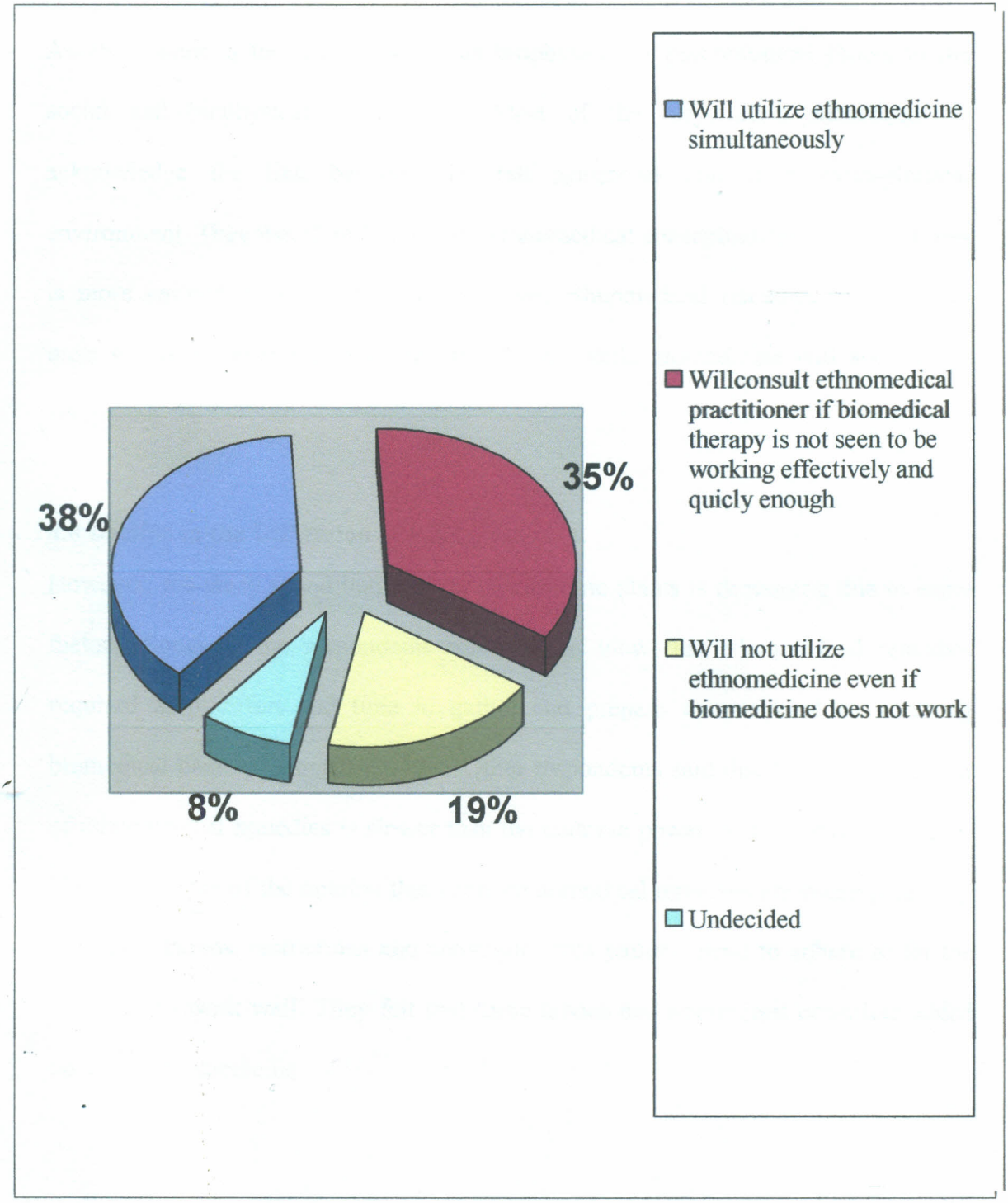
The study shows that when the decision to consult a practitioner is reached, the perceived cause of illness will determine the choice of medical system. If the illness is perceived to have been caused by biophysical factors, 73 percent of the respondents will first consult a biomedical health practitioner. Only 26% will consult an ethnomedical practitioner first as indicated in Figure 4.5.

Figure 4.5: Choice of Medical System



The study also revealed that among those who first consulted biomedical practitioners, 38 percent utilized ethnomedical remedies simultaneously while 35 percent consulted an ethnomedical practitioner if the biomedical remedy was perceived not to be working effectively and quickly enough. This is illustrated in Figure 4.6.

Figure 4.6: Utilization of Ethnomedicine



4.7.3 Explanations for Utilization of Ethnomedicine

The study found that 50 percent of the respondents consider ethnomedicine to be generally more effective than biomedicine. This they attribute to many factors. First is the argument that ethnomedicine is safer since it is unrefined and un-artificial. Another factor is the link between the biophysical or psychological illness to the social and biophysical environment .Most of the respondents subconsciously acknowledge the link between the felt symptoms and their socio-physical environment. They therefore felt that the ethnomedical conceptualization of the illness is more attuned to this understanding. Thus, ethnomedical remedies, according to most of the respondents, will cure the illness while biomedicine will address the symptoms.

4.8 Decline in the Utilization of Ethnomedicine

However, the study found that the use of medicine plants is decreasing due to many factors. Some of the respondents were of the view that ethnomedical remedies required a lot effort and time to gather and prepare as compared to obtaining biomedical pharmaceutical medicine. Other respondents said that the curative power of ethnomedical remedies is slower than the curative power of biomedical remedies. Yet others were of the opinion that some ethnomedical remedies are accompanied by too many taboos, restrictions and constraints that patients need to adhere to for the remedies to work well. They felt that these taboos and restrictions constitute added costs of ethnomedicine.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter is arranged along the major concerns of the study as outlined in the objectives. Here, the factors that influence the patterns of utilization of ethnomedicine will be discussed. In addition, the patterns of utilization, including explanations for the causes of illnesses and the treatment regimes applied in ethnomedicine will also be discussed. Finally, conclusions and recommendations will be made based on the findings of the study.

5.2 Summary of the Findings

5.2.1 Factors that influence the utilization of Ethno-medicine

This study shows that religious affiliation does not significantly influence utilization of ethnomedicine in the study area. Religion appears to be a thin veneer within deeply embedded cultural values and attitudes. However, it is instructive to note that the sampled population was largely similar in relation to religious affiliation since the percentage of non Christian participants was negligible at less than 06 percent only. This homogeneity of religious affiliation may therefore have influenced this finding.

The study also found that socioeconomic status does not have a significant influence on the utilization of ethnomedicine. Interviews with the ethnomedical practitioners also revealed that their clients are equitably distributed across the socioeconomic groups. This may be due to the fact that the study area does not have sharp class differences and is relatively homogenous in relation to socioeconomic status as indicated in Table 6.

In relation to cost as a determinant factor, Sherman (1997); Choka (1999); Byron (2001) Friedman (2003) argue that consulting ethnomedical practitioners is financially cheaper than consulting biomedical practitioners, and that this might be an important incentive for utilization of ethnomedicine by most of the people who consult the former. However, this study found that on average, it is relatively cheaper to consult biomedical practitioners than it is to consult an ethnomedical practitioner in the study area. As earlier mentioned, all ethnomedical practitioners charge a down payment, ***(lume)*** on the patient's first visit, with the final payment made upon recovery or cure. On average the ***lume*** for the professional practitioners varies from kshs 500 to 1000 while that charged by semi professionals varies from ksh200 to 500. Upon recovery final payment is made varying from ksh1000 to 2000 for the nonprofessional practitioners and ksh3000 to 5000 or more for the professional practitioners. While the professional normally have a fixed charge, the fee charged normally depends on the socio-economic state of the patient. This is much higher than the average of kshs 100 charged by the Iguhu SDH per visit.

This study therefore found that the cost of ethnomedicine in the study area is relatively higher than that of biomedicine, especially in relation to primary health care. Therefore, cost is not a major hindrance to the utilization of ethnomedicine in the study area.

The study however revealed an interesting phenomenon in the relationship between the level of educational attainment and the tendency to utilize ethnomedicine. According to the findings of the study, respondents with no formal schooling have a high likelihood of utilizing ethnomedicine. The study also reveals that respondents who have attained at least college level of education are also more likely to utilize

ethnomedicine, as opposed to those who have attained secondary school education only. This may be due to that fact that those with post secondary education may have nothing to prove while the respondents with an average level of education were very conscious of their perceived "modernity". To these respondents, biomedicine appears to be an epitomization of higher social status while ethnomedicine is associated with "backwardness".

This study also showed that sex and marital status have a significant influence on the utilization of ethnomedicine. Women are more likely to utilize ethnomedicine than men. This may probably be related to the findings of Kimani (1982), that women have better health seeking behaviour than men. The influence of sex on the patterns of utilization is however affected by two key factors, marital status and children.

In relation to marital status, the results of the study revealed that married people are more likely to utilize ethnomedicine than those who are not married. This may be related to the fact that married people are likely to have children, who fall sick more often and it is the responsibility of their parents to seek treatment for them.

The study also reveals the strong influence of children on the tendency to utilize ethnomedicine. The study shows that couples who are married without children have a very high tendency to utilize ethnomedicine. This may probably be attributed to the cultural conceptualization of complications like the inability to conceive as being caused by supernatural factors. The cure for such complications caused by supernatural factors is perceived to lie in ethnomedicine.

The study further revealed that single parents who have custody of their children demonstrated a high tendency to utilize ethnomedicine. It is instructive in this respect

that the rate of utilization of ethnomedicine by divorced, widowed or separated men who have custody of their children was found to be higher than that of those who do not have custody of their children. Thus, having custody of children by men increases their propensity to utilize of ethnomedicine.

5.2.2 Explanations for the Causes of Illness

Like most rural communities in Africa, he Luhya community considers the world to be divided between the natural tangible environment and the supernatural or the supernatural realm. This duality is embedded in the community's interpretation of the world found in their explanations of the causes of illness. The study found that the Iguhu community distinguishes between biophysical and supernatural illnesses. The community in the study area conceptualizes diseases as resulting from both natural and supernatural factors. In the free listing of the perceived natural causes, most of the respondents included contaminated water; exposure to elements like rain and cold; eating contaminated food and physical common injuries.

It is in this light that there is a very high rate of self medication, which was mostly pharmacological. Most of the respondent who admitted to utilizing ethnomedicine will not hesitate to consult a biomedical practitioner if the illness is perceived to have been caused by biophysical factors .if the illness is to have been caused by supernatural factors then biomedicine is seen as being inadequate .Indeed ,52%of biomedical practitioners interviewed in this study agree with this conceptualization of illness and agree that biomedical remedies cannot effectively treat illness caused by supernatural or cultural factors

Illnesses and common injuries that are perceived to have been caused by supernatural factors are treated using ethnomedical interventions.

5.2.3 Patterns of Utilization of Ethnomedicine and Treatment Regimes Applied

The findings from this study regarding utilization of either ethnomedical or biomedical remedies revealed interesting tendencies. In the event of an illness, most of the respondents will first self medicate, using either medicinal plants or biomedicines or both simultaneously or sequentially. If the illness persists after self medication most respondents will consult a biomedical practitioner first and will then consult an ethnomedical practitioner in case the symptoms persist. If effective remedy for the illness is not forthcoming even after consulting an ethnomedical practitioner, the common option was found to be recourse to a more skilled or refutable ethnomedical practitioner. Beyond that, the tendency was to accept the seemingly terminal condition (called ***Khutora*** in the local dialect). Thus, the utilization of ethnomedicine in the study area is prevalent.

It is also important to report that the study found the use of medicinal plants to be decreasing due to many factors, among them acculturation; and the ready access to biomedicine. This study also found that most of the respondents misuse biomedicine. Most of them do not have the skills to select appropriate drugs without relying on advice from traders and doctors and they lack knowledge about pharmaceutical treatments. As a consequence, they often do not use the appropriate medications for their condition or use inappropriate dosages.

Further, acculturation might generate loss of local medicinal knowledge, which seems to protect rural communities' health and nutritional status. Most respondents felt that

the local community is loosing indigenous medicinal knowledge, and that the young are not adequately learning this knowledge.

In contrast the study findings showed that the preventive and treatment procedures for illness attributed to supernatural factors are both pharmacological and non pharmacological. However, knowledge of the non pharmacological is confined to the ethnomedical practitioners, who do not disclose the same to their patients. The researcher found the ethnomedical practitioners reluctant to disclose the meanings of the procedures they use and therefore the study was not able to conclusively ascertain the meanings attached to them

5.3 Conclusions

Based on the findings of this study, the following conclusion may be made. First, that utilization of ethnomedicine remains strongly prevalent in rural areas such as the study area. In fact, the residents see no contradiction in the use of ethnomedicine alongside the use of biomedicine. This means that ethnomedicine plays an important role in primary health care in the study area and rural areas in general.

Second, the study showed that most respondents conceptualize biomedicine and ethnomedicine as two independent domains of knowledge, although they mix biomedical and ethnomedical remedial therapies in their daily health seeking practice. Biomedicine is regarded as having qualities of power, trust, and effectiveness by most respondents. However, ethnomedicine is seen as being more effective in curing illnesses in totality, especially if the illness is not purely biophysical. Therefore, ethnomedicine is an integral part of the primary health care system in the study area and other similar rural settings.

Third, the study found that educational attainment does not contradict the use of ethnomedicine since those with post secondary education accept use as much as do those with primary level of education and below. Education therefore should take cognizance of the utilization of ethnomedicine

Finally, the study concludes that both ethnomedical and biomedical practitioners show a willingness to cooperate and expressed desire to learn more from each other so that people could benefit from both medical systems simultaneously. However, both ethnomedical and biomedical practitioners have some reservations regarding this coperation. The main reservation of the ethnomedical practitioners is related to issues of patents and the protection of their medical inventions. The biomedical practitioners on the other hand are more concerned about the pharmaceutical efficacy of the ethnomedical remedies and the need for conduct further research on the same.

5.4 Recommendations

1. Considering the important role of ethnomedicine in primary health care and given that its use remains strong in rural areas, there is need for a comprehensive policy paper which must be developed through an inclusive approach, which will emphasize the centrality of ethnomedicine alongside biomedicine. To achieve this, the following program of action may be implemented
    a) The Ministry of Health and that of Medical services should facilitate open debate on the subject in public for a. All stakeholders should actively participate in the debates.

b) The ministries of health should then facilitate a conference of stakeholders which will address all the issues raised in the public debates.

c) The document produced from such a conference be entrenched in the law of the country.

2. Proceeding from this policy paper and legislation, and taking into consideration the fact that educational attainment does not influence the utilization of ethnomedicine, the Ministries of Education should incorporate ethnomedicine into the Kenyan education curricular at all levels. To realize this, the following program of action may be implemented

   a) Sensitization workshops by all stakeholders including Ministries of Health and Education officials, biomedical and ethnomedical practitioners and scholars.

   b) Development of an ethnomedical curricular and training manuals for all levels of education.

3. Using the policy paper and legislation as the basis, ethnomedicine be incorporated into the mainstream health service delivery system. The following action may be initiated:

   a) Open discussion fora facilitated by the ministries of health incorporating both biomedical and ethnomedical practitioners and other stakeholders to address their common fears and suspicions.

   b) Inclusive development of an implementation framework and guidelines based on the open discussions in order to eliminate doubts and fears.

5.5 Recommendations for Further Research

Finally, there is need for further research on the topic focusing on the following areas;

a) Research on the patterns of utilization of ethnomedicine among more diverse populations, preferably in urban areas.

b) Research on the non pharmacological ethnomedical therapies, including spiritotherapy.

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APPENDICES

Appendix 1: Questionnaire Cover Letter

Greetings! My name is …… I am a student at Kenyatta University. We are talking to members of your community to find out whether ethnomedicine plays any role in the prevention and treatment of diseases and injuries. If you oblige, we would like to talk to you. However, before you make the decision on whether or not to participate in this study, I would like to explain to you what the study is all about.

The discussion will last for approximately 45 minutes. When we complete the discussion, please do not share what we will have discussed with other people. There are no right or wrong answers.

You are free to decide whether to participate or not. Should you decide to participate, the information you provide in this discussion will be kept confidential. Your name will not appear on any document, including the final research paper. Also remember, you are free to refrain from responding to any question that you do not wish to answer.

Please note that there is no personal compensation for your participation. However, the information may benefit your community through inclusion of your ideas in the research paper, which may result in improving the health care system in your community.

In case you have any questions after the exercise, please consult the principal researcher.

Mr. Taji Shivachi
Sociology department
Kenyatta University
P.O.Box 43844-00100
Nairobi.

Appendix 2: Survey Questionnaire

Instructions for Research Assistants are in Italics

Please do not read the main titles to participants (indicated in Letters, e.g. A, B...) since this may bias their responses. Only read the instructions in italics. Do not show the questionnaire to the respondents.

A. Administrative Information

Date: _____

Sub-location: _____

Location: _____

ID #: _____

Interviewer: _____

B. Demographic and Socio economic information

Kindly allow me to ask you some personal questions

1. Sex: _____
2. Age: _____
3. Marital status _____
4. Number of children, if any: _____ Age of eldest ( ) Age of youngest ( )
5. How long have you lived in this area? _____
6. Name the furthest town you have visited: _____
7. What is your level of educational attainment (highest class/level attained):
8. Occupation: _____
9. Religion: _____
10. What do you consider as an indicator or sign of wealth or prosperity?

    _____
11. What do you consider as an indicator or sign of poverty?

    _____
12. What is the distance to the nearest health facility

    _____

C. Utilization of ethnomedicine

Now, I would like to know about ethnomedicine in your community

13. Have you ever utilized ethnomedicine? Yes ☐ No ☐

14. If yes, how often do you utilize ethnomedicine? *(tick one)*

a) Very frequently
b) Frequently
c) Averagely
d) Rarely
e) Very rarely

15. If you answered yes to question 12, did the ethnomedical therapy you used work?

Yes ☐ No ☐

16. If you answered yes to question 12, which diseases do you normally attempt to treat with ethnomedicine? Name them

No.	Name of disease	Perceived cause of disease

17. How would you rate the success of ethnomedical therapies generally? *(Tick one)*

a) Very high rate of success
b) High rate of success

c) Average rate of success

d) Low rate of success

e) Very low rate of success

18. What diseases are normally cured by ethnomedicine? Name them

No.	Name of disease	Perceived cause of disease

D. Factors that determine utilization of ethnomedicine

19. In your opinion, why do people utilize ethnomedicine?

_____

_____

_____

_____

_____

_____

20. What is the average cost of treatment using ethnomedical therapies?

_____

_____

_____

_____

21. What is the average cost of treatment using biomedical therapies?

_____

E. Education and utilization of ethnomedicine

22. In your opinion, does the level of educational attainment influence the utilization of ethnomedicine? Yes ☐ No ☐

23. If you answered yes to the question above, kindly explain your answer

_____

_____

_____

_____

_____

_____

_____

F. Religious affiliation and utilization of ethnomedicine

24. In your opinion, does the religious affiliation influence the utilization of ethnomedicine? Yes ☐ No ☐

25. If you answered yes to the question above, kindly explain your answer

_____

_____

_____

_____

_____

_____

_____

G. Demographic factors and utilization of ethnomedicine

26. In your opinion, does age influence the utilization of ethnomedicine? Yes ☐ No ☐

27. If you answered yes to the question above, kindly explain your answer

_____

_____

_____

_____

_____

28. In your opinion, does marital status influence the utilization of ethnomedicine?

Yes ☐ No ☐

29. If you answered yes to the question above, kindly explain your answer

30. In your opinion, does gender influence the utilization of ethnomedicine?

Yes ☐ No ☐

31. If you answered yes to the question above, kindly explain your answer

32. In your opinion, what are the challenges of utilization of ethnomedicine?

Appendix 3: In-Depth Interview Guide for Ethnomedical Practitioners

Instructions for Research Assistants are in Italics

Please do not read the main titles to participants (indicated in Letters, e.g. A, B...) since this may bias their responses. Only read the instructions in italics. Do not show the interview guide to the respondents.

A. Administrative Information

Date: _____

Sub-location: _____

Location: _____

ID #: _____

Interviewer: _____

B. Demographic and Socio economic information

Kindly allow me to ask you some personal questions

1. Sex: _____
2. Age: _____
3. Marital status: _____
4. Number of children, if any: _____ Age of eldest ( ) Age of youngest ( )
5. How long have you lived in this area?
6. Name the furthest town you have visited:
7. What is your level of educational attainment (highest class/level attained):
8. Occupation other than ethnomedicine:

   _____
9. Religion: _____
10. What do you consider as an indicator or sign of wealth or prosperity?

    _____
11. What do you consider as an indicator or sign of poverty?
12. What is the distance to the nearest health facility

C. Ethnomedical Practice

Now, I would like to know about ethnomedicine in your community

13. How long have you practiced ethnomedicine?
14. How did you gain your ethnomedical knowledge?
15. Do you keep records? Yes ☐ No ☐
16. On average, how many clients consult you per day?
17. Where do most of your clients come from?
18. What are the most common socio-economic characteristics of your clients?
19. How do you charge for your services?

D. Ethnomedical Procedures

20. Which diseases do you normally treat? Name them

No.	Name of disease	Perceived cause of disease

21. Please explain some of the procedures you use for diagnosis and treatment.
22. Do you normally explain to your clients what you are doing and why?
23. How would you rate the success of ethnomedical therapies generally?
24. In your opinion, why do people utilize ethnomedicine?
25. In your opinion, what are the challenges of utilization of ethnomedicine?
26. Would you recommend the utilization of biomedicine and if yes, why?

Appendix 4: In-Depth Interview Guide for Key Informants

Instructions for Research Assistants are in Italics

Please do not read the main titles to participants (indicated in Letters, e.g. A, B...) since this may bias their responses. Only read the instructions in italics. Do not show the interview guide to the respondents.

A. Administrative Information

Date: _____

Sub-location: _____

Location: _____

ID #: _____

Interviewer: _____

B. Demographic and Socio economic information

Kindly allow me to ask you some personal questions

1. Sex: _____
2. Age: _____
3. Occupation: _____
4. How long have you lived in this area?
5. Name the furthest town you have visited:
6. What is your level of educational attainment (highest class/level attained):
7. Religion: _____

C. Role of Ethnomedicine

Now, I would like to know about the role of ethnomedicine in this community

8. How would you rate the extent of utilization of ethnomedicine in this community?
9. In your opinion, which people utilize ethnomedicine in this community?
10. In your opinion, which diseases are normally treated by ethnomedicine and why?
11. How would you rate the success of ethnomedicine in this community?
12. In your opinion, why do people in this community utilize ethnomedicine?

13. In your opinion, what are the challenges of utilization of ethnomedicine and how may they be mitigated?
14. Would you say ethnomedicine adds value to primary health care?
15. Would you recommend the utilization of ethnomedicine?