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**THE INFLUENCE OF SOCIO-CULTURAL
AND ECONOMIC FACTORS ON HEALTH
SEEKING BEHAVIOUR: THE CASE OF
MEASLES IN CHILDREN IN RARIEDA
DIVISION, SIAYA DISTRICT**

BY
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**A THESIS SUBMITTED TO THE INSTITUTE OF
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SEPTEMBER 1998



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DECLARATION

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

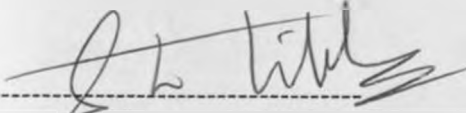


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DEDICATION

To the memory of my late Mother Mary Awino Ouko, and to my Father John Peter Ouko, my Aunt Roseline Oduor and Uncle Rev. Joseph Oduor for their selfless sacrifice and inspiration throughout my life.

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LIST OF ABBREVIATIONS

DPT	Diphtheria, Pertussis and Tetanus
EM	Explanatory Models
FGD	Focused Group Discussions
GOK	Government of Kenya
HBM	Health Belief Model
HSB	Health Seeking Behaviour
IMR	Infant Mortality Rates
KEPI	Kenya Expanded Programme on Immunization
SDDP	Siaya District Development Plan
UNICEF	United Nations Children's Fund
WHO	World Health Organization

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ABSTRACT

This study was designed to investigate the influence of socio-cultural and economic factors on health seeking behaviour in the case of measles in children. Fieldwork for the study was conducted in Rarieda Division in Siaya District between November 1996 and February 1997. The study sought to find out the effects of feeding habits on the management of measles, whether there was a gender preference in the way children with measles are treated, people's beliefs about the cause of measles, and whether the level of formal education influences choice of therapeutic options.

A total of 161 respondents were systematically sampled and interviewed. The methods used in obtaining data information for this study were library research, interviews, focus group discussions and case studies. The data were analyzed both quantitatively and the information presented in the form of tables.

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The findings reveal that people tend to utilize various therapeutic options for the same episode of illness. The health seeking behaviour of the Luo in Rarieda Division results from a number of factors. In examination of the factors, financial resources and cultural beliefs were found to exert a lot of influence on people's health seeking behaviour.

It is, therefore, recommended that health educators emphasize on educating people about causes, symptoms and treatment of common diseases, like measles. In addition, greater attention should be directed to the adoption of an integrated and comprehensive approach to the control management and treatment of measles. It is also recommended that health policy makers should also recognize and utilize traditional health systems.

CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

Measles is a severe viral infection caused by the measles virus and is spread very rapidly from one person to another by fine, invisible droplets which contain this virus (Ebrahim, 1981; Balldin *et al.*, 1975). It is a highly contagious childhood disease whose symptoms are usually characterized by high fever, cold, inflammation of the eyes, bronchitis and a rash which usually appears three or four days after the onset of the first symptoms (Imperato, 1977). This disease occurs exclusively in children, although young infants of less than five months are fairly well protected by maternal antibodies (Robinson, 1978).

Measles, according to Brown *et al.*, (1979) and WHO/UNICEF (1987), kills over 2 million children annually. This is about 50% of all the deaths resulting from all the infectious diseases earmarked for prevention by WHO and UNICEF in control programme through the Expanded Program on Immunization (EPI). Mortality from measles has been declining in Western Europe and North America and it is no longer a serious disease of children. However, in the developing countries, it still causes high morbidity and mortality and seriously affects the growth and nutrition of children (Ebrahim, 1981).

In uncomplicated measles, personal hygiene and possibly symptomatic treatment with sedatives and antipyretics¹ are all that are required, and every effort should be made to prevent dehydration and further deterioration of the nutritional state of the child. Children with complicated forms of measles require hospitalization and, whenever possible, barrier nursing should be instituted during the period of communicability (Robinson, 1978).

Measles, being a ubiquitous² disease with no effective treatment, has given rise to various beliefs and practices concerning its cause and treatment which, in turn, influence people's health seeking behaviour (hereafter referred to as HSB). For example, in Northern Nigeria, it is believed that a measles injection given to a child with measles will lead to his/her death. Many societies consider the rash of measles to be due to 'heat' in the body, and so the various foods considered as 'hot' are not allowed in the diet (Ebrahim 1981).

In 1990, the World Summit for Children declared their commitment to:

Reduction by 95% in measles deaths and reduction by 90% of measles cases compared with pre-immunization levels by 1995, as a major step to the global eradication of measles in the longer run (WHO, 1993:1)

¹ A drug/other remedy for the allaying of fever.

² Found everywhere

Many developed countries have already achieved 95% reduction in deaths. However, five years later in most developing countries, raising coverage with the measles vaccine to even higher levels has not been sufficient to reduce deaths by 95% (WHO, 1993). Thus, additional measures such as the consideration of the influence of socio-cultural and economic factors on HSB in the case of measles and the improvement of case management and treatment of complications are necessary in order to achieve this goal.

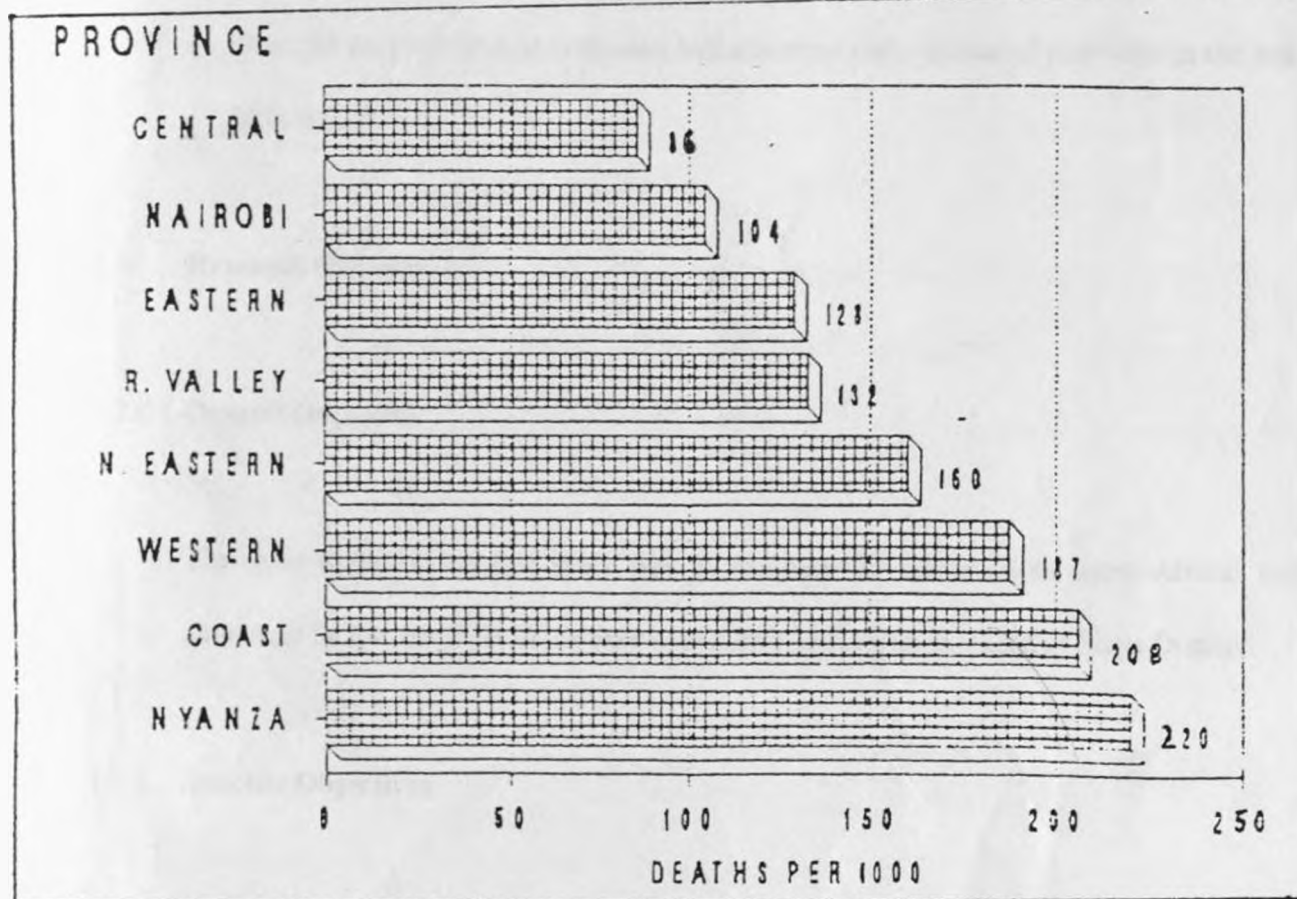
1.1 Problem Statement

This study examined the socio-cultural and economic factors that influence HSB and their implications for the treatment and management of measles. The need to focus on these factors arose from the premise that they are important when considering the HSB of an individual or a community. In relation to measles, most research carried out has focused on its clinical aspects (Bwibo, 1970; Kimati and Lyaruu, 1976; Mjomba, 1985; Ogaro, 1990; Onyari, 1987). Unfortunately, these researches do not consider cultural factors, despite the significance of such factors in dealing with health issues. This poses a problem in that, so long as the cultural beliefs and practices of a community are ignored, there will always be a gap in the fight, management and subsequent treatment of measles.

One of the most common health problems in Nyanza Province in general, and Siaya District in particular, are the high infant and child morbidity and mortality rates (Fig 1.1). Malaria, respiratory tract infection, diarrhoea, gastroenteritis and measles are the top five

disease that contribute to this (Koyugi, 1982; Olenja, 1991). These five disease take heavy toll on young lives so much so that about a quarter to a third of the babies born do not reach the age of five years. Yet, these disease are preventable either by means of health education or by regular supervision and immunization. Part of the problem in the management of measles in Siaya District might be that the causes of measles are interpreted wrongly due to the people's cultural beliefs, thus leading to a wrong choice of treatment. These cultural beliefs are similarly prevalent and this could possibly be due to the low levels of formal education among the people.

Figure 1.1: Childhood Mortality by Province, Kenya



Source: CBS - 1979 Population Census, Vol. II, Analytical Report

This study was designed to find out whether socio-cultural and economic factors influence the HSB of the people of Rarieda Division in the case of measles in children.

In view of the above, it sought to answer the following questions:

1. Do people's ^{Cause}beliefs about the cause of measles influence their choice of therapy?
2. Do feeding habits contribute negatively to the episode of measles?
3. Is there a gender preference in the way children with measles are treated?
4. Does the level of formal education influence people's choice of treatment in the case of measles?

1.2 Research Objectives

1.2.0 Overall Objective

The main objective of this study was to examine the influence of socio-cultural and economic factors on HSB in the case of measles in Rarieda Division of Siaya District.

1.2.1 Specific Objectives

1. To find out and document people's beliefs about the causes of measles.

2. To determine the effects of feeding habits on the management of measles.
3. To find out if there is gender preference in treatment of children with measles.
4. To find out how the level of formal education influences people's choice of treatment in the case of measles.

1.3 Justification of the Study *uses*

The study was deemed justifiable because of the following reasons. The number of children (0-9 years) constitute about 32.9% of the population of Siaya District and yet they are the most vulnerable group in the society (GOK, 1994). According to the 1989 population census, the infant mortality rate (hereafter referred to as IMR) in the district was 90 per 1000, third highest in the country, with the mortality rates being highest in the first 5 years of life (GOK, 1994). This high IMR resulting from various preventable diseases, remains a big handicap in population management in the district. Measles is named among the diseases that are significant contributors to the high IMR.

According to the Ministry of Health (1992), a national survey carried out between September and October 1992, revealed that despite the improvement in the general immunization status of children in Kenya, and despite the fact that 91.6% of the children had access to immunization services, there was a drop-out rate of 11.4%. This was

between the Diphtheria, Pertussis, Tetanus (DPT 1) vaccination and the measles vaccination. This drop-out rate is a major reason for the reduction in the average of fully immunized children.

As articulated in Sessional Paper No. 10 of 1965 and the successive development plans since independence, health is one of the fundamental basic human needs and is essential as a prerequisite for overall economic and social development. To improve child health is to improve the general health of the community. Therefore, there is a need to restructure the existing health strategies to help attain the World Health Organization's target of "Health for all by the year 2000". An understanding of the cultural factors which influence HSB in the case of measles and its implications can provide information which can be used by health policy makers to design appropriate policies which will be in line with the actual needs of the people. This study was not only designed to help modify health intervention programmes to suit local conditions, but also to contribute additional literature on the subject, that future scholars can draw upon for reference.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL MODELS

2.0 Introduction

In this study the literature review is divided into four parts. These include culture and health, food and disease, gender and health and, finally, formal education and health. This chapter also deals with the theoretical models as well as the hypotheses which guided the study.

2.1 Literature Review

2.1.0 Culture and Health

According to Tylor (1958:1):

Culture is that complex whole which includes knowledge, belief, art, morals, law, customs and any other capabilities and habits acquired by man as a member of society.

On the other hand, Keesing and Keesing (1968:20) define culture as "The totality of learned socially transmitted behavior".

From these two definitions one can see that culture is a set of guidelines which individuals inherit as members of a particular society, and which tells them how to view the world, how to experience it emotionally and how to behave in it in relation to other people, to supernatural forces or gods, and to the natural environment. A cultural background, therefore, has an important influence on many aspects of people's lives, including their beliefs, behaviour, perceptions, emotions, attitudes to pain and other forms of misfortune, all of which may have important implications for health and health care (Helman, 1984).

An important point in understanding the role of culture is that it must always be seen in its particular context. This context is made up of historical, economic, social, political and geographical elements. It may, therefore, be impossible to isolate 'pure' cultural beliefs and behaviour from the social and economic contexts in which they occur (Helman, 1984). It was in view of this that this study incorporated the socio-cultural and economic aspects of disease to find out how they influence HSB. This study concentrated on the kind of behaviour that is related to health and disease. The health and disease of humans and of the community in which they live depend upon the interaction with the physical, biological and social environments. Socio-cultural and economic factors have an impact upon the pattern of health and disease in the community and they play a role in the etiology of certain disease (Elissen, 1991; Luijk, 1971; Neylan *et al.*, 1988). These factors also play an important role in the organization and utilization of modern and traditional medical care. Also, the pattern of interaction between health workers and their clients is influenced by their socio-cultural and economic backgrounds.

The success of preventive and promotive action programmes largely depend upon their acceptability and this is related to cultural norms and values (Abdullah, 1984; Luijk, 1971; Vogel *et al.*, 1974). An investigation carried out in Machakos District with the aim of finding out what mothers believe about measles and diarrhoea and what they do when their children contract these diseases, revealed that perceived etiological notions about these diseases influence the beliefs held and this led to their being classified among "God's diseases" (Maina, 1978). This classification influenced an adherence to traditional practices as well as the acceptability to seek modern care.

Maina (1978) argues that social and cultural factors influence many aspects of health and disease. These factors do not only affect patterns of morbidity and mortality, but also the utilization of therapeutic options. Suchman (1963, as quoted in Maina 1978:139) asserts that:

Social factors determine the response of society and the individual to many health problems. The meaning of illness, its perception and definition, and behavioural responses to illness are basic factors influencing the reactions of the public to public health programmes.

This implies that the existence and role of beliefs and practices, which are part of the culture of a particular population, should be taken into account when designing measures and programmes aimed at improving the health situation in that population (Manyeneng, 1980).

According to Vogel *et al.* (1974), the study of how and why people behave the way they do in relation to health problems is important in order to get a better insight into the social process in a community and also in order to understand why people accept or reject certain "modern" medical activities. The way in which people deal with illness is closely related to their ideas about cause and etiology and these vary from one society to another (Jennings, 1955; Kaendi, 1995; Kimani, 1981; Messer, 1981; Sindiga *et al.*, 1995; Stevenson, 1987).

Explanatory Models (hereafter referred to as EMs) provide explanations for the etiology, symptoms, physiological changes, natural history and treatment of the illness. On this basis, patients choose what seems to be the appropriate source of advice and treatment for their condition (Helman, 1984). For instance; illnesses, such as colds, are treated by relatives; supernatural illnesses (such as 'spirit'-possession) by sacred folk healers; while 'natural' illnesses by physicians - especially if they are very severe. If, for example, the ill-health is ascribed to divine punishment for a moral transgression, then "prayer and repentance, not penicillin, cure sin" (Snow, 1978 cited in Helman, 1984:71). In this way, sick people frequently utilize several different types of healers at the same time or in sequence (Helman, 1984; Nyamwaya, 1992; Osero, 1990; Sindiga *et al.*, 1995; Were, 1991).

Many African communities categorize disease and illness according to cause. This, in turn, may influence therapy seeking and selecting behaviour. Patients will go to biomedical facilities when their families, friends or neighbours or even themselves

believe that an illness is naturalistic. On the other hand, they will turn to traditional healers when they conceive an illness to be caused by human-induced forces. However, when faced with actual illnesses, patients in the African context have been observed to be quite flexible, sometimes using a number of systems together for the same episode of illness (Sindiga *et al.*, 1995; Nyamwaya, 1992).

Foster (1976 cited in Abdullah, 1984) has observed that non-western medical systems possessed two categories of disease causation, that is, personalistic and naturalistic. Correlated with the personalistic category is the belief that disease is due to the active purposeful intervention of an agent who may be human or non-human. Diseases under this category included the uncommon conditions which members of a community cannot comprehend, such as conditions that lead to deliriums, malignant growths and elephantiasis. Under the natural category, diseases are believed to stem from such natural forces or conditions as cold, heat, wind and dampness. These diseases included everyday complaints such as fever, the common cold and diseases of children, the aged and expectant mothers.

Leprosy studies carried out in the McKean Rehabilitation Institute in Chiang Mai, Thailand (Neylan *et al.*, 1988) and in Indonesia (Elissen 1991), revealed a wide variety of etiological theories related to the disease and the choice of treatment, including the help of indigenous healers. Very few patients mentioned the bacterial cause. The researchers, therefore, concluded that combining traditional beliefs with modern theories would have a positive effect on the therapeutic results.

It is obvious from the above literature, that traditional beliefs about cause and etiology of disease still influence, to a great extent, the HSB of people, especially in the rural areas. A research whose scope is wide has been done on this area among the Luo (Sindiga 1995). However, a wide-scoped study does not usually relate to or address some specific details. Thus, there is still need to study the traditional beliefs about cause and etiology of disease, specifically in relation to particular diseases like measles, so as to provide a comprehensive and detailed study.

2.1.1 Food and Health

Food is more than just a source of nutrition. In all human societies it plays many roles and is deeply embedded in the social, religious and economic aspects of everyday life (Helman, 1984). Anthropologists have further pointed out how cultural groups differ markedly from one another in many of their beliefs and practices related to food (Ebrahim, 1981; Helman, 1984; Mboya, 1938). As a result of the central role that food plays in daily life, especially in social relationships, dietary beliefs and practises are notoriously difficult to change, even if they interfere with adequate nutrition (Ebrahim, 1981; Helman, 1984; Mboya, 1938). Before these beliefs can be modified or improved, it is important to understand the way that each culture views its food, and the way it classifies it into different categories. The clinical significance of these beliefs and practices is that they may severely restrict the types of food stuffs available to people,

and that diet may be based on cultural rather than their nutritional criteria (Helman, 1984).

According to Mburu (1984), there exists a relation among a number of factors related to malnutrition and ill health. Among the leading causes is poverty, which is quite widespread in the African continent. Contributory causes behind the persistently high IMR are ultimately due to the way people live and the fact that they lack facilities to improve their lives. A lack of the appropriate use of the available foods will lead to poor health and further exacerbate precarious life styles (Helman, 1984; Mboya, 1938).

The mere availability of food is not a sufficient condition to improve health and nutrition status. Food preferences and habits are far greater determinants. Just as people are the greatest resources, their attitudes and behaviour may be the greatest stumbling blocks to change (Helman, 1984). From a clinical perspective, cultural influences may affect nutrition in two ways:-

1. They may exclude much-needed nutriment from the diet (by defining them as non-foods, profane, alien or lower-class food, or food on the wrong side of the hot or cold dichotomy).
2. They may encourage the consumption of certain foods or drinks (by defining them as food, sacred, medicine, or as a sign of social, religious or ethnic identity) which are actually injurious to health (Helman, 1984; Messer, 1981).

When both of these influences co-exist there is likely to be an increased risk of malnutrition, manifesting itself either as under-nutrition or as over-nutrition. Superstitions exist regarding foods which a sick person is allowed to eat. Some foods are believed to have 'cold' and some 'hot' effects on body organs, such that certain foods are allowed and several others prohibited, depending on the perceived nature of the disease.

Measles is pre-eminently important as a disease causing loss of weight. The reasons for this loss of weight are myriad. There is a tendency to restrict the child's diet during measles, which accentuates protein energy depletion (Mburu, 1984; Morley, 1973). Mothers have a widespread tendency to withdraw food and even liquids from children with measles, thereby accelerating malnutrition and loss of weight. Thus, many children suffering from measles, especially in the rural areas, progressively lose their ability to "catch up" on growth, as they have to cope with hazards from other infections. There is abundant evidence, according to Whittle (1980, as quoted in Ibia and Asindi 1990), to show that protein-energy malnutrition (PEM) is one of the main determinants of measles' morbidity and mortality in developing countries.

A number of food taboos limit the variety of foods available to children. In many cultures, the withdrawal of various foods is considered an essential element in the treatment of childhood illnesses. Among the Guatemalans of South America, there is a strong tendency to deny foods of animal origin to children, for fear of stimulating worms, and to withdraw protein containing foods almost entirely when diarrhoea develops. This

may be fatal if the child is already undernourished (Ebrahim, 1981). According to Maina (1978), the Akamba of Machakos have a belief that certain foods and fluids, such as milk, fats and meat, should be withheld from a child who is suffering from measles.

Children with poor nutritional status tend to become ill more easily, have less strength to recover from illnesses, and are more likely to die from illnesses (especially, measles and malaria) which would not be fatal for healthy children (Chaiken, 1986). Thus, according to Stanton *et al.* (1987), the importance of nutritional education focusing on breast-feeding, weaning practices, nutrition during pregnancy and feeding during diarrhoea, have been stressed. Also emphasized has been the necessity of integrating nutritional activities with Public Health Care activities, especially the distribution of Oral Rehydration Salts and immunization efforts.

However, it should always be remembered that cultural influences alone do not account for most causes of poor feeding habits world-wide, though they may be one of the factors contributing to them. To be fully understood, malnutrition should also be placed in its wider social, political, economic and environmental contexts (Helman, 1984). In the light of the above, it was necessary to examine the feeding habits of the people of Rarieda Division in Siaya District in relation to measles, to determine their effects on the disease.

2.1.2 Gender and Health

All human societies divide their population into two social categories, namely, male and female. Each of these categories is based on a series of assumptions drawn from the culture in which they occur - about the different attributes, beliefs and behaviour characteristic of the individuals included within each category. Although this binary division of humanity into two genders is universal, on closer examination one can see that it is a rather more complex phenomenon, with many variations reported on how male and female behaviour is defined in different cultural groups (Helman, 1984).

In looking at sexual identity, however, it is reasonable to say that both biological and environmental influences play some role in the definition of any individual's gender. In all societies, men and women have different body shapes, and different physiological cycles; women menstruate, give birth and lactate, while men do not. However, it is the cultural meanings that are given to these physiological events, and how these in turn influence people's behaviour, and even the social, political and economic system of the society, that are of chief interest to the modern Anthropologist (Helman, 1984). If one excludes the role of the physiological differences between the sexes, it is possible to see how each of the two gender cultures may, depending on the context, be either protective of health or pathogenic. That is, the beliefs and behaviour characteristic of a particular gender culture may contribute to the cause, presentation and recognition of various forms of ill-health (Helman, 1984).

The female child is accorded a lower status than her male counterpart in most societies in Kenya although she is born with a natural biological survival advantage. There is a strong cultural correlation to this. Several customs and traditions exist which deny girls and women proper food and adequate nutrition and this affects their health status (Rogo, 1995). The girl-child is disadvantaged by societal practices that emphasize the notion that she is of less value. Theoretically, both boys and girls have equal access to health facilities but cultural barriers exist that result in sub-optimal utilisation of available resources (health services included) by the girl-child.

According to UNICEF (1992), the weight of discrimination among gender is so great that it even sways the survival chances of the girl-child. All other things being equal, female children have a better natural chance of surviving the early vulnerable years. But all other things are not always equal. In several countries of South Asia, fewer girls survive than boys due to cultural factors, female infanticide being one of the dominant ones (Miller 1948). And in this gap between natural and actual survival rates, discrimination can be measured. In Bangladesh, India and Pakistan it adds up to more than a million deaths every year. In other words, a million girls die each year because they are born female. In some countries (especially in the developing world), twice as many boys as girls are brought to health centres for treatment (UNICEF 1992:57). In the light of this, this study endeavoured to find out if there is any aspect of gender difference in the way girls in relation to boys are treated in the case of measles.

2.1.3 Formal Education and Health

Education has gained recognition as a condition for social and economic development and a vehicle for this development (GOK, 1994). Access to education by all Kenyan is a recurrent development theme and more recently, the focus is on women and girls in order to bridge the educational gap between them and men and boys respectively. Education, especially high educational attainment, enhances the status of women through improving their health and that of their families; increasing women's economic opportunities, and reducing women's chances of poverty (Khasiani, 1995).

Formal education is one of the major ways of exposure to western culture. Many studies done show that formal education turned villagers away from traditional healing (Osero, 1990). In rural Nigeria, however, no evidence was found that educational status influenced the pattern of utilization of health services, although in urban Nigeria an influence was evident. In rural Ecuador the patterns of care used varied considerably between those with and those without education. However, primary education had no significant effect (Osero, 1990). According to a study about beliefs and practices concerning measles and diarrhoea among the Akamba of Kenya, education was found not to influence the type of medical care mothers selected, but did influence the use of certain traditional practices (Maina, 1978).

According to Chaiken (1986) health problems such as malnutrition, poor immunization coverage, frequency of preventable disease and poor sanitation facilities are related to the

issue of low public awareness of health issues. If people, through formal education, are made aware of the need to prevent disease through better sanitation, nutrition and home treatment of common illnesses, then improved health and child survival will follow independently of other interventions in health care delivery. For health education to be effective, it must not only convey information, it must also imply action which leads to a change of attitudes, behaviour and practices from those that are not conducive, especially to health (Manyeneng, 1980). Education is very instrumental in changing or modifying people's attitudes and beliefs as seen in the above literature. Therefore, this study set out to investigate the influence of formal education on the HSB of the Luo of Rarieda Division.

2.2 Theoretical Model

A number of formulations have been designed in an attempt to account for health behaviour. Disease not only involves the body, it also affects people's social relationships, self-image and behaviour. The socio-psychological aspects of illness are related, in part, to the bio-physiological manifestations of disease but are also independent of them (Oyaya, 1993). Against this background, it was pertinent for the researcher to review the main social science models that are used in health systems research, especially with regard to HSB. The Ethnomedical approach and the Health Belief Model (hereafter referred to as HBS) provided the basis to undertake the study.

2.2.0 The Ethno-Medical Approach

The 1968, the term ethnomedicine was coined and applied to "those beliefs and practices relating to disease which are the products of indigenous cultural development and are not explicitly derived from the conceptual framework of modern medicine" (Hughes, 1968 and Ackerknecht, 1971 as quoted in Johnson and Sargent, 1990:118). Subsequently, the term was applied more broadly to refer to culturally oriented studies of illness. This term was also later defined as "the study of how members of different cultures think about disease and organize themselves toward medical treatment and the social organization of treatment itself" (Fabrega, 1975:969 as quoted in Johnson and Sargent, 1990:118). Ethnomedical research has made a significant contribution to the understanding of how knowledge about illness influences HSB.

The ethnomedical approach focuses more on issues of classificatory characteristics of medical phenomenon, the meaning of illness and how ethno-medical knowledge influences HSB. When confronted with an illness, households have to make decisions on the type of health care to seek. Broadly, the factors which have been identified as influencing illness behaviour (HSB) have been social, cultural, economic and political. In Medical Anthropology, the major factors associated with illness behaviour have been biological beliefs (Kaendi, 1995).

This approach aims to understand how a group or a society's system of medicine functions, and attempts to delineate different systems of medicine. This view of disease

holds that notions of disease causation, dynamics and treatment are always elements of the individual culture. The focus of this approach is on understanding how illness is constructed within a specific cultural milieu. There is a general consensus among ethnomedicologists that illness etiologies define diagnostic procedures and therapeutic choices. In this approach, episodes of sickness are interpreted in terms of EMs used by practitioners in all health care systems. Thus, EMs of illnesses function as guides for action in that they orient therapeutic choice and illness management.

This approach was quite relevant to the study topic because it helped explain how people's beliefs about the causes of measles influence their HSB. However, this approach has been criticized for failing to locate beliefs and meaning systems within the existing social structures. Other studies have emphasized that verbalized categories, EMs and other knowledge may not be predictive of consequent behaviour (Rubel and Hass, 1990 as quoted in Johnson and Sargent, 1990). Thus, any discussion of illness behaviour must of necessity take into account factors other than beliefs alone. It is at this point that the HBS came in to help explain the study in relation to factors other than beliefs alone.

2.2.1 The Health Belief Model

One's perception of vulnerability to an illness and of the efficacy of treatment will influence one's decisions and health behaviour.

The HBS is a theoretical model frequently used in the analysis of health related behaviour. Formulated by Hochbanm, Leventhal, Kegels and Rosenstock between 1950 and 1960, the HBS was meant to explain preventive health behaviour by the use of socio-psychological variables. It was essential in a choice situation to an individual about alternative health behaviour. Health belief was, therefore, defined as the propositions accepted as true by people about the causes, symptoms and remedies related to illness (Rosenstock, 1974).

Health behaviour, as defined by Kasl and Cobb (1966, cited in Oyaya, 1993:27), is "any activity undertaken by a person who believes himself to be healthy for the purpose of preventing disease or detecting disease in an asymptomatic stage". However, to date, three modes of behaviour have been incorporated in the HBM. These include health behaviour, which is already defined, illness behaviour and sick role behaviour. As opposed to health behaviour, illness behaviour is defined as "any activity undertaken by a person who feels ill, for the purpose of defining the state of his health and of discovering a suitable remedy". Sick role behaviour, on the other hand, is defined as "the activity undertaken by those who consider themselves ill for the purpose of getting well" (Becker, 1974, quoted in Oyaya, 1993:27). In relation to measles, illness and sick role behaviour are seen as situations where one defines oneself as having measles, or having it diagnosed by someone else who then acts appropriately by either going for treatment or administering self treatment by taking drugs (Leavitt, 1979).

According to Quah (1985:351), in accordance with the HBS, an individual's engagement in a particular kind of health, illness or sick role behaviour is seen to depend on two conditions. The first one is the perceived amount of the treat, while the second one is the attractiveness or value of the behaviour.

This means that for a person to define his illness as measles and, thus, either go for treatment or participate in its prevention, he has to know about measles as a disease, its cause, its seriousness and its being a threat to life before he makes such a move. However, according to the HBM, the choice of action taken to prevent oneself from a disease depends not only on whether the person knows the cause and seriousness of the disease, but also on the perceived probability that the actions will lead to desirable preventive or ameliorative results, and the unpleasantness or cost of taking or not taking such action.

As seen from the HBM, it seems that measles control measures, including treatment and prevention, can only be successful if the persons involved know about the disease, its treatment and prevention, and perceive it as a serious disease which is a treat to their lives. Besides, the measures have to be perceived by the people as favourable not only because they lead to actual cure and prevention, but also because they are available, simple and convenient to carry out (Abdullah, 1984).

2.3 Hypotheses

Following the research problem highlighted, the objectives set and the subsequent review of the literature, the following research hypotheses were formulated:-

1. People's beliefs on the causes of measles has a direct bearing ^{impact} on their choice of therapy. ^{choice of the patient}
2. Feeding habits have a negative influence on a measles patient's diet.
3. There is a direct relationship between sex and the treatment of children with measles.
4. The level of formal education influences the choice of therapy in the case of measles.

2.4 Definition of Terms and Operationalization of Variables

2.4.0 Terms

Health seeking behaviour: In this study this refers to the process whereby one utilizes various health techniques to prevent, diagnose or cure a disease, in this case, measles.

Socio-cultural factors: In this study, these refer to beliefs and practices in the community in relation to health and disease, food and gender.

Economic factors: These factors are usually many but in this study formal education formed the basis for economic factors.

2.4.1 Operationalization of Variables

2.4.1.1 Dependent Variables

Therapy: Refers to any method of treatment designed to prevent, diagnose or cure a disease. It was measured by asking respondents the various methods they utilize in treating measles.

Measles: Refers to an infectious disease in which the patient has a fever and small red spots on the face and the body. It was measured by asking the respondents questions on the symptoms displayed by the patient.

Treatment: In this study this refers to the attention and concern that is given to a measles patient. It was measured by asking the respondents questions on the duration they take before taking the patient to hospital, and the methods of therapy they use.

Measles Patient's Diet: Food given to a person suffering from measles. It was measured by asking respondents what kinds of food are given to a measles patient.

2.4.1.2 Independent Variables

Beliefs: This variable refers to the ideas which are considered true and which are part of a large system of ideas, in this case ideas about measles. This variable was measured by classifying the various categories of the respondent's beliefs on the causes of measles.

Feeding Habits: This refers to the particular way that nutritious food is restricted/recommended in the diet or given in very small quantities. This variable was measured by asking the respondents question on the foods that are recommended or restricted during a measles occurrence.

Sex: Refers to either male or female. It was measured by classifying respondent's answers in both male and female categories.

Formal Education: This variable refers to the number of years spent in acquiring formal knowledge in an educational institution such as school or college. Four categories of this variable were established. These included: No education, primary education, secondary education and post-secondary education.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This Chapter describes the research site, population sample, sampling techniques and methods of data collected and analysis. The problems encountered in the field and their solutions are also presented.

3.1 Description of Research Site

Rarieda Division (Map 3.1) is one of the ten divisions of Siaya District in Nyanza Province. It is bordered by Wagai Division to the North-East, Bondo Division to the West, Madiany Division to the South-West and Kisumu District to the East. To the South-East is lake Victoria. This division covers an area of 179 km² and is divided into four locations that is, West Asembo, East Asembo, South Asembo and Central Asembo. It has a total of ten sub-locations.

Map 3.1: Administrative Boundaries of Siaya District



Source: Siaya District Development Plan, 1994-1996

Table 3.1: 1989 Population by Sex of Various Age Cohorts in Siaya District

Age Cohorts	Male	Female	Total
0 - 4	54,208	54,716	108,924
5 - 9	51,173	50,442	101,615
10 - 14	47,158	45,667	92,825
15 - 19	34,772	34,867	69,639
20 - 24	18,033	26,772	44,805
25 - 29	13,891	22,185	36,076
30 - 34	11,299	17,972	29,271
35 - 39	9,721	16,345	26,066
40 - 44	8,410	14,387	22,797
45 - 49	6,984	12,845	19,829
50 - 54	7,709	12,249	19,958
55 - 59	7,953	11,499	19,452
60 - 64	6,909	8,155	15,064
65 - 69	5,339	6,113	11,452
70 - 74	4,058	4,683	8,741
75 - 79	3,396	2,813	6,209
80 +	2,896	2,994	5,890
Total	293,909	344,704	638,613

Source: 1989 Census Report, Vol.1

3.1.1 Demographic and Population Structure

The 1989 census reported that Rarieda Division has a population of 49,243 inhabitants, with a density of about 275 persons per km² (GOK, 1994). The overall population of Siaya district is dominated by children (0-9 years), who constitute 32.9% of the district's population (Table 3.1). It is also this age group that is most vulnerable to some of the endemic diseases in the district, such as malaria, diarrhoea and measles (GOK, 1994).

3.1.2 Economic Activities

Rarieda Division has a farm area of 38.4 km², out of the total land mass of 179 km². Agriculture is of great economic significance and the main food crops grown are maize, beans, cassava, green-grams and groundnuts. Cotton is the major cash crop and is grown by about 50% of the households. Livestock farming is also significant. Apart from cattle rearing, other important livestock enterprises include bee-keeping, poultry, donkey and goat farming. Fisheries is the second most important economic activity after agriculture and stock farming. Many people are believed to derive their livelihood from this sector directly, either as fishermen and traders, or indirectly as suppliers of complimentary goods and services (GOK, 1994).

3.1.3 Education Facilities

In 1992, Rarieda Division had 58 primary schools and 7 secondary schools. The overall enrolment has increased by about 5.2%, or an additional 900 pupils each year, from 1992. In 1988, the overall district enrolment of girls in primary schools was 88,351, while the boys' enrolment stood at 97,672 (GOK, 1994). Some information given in the 1989 - 1993 Siaya District Development Plan indicates that the school drop-out rate is very high, especially at the primary level. Some 2,000 pupils are believed to be dropping out of school annually, either because of pregnancy or lack of school fees (GOK, 1994:83).

3.1.4 Health Facilities

The utilization of health facilities in Siaya District has increased since 1987, mainly due to: the introduction of preventive services in most health facilities; the improvement of the serve base through additional staffing; reliability in the supply of drugs; improved management skills of staff through training; and rapid population growth. Low utilization has been reported in a number of health facilities for reasons such as sparse population, accessibility problems and preference for other facilities. On the other hand, over-utilization has been due to community preference and increase in population (GOK, 1994).

Rarieda Division has a total of 13 health facilities, including 1 mission hospital and 6 dispensaries, 5 private clinics and 1 nursing home. Although there has been an increase in the utilization of health facilities, the district is still under-staffed with professionals and experiences shortages of drugs, equipment and other supplies. Map 3.2 shows the distribution of health facilities in Siaya District.

Map 3.2: Distribution of Health Facilities in Siaya District



Source: Siaya District Development Plan, 1994 - 1996

3.2 Population Universe

The Government of Kenya population census (1989) reports that there are 21,188 households in Rarieda Division. This figure was used as the population from which the sample for the study was obtained.

3.3 Population Sample

The units of analysis consisted of all the households in the division. This was because the household is the decision-making unit as far as HSB is concerned. However, due to financial and time constraints, it was not possible to study all the households in the division. Therefore, a sample population of 147 households was selected and studied.

In each household, the mother was the respondent interviewed. This was because women are considered to be the most crucial providers of health care to children and families. It is also often argued that mothers make over 80% of the health decisions in rural Kenya (Olenja, 1991). However, since the study contained a gender component, interviewing only mothers would have resulted in biased conclusions towards the gender questions. It was, therefore, considered crucial to choose and interview some fathers to get their views. Thus, a total of 14 men were interviewed as key informants.

3.4 Sampling Technique

3.4.0 Simple Random Sampling

In this study, the Simple Random Sampling method was first used to select a location (Central Asembo) and then a sub-location (Memba) which was used as the study area. Since the unit of analysis is the household, the systematic sampling design was at this stage used to get the required sample population, as described below.

3.4.1 Systematic Sampling

This method was used to get the required sample population. The Chief, with the assistance of the Assistant chiefs, was contacted to get a list of all the households in each village. After choosing $1/K^{\text{th}}$ of the households to get the required sampling population (where K stands for the size of population/size of sample), every K^{th} household of the population universe was selected. This resulted in the required 21 households from each of the 7 villages in Memba sub-location.

3.4.2 Snowball Sampling

This sampling technique was used in identifying households which had experienced a measles attack in the family, for case-studies. This method was conducted in 4 stages. In

the first stage, one household having the requisite characteristics was identified and one respondent interviewed. This respondent was, in turn, used as an informant to lead the researcher to another household having the requisite characteristics. This process continued until four case-studies had been carried out.

3.5 Methods of Data Collection

3.5.0 Library Research

Documentary materials, both published and unpublished such as books, journals, dissertations, theses and seminar papers were reviewed. This method was useful in obtaining some basic data on the subject of study as well as the relevant theoretical models. Also, the researcher was able to identify some of the existing gaps related to measles.

3.5.1 Structured Interviews

The study adopted the survey research method within which the basic tool for data collection was a questionnaire. The questionnaire contained both "open-ended" and "closed-ended" questions to allow for appropriate flexibilities of the respondents as well as to restrict them to relevant issues. The questions were related to knowledge, attitudes, beliefs and practices towards measles.

This method was found to be appropriate because it allowed for probing, especially on open-ended questions related to attitudes and practices. The questionnaire was also found very necessary in this study since all the respondents were asked exactly the same questions in the same order, thus enhancing comparability. This method has the added advantage of being fast.

3.5.2 Focused Group Discussions

Two focused group discussions were held. One group comprised 10 mothers while the other one consisted of 8 fathers. The participants were asked to sit in a circle so that the researcher could be able to grasp their reactions. The discussions always started with introductions and concluded with a word of appreciation for the assistance and cooperation accorded to the researcher.

This method was very vital to the study since it enabled the researcher to compare the outcome of the discussion with the responses given in the questionnaires.

3.5.3 Case Studies

Case studies involved four households which had had cases of measles. This method was very useful because it allowed the researcher to get detailed information on the responses already given in the other methods used.

3.5.4 Key Informants

Fourteen men were randomly selected and interviewed. This method was very useful because it allowed the researcher to get men's perspective on the research topic but moreso, on questions related to gender issues

3.6 Methods of Data Analysis

Both qualitative and quantitative approaches were used in data analysis. In the quantitative approach, the study made use of descriptive statistics whereby percentages and frequencies of various responses were calculated and correlated and the information presented in the form of tables.

The qualitative approach was used in describing and discussing the data pertaining to attitudes, beliefs and practices in regard to measles.. These data were mostly collected through the focus group discussions and case studies.

3.7 Problems Encountered in the Field

The researcher experienced some problems in the field which threatened the process of data collection. As a result of previous researches carried out in this area, especially one in which respondents were required to give blood samples without having quite understood why, some respondents were very suspicious and thought I belonged to that

particular project. Therefore, they did not want anything to do with my research. I had to explain to them in detail the purpose of my research and that I was a student who had no attachment to that project and was not interested in taking blood samples but only in their views about my topic. It was only after this that they would relax and decide to go on with the interview.

Another problem was that some respondents were not at home at the time the researcher visited them. Therefore, the interview had to be scheduled for another day despite the distance that had been covered walking to reach these homes. The researcher left a message requesting for their availability for the following day's appointment. The researcher always found them waiting the next day and thus carried out the interview.

Another problem arose when other people would literally come to hijack the interview and provide all the information required and in so doing intimidate the respondent who would, in turn, withdraw from the conversation. To solve such a problem, the researcher avoided creating ill-feelings by asking the opinion of all those present during the interview to the same question, but only recording the responses from the relevant respondents.

The survey method, which constituted the main method of data collection, had a few shortcomings. In some cases, the researcher was unable to obtain accurate information

when questions on sensitive issues were asked. For instance, some respondents were not quite willing to respond to questions pertaining to income and household expenditure. The researcher tried to overcome such problems by being explicit and honest about the intentions and purpose of the research, and also by probing further on these questions.

CHAPTER FOUR

CULTURAL BELIEFS AND PRACTICES CONCERNING MEASLES

4.0 Introduction

This Chapter focuses on the respondent's beliefs and practices concerning measles. To determine the respondent's beliefs, questions related to cause, disease labelling, methods of transmission, possible control measures and the people most susceptible to measles were asked. To find out their practices regarding measles, the respondents were asked about the therapeutic options they utilized in treating measles and the foods recommended or restricted for/from a child suffering from measles.

4.1 Background Information on Respondents

4.1.1 Demographic Characteristics

There were 147 respondents in the sample. This gender distribution came about as a result of the pre-test that was carried out before the actual research. The pre-test results depicted that out of the 10 male respondents interviewed, only 10% of them gave valid information, while 90% of the 10 female respondents interviewed had valid information. This led to the decision to interview male respondents only as key informants. Besides,

in a study undertaken in the same District. Olenja (1991) had concluded that mothers make over 80% of the health decisions.

As shown in Table 4.1, there were 7 teenage mothers and 28 females of between ages 20 and 24. However, all the male respondents fell in the age category of 25 years and above. In total, a majority of the respondents (57.8%) were between 20 and 34 years of age. The youngest respondent interviewed was 16 years old while the oldest was 75 years old.

Table 4.1: Age Distribution of the Respondents

AGE	RESPONDENTS	
	Frequency	Percentage
15 - 19	7	4.8
20 - 24	28	19.2
25 - 29	39	26.7
30 - 34	22	15.0
35 - 39	15	10.3
40 - 44	14	9.6
45 - 49	7	4.8
50 and above	14	9.6
TOTAL	146	100

A majority of the respondents 66% were married, 14.3% were widowed, 12.9% were single and 6.8% were either divorced or separated. The single respondents were mainly

those falling in the 15 - 24 years age category. In total, there were 21 widows with a majority (66.7%) of them falling in the age category of 24 - 44 years while 33.3% were in the 45 and above age category. With the practice of widow inheritance in this community, one may want to question the presence of many widows in the sample. However, this could be explained by the fact that probably, these widows could have actually been inherited, but feared to divulge this information due to many other reasons. One of the reasons could be the ongoing debates that have questioned the relevance of widow inheritance in the wake of the AIDS scourge.

4.1.2 Socio-Economic Factors

In this section the socio-economic status of the respondents is presented. The factors discussed include education, occupation, income and expenditure. To determine each respondent's level of formal education, the respondents were asked the highest level of formal training they had obtained. They were further asked whether they were formally employed, self-employed or unemployed. Finally, they were asked to state their total incomes per month and their monthly household expenditures, to help in finding out how much on average is spent on health in relation to other needs. ↓

A majority (130) of the respondents had acquired formal education while only 17 had not been to any formal school. The largest number of respondents (65) had attained primary education. About 12.2% of the respondents had post-secondary education while 32% of them had obtained secondary education. This is clearly shown in Table 4.2

Table 4.2: Formal Educational Level of the Respondents

Level of Education	RESPONDENTS	
	Frequency	Percentage
None	17	11.6
Primary	65	44.3
Secondary	47	32.0
Post-Secondary	18	12.1
TOTAL	147	100

The level of formal employment among the respondents was 18.4% while 14.3% were unemployed. On the other hand, a greater majority (67.3%) of the respondents were self-employed. This could be due to the fact that the research was carried out in a rural area where most households engage in small scale farming. They mainly grow maize, millet, cassava, sorghum, vegetables, beans and sweet potatoes. There is also livestock and poultry rearing and the main animals reared include cattle, sheep, goats and donkeys. Livestock is reared for domestic products such as milk and meat, poultry for eggs and chicken while the donkeys are used as a means of transport.

The farm products are mostly used for household consumption, though in some cases they are sold. This is done so as to get some little money to purchase other household requirements like sugar, salt, soap and many others. Apart from the selling of farm products other respondents are involved in petty businesses like selling of second-hand clothes and general groceries either by the wayside or at the local village markets.

Slightly less than half (40.8%) of the respondents reported having no other source of income. Twenty-three point one per cent of the respondents said that they were supported by their husbands while about 4.2%, most of whom were single teenage mothers, were supported by their parents. Eight point eight per cent of the respondents were supported by either friends or relatives. On the other hand, 10.2% and 12.9% of the respondents, most of whom are in formal employment, had farming and business, respectively, as other sources of income.

The mean monthly income of the respondents was 2,620 Kenya Shillings. The income distribution reveals that only about 18.4% of the respondents earn a monthly income of over five thousand Kenya Shillings. This tallies with the 20% who are in formal employment. Only 15.4% of the respondents had a monthly income of between KSh. 3,001 and 5,000. Thirty-three point four per cent of the respondents fall in the category of earning one thousand Kenya Shillings and below, while a similar percentage have a monthly income of between KSh. 1,001 and 3,000. The total number of respondents in these two categories almost corresponds with the total number of respondents who were self-employed. This could mean that respondents who were self-employed were involved in income generating activities that produce a monthly income of three thousand Kenya Shillings and below.

The following household expenditures could be considered suspect because during the research, it was difficult to ascertain monthly expenditures per household. This is

because majority of the respondents did not keep records of their expenditures and furthermore they could not even cost foods produced and medical remedies offered within the household. Thus, it is only through approximations that one could come up with what could be regarded as average household expenditures. The mean monthly expenditure per household was nine hundred Kenya Shillings on various aspects such as food, education, clothing and health. Of these uses education claimed the largest share of the family income, averaging to about KSh. 430 per month. Food and clothing consumed KSh. 200 and 180 per month, respectively. Medical attention claimed only an average of ninety Kenya Shillings per month. This probably implies that the majority of the respondents use public health interventions where little or no payments are required for the services offered.

4.2 Knowledge and Beliefs about Measles

The most common childhood diseases in this area, as cited in the focus group discussions, include anaemia, measles, malaria, kwashirkor, diarrhoea and vomiting. Out of these diseases, all the respondents cited measles as the most feared and deadly disease which can easily kill. Studies carried out by Kowango (1995) and Olenja (1991) in the same district revealed similar findings. When asked to explain, the respondents stated that measles is a satanic disease which attacks in many complicated ways, and usually causes congestion in children's chests. The respondents gave 6 local names for measles, the most common being angiew which was cited by 38.3% of them.

Also commonly used are the names aruodhi and alura which were mentioned by an equal percentage (17.8%) of respondents. These two terms literally translate to “small spots” or “rashes”. Tuo matindo, as cited by 18.1% of the respondents, literally means “small sickness”. It is often used to refer to measles for fear that use of the proper name will cause the disease in one’s family and that the attack would be so severe as to even lead to the death of the infected children. This concurs with findings from a research carried out in Mali by Imperato (1977), which revealed that various ethnic groups have different pseudonyms which they use to refer to measles for fear that use of the proper name would cause the disease in one’s family. Tuo matindo is restricted in use of measles and never refers to any other childhood disease.

Other names mentioned were nundu and orianvancha, which were cited by 7.4% and 0.6% of the respondents, respectively. Further discussions in the focus groups revealed that the many terms used to refer to measles also arise from the fact that people in different areas know it by different names. Some of the names like nundu and orianvancha, which stand for small pox and thrush, respectively, may result from wrong labelling of the disease. Since some of their symptoms may look similar to those of measles, one may mistake either of these disease for measles, and vice versa and, thus, end up treating the wrong disease.

The way in which people deal with illness is closely related to their ideas about cause and etiology which vary from one society to another (Jennings, 1955; Kaendi, 1995; Kimani, 1981; Sindiga *et al.*, 1995). This study revealed that many Luo usually consider the cause

of measles to be evil spirits. This is not surprising since measles is an epidemic disease with a high mortality. According to Table 4.3, about 49% of the respondents cited nyawawa as a major cause of measles. K'okul (1991) also found that the Samia people of the adjacent Busia District believe that measles is caused by underworld ghosts who occasionally come into the upper world by way of the lake and roam the villages, causing disease on those whom they dislike or to those children they want to join their underworld community. Focus group discussions further revealed that nyawawa are evil spirits which are ancestral in nature, and originate from old homes (gunda) or cemeteries and they roam about in the air, usually moving towards the lake. Whenever they pass by, they move in the form of a very noisy and strong wind. Some respondents claimed that the noise is made when these evil spirits are talking and that, in fact, one can hear their conversations.

These same respondents when further probed on what they heard reported the following conversation: "wa donj ka?" (Do we enter here?) which was replied with an emphatic "kik wadonj ka! Ma dala na" (No! This is my homestead). "Rita uru koro uyomba?" (Why are you leaving me behind? Please wait for me). The spirit which was refusing the rest from entering its homestead must have been the spirit of an ancestor who used to belong to that homestead when he was still alive.

As these spirits roam about, if they agree to enter or pass through a particular homestead, they usually leave behind many disease, especially childhood diseases, measles being one of them. This disease attacks the children so severely that it can even lead to their death.

Members in the focus group discussions further said that it is only by sheer luck that one's child gets healed; otherwise, when nyawawa passes, a child must always die, especially from measles. They also said that to ward off nyawawa, people usually beat tins to make noise so as to scare them away to the lake. However, on further probing, the respondents revealed that even beating of tins when nyawawa are passing does not stop the various diseases from affecting one's child.

Forty-two respondents said that they believed measles was caused by yamo. Yamo literally means "boils associated with wind and seasonal changes", and is usually used to refer to contagious diseases whose cause is mysterious. It is often used when referring to diseases that cause swellings or eruptions on the body. Only a mere 16.3% reported that measles is caused by a virus while 9 respondents (6.1%) admitted that they did not know what causes measles. The above analysis shows that a majority of the people do not know the true cause of measles and, therefore, this would greatly affect or influence their choice of therapeutic options when faced with a measles occurrence.

Table 4.3: Causes of Measles

Causes	Frequency	Percentage
Nyawawa	72	49
Yamo	42	28.6
Virus	24	16.3
Don't know	9	6.1
TOTAL	147	100

When asked about which age category was at a high risk of contracting the measles virus, 120 respondents reported that children between ages 1 - 5 years were the most vulnerable to the measles virus. This is in line with clinically proven findings which reveals that measles usually attacks children from 12 months and above (K'okul, 1991). On the other hand, 21 respondents said that babies of between 1 - 11 months were the most vulnerable while only 3 respondents cited children of between ages 6 - 10 years as being susceptible to measles. A similar number also mentioned adults as being susceptible to the disease.

Their reasons for identifying the 1 - 5 years age group category as most susceptible to measles are varied. Sixty-nine per cent of the respondents said that at this age the children's body cells are weak and thus still developing while 14.3% reported that this age group of children like playing together with other children, thereby exposing themselves to the measles virus. Eight per cent of the respondents said that at this age children have not been immunized while 5% claimed that at this age children are still close to their parents and thus their ancestors can punish their parents through them for wrong doing. Three point seven per cent of the respondents said that children in this age group have not suffered from measles as yet and so they are highly susceptible to it. This implies that once one has suffered from measles, the probability of them being susceptible to it again is low.

The major symptoms of measles, as reported by most respondents, include rashes, high fever, cloudy red eyes, red lips, sores in the mouth, running nose, congested chest, cough and diarrhoea. Further discussions in the focus group discussions revealed that nightmares also constitute a major symptom. The respondents said that a child suffering from measles will have night mares even at daytime. Further probing revealed that the nightmares are as a result of the child seeing the evil spirits and trying to chase them away.

For children who can talk, they are usually heard trying to chase away the evil spirits by saying words similar to: "Eki gi. Aneno gi. Weva uru, dhiuru kucho". (Here they are. I can see them. Leave me alone and go away). The findings reveal that the respondents are well conversant with the symptoms of the disease. Almost all of them also know that measles is contagious. In fact, 96.2% of the respondents stated that measles can be passed on to someone else through the air or by being in close contact with a measles' patient.

Most of the respondents had received information on how to identify and treat measles while only 6 were not informed. Table 4.4 shows the various sources of information. Seventy respondents were informed at health institutions, 48 were informed at home, 19 were informed at school, 3 said they were informed at a chief's meeting and only 1 had been informed through the mass media.

Table 4.4: Sources of Information on Measles

Source	Frequency	Percentage
Medical Personnel	70	49.7
Parents/Friends	48	34
Teacher	19	13.5
Chief	3	2.1
Mass media	1	0.7
TOTAL	141	100

A majority (80%) of the respondents claimed that they had taken their children for immunization. The remaining 20% had not had their children immunized due to varied reasons. Thirteen respondents said their children were still under-age. 11 had no money to go to hospital. 2 said the distance to the hospital was far, another 2 said they had gone to the clinic but the measles vaccine was not available then, a similar number of respondents said they did not know while another 2 said that their children had not become sick. This implies that some people still do not understand that immunization is a means of prevention against disease. According to them, for their children to be immunized, the children have to be sick or else they see no need of taking them for immunization.

When asked if they knew any other form of prevention against measles, apart from immunization, only 66 respondents answered in the affirmative. Out of these

respondents, 62 said traditional herbs such as oluwo chiel (*Hyptis pectinata*), oluoro chieng, (*Ageratum convzoides*) and rayudhi (*Gardenia lurea*) could be used for prevention while 4 said that traditional charms tied around the waist, neck arm or legs worked to prevent measles.

Questions concerning gender revealed that 40.1% of the respondents value boys more than girls. The argument was that boys are the pillars of the homes and will secure these homes and also inherit the family legacy while girls will eventually get married and move to their husband's homes. They also claimed that boys are strong and help in doing hard work. When they were asked as to who between a boy and a girl suffering from measles, would they make sure receives immediate and better treatment, a majority (81%) of them said that they would treat both children equally irrespective of their sex. Their reason was that they are both sick and need immediate treatment because if one is not treated immediately, one can easily spread the disease to others since it is contagious.

Some (12.2%) of the respondents claimed that they would treat the boys first because of their societal value in terms of security of the home and the continuation of the family tree. They also said that boys are weak and can easily die when sick. Only 6.8% of them said they would first treat the girl because of their societal value in terms of bride-wealth and also because they help with housework.

Almost all the respondents, apart from 33 of them, reported that their children had at one time or another suffered from measles. About 69.5% of them said their children

contracted measles at home or at a neighbour's place, while 21.1% of them had no idea as to where their children had contracted the disease. Only 3.9% and 5.5% of them cited school and hospital, respectively, as the place of contagion. Further discussions in the focus groups revealed that most children contracted measles at home while playing with other children who were already infected by the measles virus.

Forty-five per cent of the respondents whose children had contracted measles took less than a week before they started any form of treatment. At this early stages of the disease, they may have not been sure that it was measles and may have instead been treating a different disease which has similar symptoms as those of measles. About 39.8% of the respondents took one week before starting treatment while about 12.5% and 0.7% of them took 2 to 3 weeks and more than 4 weeks, respectively. The reasons for the duration taken before treatment were varied, as Table 4.5 shows.

Table 4.5: Reasons for Duration Taken

Reason	Frequency	Percentage
Lack of money	23	17.9
Mistaken symptoms	80	62.5
Symptoms identified early	21	16.4
Medicine easily available	2	1.6
Hospital was far	2	1.6
TOTAL	128	100

The major reason for delayed treatment, as stated by 80 respondents, was that they did not know that the child had measles. This is because the symptoms can sometimes be confused with those belonging to another disease. Further discussions in the focus groups revealed that most people often mistake the symptoms of measles for those of malaria since malaria displays some similar symptoms, especially high fever. Further probing also revealed that delay in taking a measles patient to hospital is deliberate among "inexperienced" parents on the understanding that an injection before the rash forms all over the body would inhibit this from happening and thus delay the healing process.

Financial problems were cited by 23 (17.9%) respondents who said they delayed treatment because of lack of money for treatment. These were mostly respondents who were falling in the KSh. 1,000 and below income category. Only two (1.6%) respondents delayed treatment because the hospital was far. On the other hand, 21 (16.4%) respondents acted immediately because they correctly identified the symptoms of measles and started immediate treatment. Two (1.6%) respondents did not delay treatment because medicine was easily available to them.

As regards health seeking behaviour (see Table 4.6), 48.4% of the respondents first used herbs at home while 25.8% of them resorted to health institutions for treatment. Only 13.3% of them admitted having visited a faith healer as their first step of treatment while 12.5% of them utilized patent medicines.

Table 4.6: First Method of Treatment Utilized

Method	Frequency	Percentage
Use of herbs	62	48.4
Patent medicine	16	12.5
Faith healer	17	13.3
Health Institution	33	25.8
TOTAL	128	100

Information gathered from the case studies and focus group discussions revealed that herbs such as angwe (*Kedrostis foetidissima*), dwele (*Melia azedarach*), oluwo chiel (*Hyptis pectinata*), oluro chieng (*Ageratum conyzoides*), an'yach (*Tagetes minuta*) and mwarubaine (*Azadirachta indica*) were used to treat measles. The herbs were usually crushed and then boiled and some given to the child to drink, some were used to bath him/her and some to steam the patient to 'sweat out the fever'. This process is called fundo. The herbs were said to be useful both in bringing out rashes and also in curing the disease.

These findings depict that herbs seem to be a common remedy for measles in this area. Traditional medicine involves the use of leaves, barks and roots of particular plants which are crushed, boiled and the solution taken either orally, or used to bathe or steam

the patient. Steaming is believed to clear the respiratory tract, especially in the case of measles. The patient is covered with a sheet while he/she sits in front of a pot of herbs, especially roots, which have been heated to boiling point. The Luo use steaming to treat illnesses which are believed to be evenly spread through-out the body (Were, 1986).

People had varying views as to how to cure the disease. Some reported that a concoction of donkey dung was given to a sick child to bring out the rash. On the other hand, another view reported was that a mixture of chwaa (Tamarindus indica), water used to boil gwend ogara (a hen with a peculiar feather format), njaga (Cannabis sativa) and herbs given to the child to drink while some were used to bathe him/her to bring out the rash. The soft drink 'Coca Cola' was also alleged to be useful in bringing out the rash. It was taken orally and some was used to bathe the measles' patient. After the rash had erupted, pig fat, finger-millet and sorghum flour were reported by some informants as being useful in drying up the rash when applied to the affected parts of the body.

Some methods such as drinking a concoction of donkey dung or applying finger-millet flour on the skin of a measles patient may be potentially injurious, sometimes leading to septic wounds which further complicate the case. Focus group discussions also revealed that some people do not bath children who have measles. They believe that bathing the child will prevent the rash from erupting or make it go back to the stomach and this could be fatal. Such kind of traditional practices have also been reported in Mali by Imperato (1977).

Various drugs such as Panadol, Malariaquin, Chloroquine, Hedex and Asprin were cited in the focus group discussions and case studies, as the patent medicines bought from the shops. The members in the focus group discussions further revealed that many people do not take measles patients to hospital because they believe that if the measles patients are injected, they will die. Some respondents claimed that medical personnel sometimes mistake measles for malaria and so give the child a wrong injection and this is usually fatal. Studies carried out by Kowango (1995) in the same district revealed similar findings. Traditionally, it was not acceptable for one to carry a child suffering from measles along the way. Instead such a child was kept in a dark place within a house whose windows were all shut. This was said to be because measles is a satanic disease and if exposed to light, it becomes worse. As a result of all these, many people resorted to the local methods of treatment mentioned above instead of going to hospital.

After the first step of treatment taken, 75 respondents reported a positive improvement while 38 of them said there was no improvement at all. Only 15 respondents noticed a slight improvement. When questioned about their reasons for the method of action, 39% of the respondents said they chose the method they used because it was the most effective one, while about 36% said it was the cheapest method. About twenty-three per cent of the respondents chose the method they used because it was the nearest source while about 2% did not know why a particular method was chosen.

In the absence of desired improvement when a particular method of treatment was utilized, respondents tended to seek for alternative methods. Mbiti (1969) asserts that

patients tend to utilize particular methods of treatment, depending on their belief about cause of illness. However, when faced with actual illness, patients in the African context have been observed to be quite flexible, sometimes using a number of systems together for the same episode of illness. Accordingly, we find that 51 respondents either resorted to a health institution or if a particular health institution had been utilized before, one changed the institution and went to another different one to try and get a more effective treatment. Fourteen respondents turned to using herbs as a second alternative while 9 and 3 turned to a faith healer and patent medicines, respectively. These findings are consistent with the views of Helman (1984) concerning medical pluralism. He states that every society has multiple health care systems from which members are free to choose one or more of the available therapeutic options.

In many cultures, the withdrawal of various foods is considered an essential element in the treatment of childhood illnesses (Ebrahim, 1981). Table 4.7 depicts the kinds of foods restricted during a measles occurrence. Further discussions in the focus groups revealed that eating meat or anything that has blood when one had measles was a taboo among the Luo. This was because measles was considered a satanic disease and eating meat which the Luo believe contains yamo would interfere with the disease, preventing the rashes from erupting, and make it even worse to the point that it would lead to death. Imperato (1977) also found similar views in Mali. The various ethnic groups in Mali usually withheld animal protein and vegetables from children during a measles occurrence for fear that both would produce diarrhoea, which is considered a bad prognostic sign. Salty and sugary foods were restricted from the patients' diet because

they irritate and interfere with the swellings on the mouth. Fat/oil and nyoyo were said to interfere with the digestive system in that they are not easily digested. Nyoyo was also said to make the cough, already affecting the measles patient, worse.

Saif (1975) says that among kwashiorkor patients, most doctors used to advise a low fat diet, claiming that kwashiorkor is characterized by low or absent enzymatic activity of the duodenal contents, and that malnourished children usually develop diarrhoea when fed moderate amounts of fat. This could possibly be a reason as to why fat/oil was restricted from a measles patient's diet. In fact, for long, mortality from measles has been associated with malnutrition and measles also makes malnutrition worse (Mburu, 1984).

Table 4.7: Foods Restricted During Measles Episodes

Types of Food	Frequency	Percentage
Meat	96	75
Salt	14	11
Fat/oil	4	3.1
'Nyoyo'	11	8.6
Sugar	3	2.3
TOTAL	128	100

The findings reveal that social and cultural factors influence many aspects of health and disease. These findings also reveal that a great majority of the respondents do not know the true cause of measles and this, in turn, influences their health seeking behaviour. The analysis further reveals that most of the respondents use more than one method of treatment for the same episode of illness. The study also found that various foods are restricted from a measles patient's diet. Some of the foods restricted, such as meat which is rich in proteins, are essential requirements for the patient's diet yet because of cultural beliefs, the patient is denied such foods. If no alternative sources of acceptable nutritious foods are given, the child could easily get malnourished. Therefore, this calls for health education on proper care, management and feeding of a child suffering from measles.

4.3 Factors Influencing Health Seeking Behaviour

The major reason for this study was to find out and document people's beliefs about the cause of measles in order to test the hypothesis that "People's beliefs on the cause of measles has a direct bearing on their choice of therapy".

Despite the fact that most respondents had information about measles, there was a lot of traditional influence concerning its causality. When cause of measles was cross-tabulated against the method of treatment sought (see Table 4.8), the results indicated that a majority (62.1%) of the respondents who believed that measles is caused by

Table 4.8: First Method of Treatment Against Belief About Cause of Measles

Method of Treatment	Causes of Measles				Total
	Nyawawa	Yamo	Virus	Don't Know	
Herbs	36(62.1)*	16(48.5)	4(14.8)	6(60)	62
Patent medicines	6(10.4)	4(12.1)	6(22.2)	0(0)	16
Faith healer	6(10.4)	9(27.3)	1(3.7)	1(10)	17
Health institution	10(17.1)	4(12.1)	16(59.3)	3(30)	33
TOTAL	58	33	27	10	128

* The figures in parenthesis are percentages.

nyawawa used herbs as the first method of treatment. On the other hand, only 17.1% of the respondents went to a health institution while an equal percentage of 10.4 each used patent medicine or visited a faith healer, respectively. Similarly, the highest percentage of respondents (48.5%) who believed that measles is caused by yamo used herbs while only 12.1% visited a health institution. A similar number (12.1%) of respondents also used patent medicine while 27.3% of them visited a faith healer. Out of all the respondents who knew that measles is caused by a virus, 59.3% visited a health institution, 22.2% used patent medicine while 14.8% and 3.7% used herbs and visited a faith healer, respectively. Among those who did not know the cause of measles, 60% used herbs, 30% visited health institutions while only 10% visited a faith healer.

For those respondents who recorded no improvement or only a slight improvement after the first method of treatment, seeking alternative methods of treatment was considered necessary. Therefore, slightly less (42.4%) than a half of the respondents who cited nyawawa as the cause of measles resorted to health institutions, 11.9% turned to faith healers, 1.7% bought patent medicine from the shops while 6.8% used herbs. The respondents who believed that yamo causes measles, used only 2 methods as the second option for treatment: 33.3% went to health institutions while 9.5% used herbs and the rest did nothing since the first method worked effectively. As for those who knew the true cause of measles, 38.5% went to health institutions, 20.5% used herbs and only 2.5% visited a traditional healer. The respondents who did not know the cause of measles had an equal percentage (11.1%) visiting health institutions and faith healers, respectively.

These results indicate that a majority of the respondents who believed that measles is either caused by nyawawa, yamo or those who did not know the cause used herbs as their first method of treatment while the majority of those who believed that measles is caused by a virus visited health institutions. These findings are in line with the ethnomedical approach which states that illness etiologies define diagnostic procedures and therapeutic choices. However, most respondents used more than one mode of treatment for the same illness episode. Thus, to a certain extent, people's beliefs about the cause of measles influences their choice of therapy. This evidence supports the hypothesis that people's beliefs about the cause of measles has a direct bearing on their choice of therapy.

The second focus of this study was to determine the effects of feeding habits on a child with measles. Questions related to foods recommended and those restricted and reasons why were asked. These were to help in finding out whether feeding habits have a negative influence on the diet of a measles' patient.

Table 4.9: Tendency of Respondents to Restrict Certain Foods

Food Restricted	Strongly Disagree	Strongly Agree	Not Sure	Total
Breast-milk	30(64)*	6(6.3)	3(7.5)	39
Meat	14(29.7)	63(65.6)	1(2.5)	78
'Nyoyo'	0(0)	11(11.4)	0	11
Salt/Sugar	3(6.3)	16(16.7)	0(0)	19
TOTAL	47	96	4	147

* The figures in parenthesis are percentages.

From Table 4.9, it can be noted that the probability of a respondent restricting breast-milk from a sick child's diet is low (6.3%). Over half (65.6%) of the respondents strongly agreed that meat should be restricted from the child's diet while 11.4% and 16.7% strongly agreed that nyoyo and salt/sugar, respectively, should be restricted from the child's diet. A high percentage (64%) of the respondents strongly disagreed that

breast milk should be restricted from a child's diet while only 29.7% disagreed strongly with the statement that meat should be restricted from a child's diet.

A mere 6.3% strongly disagreed that salt/sugar should be restricted from a measles patient's diet. About 75%, and 25% were not sure as to whether breast-milk and meat, respectively, should be restricted from the child's diet. The reasons for these foods being restricted have already been presented in a previous section.

This study has also revealed that most respondents are involved in small scale farming and some even rear animals and poultry for their meat, milk and eggs. Yet, the study revealed that most of these highly nutritious products are restricted from a measles patient's diet and, instead, are sold in the local markets to purchase other household requirements. This implies that sometimes children can suffer from malnutrition not because there is no proper food but because the highly nutritious foods are sold. While the above mentioned foods are restricted, focus group discussions revealed that they are never always replaced with other acceptable alternatives which are rich in nutrients. Some respondents even restrict the child from breast-feeding, claiming that the mother might also get infected, and that this might also interfere with the rest of the children that the mother will give birth to. This evidence, thus, appears to support the hypothesis that feeding habits have a negative influence on a measles patient's diet.

Thirdly, this study also focused on gender. It sought to find out whether there was a gender difference in the way children with measles were treated. The respondents were

asked which particular sex of child was more valued in the society and which child they would ensure got immediate and better treatment when attacked by measles.

Table 4.10: Preferential Treatment by Gender

Receipt of Better Treatment	Respondents	Total
Boy	18(12.3)*	18
Girl	8(5.4)	8
Both	121(82.3)	121
TOTAL	147	147

* The figures in parenthesis are percentages

The findings revealed that about 59.9% of the respondents denied the fact that boys are more valued than girls and only 40.1% agreed with this fact. Table 4.10 depicts that a higher percentage of the respondents (82.3%) would make sure that both sexes received good and immediate treatment. These results clearly indicate that a great majority of the respondents regard and value both boys and girls equally, especially when they are having measles. However, there were a few of them who still place a higher premium on boys than girls. This implies that changes are occurring in people's traditional values and beliefs such that children are treated equally irrespective of their sex and specifically, as regards health care. Since measles is a highly contagious and deadly disease, one would not like to take any chances if it happened to attack any of one's children. One would immediately take them for treatment. This is because, if not treated immediately,

spread and attack other children. This could be one of the reasons why both boys and girls would be given good and immediate treatment when suffering from measles.

These findings contrast Rogo's (1995:69) views which state that theoretically both boys and girls have equal access to health facilities but cultural barriers exist that result in sub-optimal utilisation of available services by the girl-child. The findings imply that according to the Luo of Rarieda Division, health is sometimes seriously regarded, especially when one's health is threatened by a dreaded and deadly disease like measles. Thus, the HBM would in this case be applicable in explaining the fact that the perceived threat that measles poses leads one to seek for immediate medical attention.

Surprisingly, a larger number of respondents (12.3%) said they would first consider the boys and give them better treatment than the girls as attested to by only 5.4% of the respondents. This could be as a result of the fact that the Luo community is basically a patrilineal one in which it is considered essential that a son be born in a home. Some key informants revealed that men usually place a high premium on boys and will sometimes go to great lengths to ensure that they have a son. Thus women may tend to like and favour boys because of this. The results indicated that though there were a few people who still placed a higher value on boys than on girls, a majority of the respondents regarded them equally and thus treated them as such. Thus, there is no direct relationship between sex and the treatment of children with measles.

Lastly, this study was also designed with the aim of finding out how the level of formal education influence people's choice of treatment in the case of measles. Boerma (1991) asserts that education has no direct effect on child survival. However, children of more educated mothers have better chances of survival through changes in the intermediate factors (health practices). For example, better educated mothers may ensure that their children are immunized at the right time, may improve water use and personal hygiene, or may undertake timely and appropriate action when the children are ill. Thus, the respondents' level of formal education was cross-tabulated against various variables to determine whether it affects people's choice of therapy.

When placed against cause of measles, it was evident that the relationship between cause of measles and the level of formal education seemed to be linear. For example, out of all the respondents who had not attended any formal school, 44% of them cited nyawawa as the cause of measles, about 28% cited yamo while only about 17% knew the real cause of measles and 11% did not know what causes measles. As for those who had primary education, 46% said that measles is caused by nyawawa, 29% cited the virus as the cause while about 19% mentioned yamo and only about 6% did not know the cause of measles.

Similarly, in the secondary school level category, (44% of the respondents believed that measles is caused by nyawawa, 11% thought it is caused by yamo, about 10% did not know the cause while about 35% knew the real cause of measles. The respondents with a post-secondary education displayed a different pattern from the rest. Most of them (59%) know the real cause of measles, about 23% believed measles was caused by

nyawawa, approximately 14% cited yamo while only about 5% did not know the cause of measles.

In order to further determine the influence of formal education on health seeking behaviour, education was cross-tabulated against the type of medical care chosen. The findings, as shown in Table 4.11 revealed that half (50%) of those respondents with no formal education visited a faith healer. On the other hand, a majority (56.9%) of those with primary education used herbs as opposed to other methods of treatment. The respondents who had attained a secondary level of education also had the highest percentage (44.7%) using herbs while those with post-secondary education had over half of them (56.2%) going to health institutions for treatment. This reveals that one's level of formal education does not influence the use of certain traditional practice. In fact, as seen from Table 4.11, other traditional methods of treatment were still utilized by all categories, be they formally educated or not. This can be seen from the fact that some of the highly educated respondents also reported that they utilized other forms of treatment such as herbs and patent medicines.

Table 4.11: Method of Medical Care Used by Level of Formal Education

Method of Medical Care	Level of Education				Total
	None	Primary	Secondary	Post-Secondary	
Herbs	7(43.8)*	33(56.9)	17(44.7)	5(31.3)	62
Patent medicine	1(6.2)	5(8.6)	8(21.1)	2(12.5)	16
Faith healer	8(50)	5(8.6)	4(10.5)	0(0)	17
Health institution	0(0)	15(25.9)	9(23.7)	9(56.2)	33
TOTAL	16	58	38	16	128

* The figures in parenthesis are percentages

This could be as a result of the fact that although one could be educated, there are some traditional values and practices that one still holds on to. Nyamwaya (1992) and Katz and Kimani (1982) attest to this through their views that alternative types of medical service and methods of treatment are seldom mutually exclusive, so that the adoption of the new does not necessitate giving up the old. The new is merely added to the old body of knowledge/belief, and either or both are drawn upon, depending on circumstances. Thus, people frequently utilize both traditional and modern medicine simultaneously for the same episode of illness or at different times for different illnesses.

As the study has revealed, one's level of formal education does not influence the belief in, and use of certain traditional practices. These findings do not support the hypothesis that the level of formal education influences the choice of therapy in the case of measles.

In conclusion, the findings revealed that traditional beliefs play a major role in disease etiology. This, in turn, influences people's HSB. Traditional beliefs also influence the feeding habits of the Luo to the extent that it is considered a taboo to consume certain foods, like meat, when one is suffering from measles. Thus, some feeding habits and food taboos negatively affect the health of a measles' patient. The findings also revealed that both boys and girls are given equal and immediate treatment when they are suffering from measles. The level of formal education was found not to influence HSB. These factors are therefore important and need to be considered when discussing issues related to health in an effort to improve the community's health status.

CHAPTER FIVE

DISCUSSION AND CONCLUSIONS

5.0 Introduction

This chapter consists of the conclusions of the findings and the recommendations.

5.1 Conclusion

The socio-cultural and economic factors that influence HSB in the case of measles were the main subject of this study. The study set out to find out and document people's beliefs about the cause of measles, to determine the effects of feeding habits on a measles patient's diet, to find out if there is gender preference in the treatment of children with measles, and to find out how the level of formal education influences people's choice of treatment in the case of measles.

The results of the findings are as stated below:

1. Most people did not know the true cause of measles and this tended to influence their choice of therapy. For example, those who believed that measles is caused by nyawawa or yamo tended to use traditional methods while those who knew that it is caused by a virus tended to use modern methods of treatment. These

findings imply that lack of proper knowledge about measles and its cause can be a barrier to its prevention, treatment and management. Thus, as long as people are not educated about measles, reducing mortality rates of children with measles will always be an uphill task. The study also revealed that people tended to use more than one mode of treatment for the same illness episode simultaneously, or at different times.

2. The findings also revealed that during a measles attack, some foods were usually restricted from the patient's diet due to traditional beliefs concerning such foods. The foods usually restricted are those which are rich in various nutrients (Proteins and Vitamin A). This has serious implications in that, if a measles' patient is not given a balanced diet, the chances of him/her developing complications or even suffering from malnutrition are high.
3. This study also found that there is no direct relationship between sex and treatment of children with measles. However, the study revealed that quite a number of respondents, both males and females, still place a higher value on boys than girls. This is because they consider boys to be the pillars of the homes and providers of security while girls usually move out of their home to get married in other homes.

4. The level of formal education was found not to influence the choice of therapy sought. Four methods of treatment were found to be common among the respondents: use of herbs; use of patent medicines; visiting a faith healer or a health institution. All the respondents be they highly educated or not were found to utilize both modern and traditional methods of treatment. The study also revealed that many traditional methods like use of herbs were quite effective in treating measles. However, some traditional forms of therapy are quite harmful to health.

5.2 Recommendations

1. The study has clearly shown that HSB is greatly influenced by socio-economic and cultural factors. Thus, the success of preventive and promotive action programmes, such as the control and eradication of measles, largely depend on their acceptability and this is related to the people's cultural norms and values. Therefore, health policy makers need to take into account the people's traditional beliefs concerning causation, etiology and treatment of measles in order to design appropriate policies which will be in line with the actual needs of the people.
2. In the study, it emerged that traditional medicine is widely used in Rarieda Division. The most common form is use of herbal remedies which usually work effectively, though there are some traditional modes of treatment which could be harmful to health. Methods which are harmful to health should be discouraged

while those that are useful should be encouraged after scientific studies have been carried out to determine their efficacy. Therefore, there is need to tap the existing vast knowledge on traditional medicine that cures measles to help alongside modern medicine in the fight, management and subsequent treatment of measles.

3. The study also revealed that some nutritious foods are restricted from a measles patient's diet. This could be as a result of low public awareness on nutrition. Thus, there is need for health workers to have a sound knowledge and understanding of the community's social and cultural traits in order to effectively communicate with them to persuade them to take certain positive health and nutrition actions while dropping the negative ones. Health educators should also ensure that the community and, especially mothers, have a proper knowledge about measles as a whole in relation to health and nutrition.

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APPENDIX ONE

UNIVERSITY OF NAIROBI

HOUSEHOLD QUESTIONNAIRE

All information given in this study will be held in strict confidence.

Date

Sub-Location

Questionnaire No.

BACKGROUND INFORMATION (Circle answer where applicable)

1. Marital Status 1. Single 2. Married 3. Divorced 4. Widowed
5. Separated 6. Other (Specify)

2. Age of Respondent

3. Religious Affiliation 1. Catholic 2. Protestant 3. Muslim
4. African Traditional Religion 5. Other (Specify)

10. If you had 2 children, a boy and a girl suffering from measles, who would you make sure receives immediate and better treatment?

1. Boy 2. Girl 3. Both

11. Why?

.....

12. Do you think male-children are more valued than female children in this area?

1. Yes 2. No

13. Why?

.....

14. Apart from immunization, do you know of any form of prevention against measles?

1. Yes 2. No

15. If yes, give examples

.....

RESPONDENT'S KNOWLEDGE ABOUT MEASLES

16. What is/are the local name(s) for measles?

17. What do you think causes measles?

18. How does one get it?

19. Who is most likely to get measles?

- 1. Babies 1-11 months 2. Children 1-5 years 3. Children 6-10 years
- 4. 11-18 years olds 5. Adults 6. Other (Specify)

Why?

20. What are the major signs/symptoms for measles?

21. Are the signs the same for everybody? 1. Yes 2. No

22. If No, Why?

23. If a child has measles, can this be passed on to someone else? 1. Yes 2. No

24. If yes, how?

.....

25. Can measles lead to other disease(s)? 1. Yes 2. No

26. If yes, which one(s)

.....

27. What age category do you think is **NOT** affected by measles?

1. Babies 1-11 months 2. Children 1-5 years 3. Children 6-10 years
4. 11-18 year olds 5. Adults 6. None of these

28. Do you have any information on how to:-

- (a) Identify measles? 1. Yes 2. No
- (b) Treat measles 1. Yes 2. No

29. If yes, for (a) who gave you the information?

.....

If yes, for (b) who gave you the information?

.....

30. Where was the information given?

- 1. Health Centre
- 2. School
- 3. Baraza
- 4. Mass Media
- 5. Other (Specify)

PRACTICES WITH RESPECT TO MEASLES

31. Has any of your children ever suffered from measles? 1. Yes 2. No

(If Yes continue. If No skip to Question 41)

No.	Name of Child	Sex		Age
		Female	Male	
i				
ii				
iii				
iv				

32. How did you know it was measles?

.....

33. How severe was it? 1. Very Serious 2. Serious 3. Not Serious

4. Don't know

34. Where did the child contract it?

.....

35. (a) How long did the child stay before you started any form of treatment?

- 1. Less than a week 2. One week 3. 2-3 weeks 4. 4-5 weeks
- 5. 6 weeks and above

(b) Why?

.....

36. What was done as the first thing to cure the illness?

- 1. Used herbs at home 2. Bought medicines from a shop 3. Visited traditional healer
- 4. Visited faith healer 5. Health Centre 6. Hospital 7. Private Clinic
- 8. Other (Specify)

37. What were the results?

38. Why did you choose this cause of action?

- 1. It was the nearest source 2. Cheapest source 3. Most effective source
- 4. Other (Specify)

39. What else was done? List all the methods of treatment used chronologically

.....

(a) Should a special meal be prepared for a measles patient? 1. Yes 2. No

(b) Why?

.....

40. (a) Should the intake of some particular foods be restricted? 1. Yes 2. No

(b) If yes, which ones (List them)

(c) Why?

ECONOMIC BACKGROUND

41. (a) Do you keep any animals? 1. Yes 2. No

(b) if yes, which ones?

.....

(c) What do you use them for?

.....

(d) Which ones mentioned are food recommended for a measles patient?

.....

(e) What food crops do you grow?

.....

(f) What do you do with these crops?

(g) Which ones mentioned are food recommended for a measles patient?

.....

42. Total income per month (in KSh.)

1. Below 1,000 2. 1,001-3,000 3. 3,001-5,000 4. 5,001 and over

43. Other sources of income

44. Household expenditure per month

Education/Fees

Health

Food

Rent

Clothing

Other (Specify)

ATTITUDES TOWARDS MEASLES

For Question 45 - 49 use the key to fill in the box appropriately

	Statement	Option	Reason
45.	Measles is the serious childhood disease in this area		(b) If not, which one is?
46.	When a child has measles he should be taken to the hospital immediately		(b) Why?
47.	When a child has measles he should be taken to a medicine man		(b) Why?
48.	When a child has measles he should be given tablets from a shop		(b) Why?
49.	When a child has measles he should not be breastfed		(b) Why?

KEY

1. Strongly agree 2. Agree 3. Strongly disagree 4. Disagree
5. Don't know

50. (a) Can measles kill? 1. Yes 2. No

(b) If yes, for whom is it especially dangerous?.

	Male	Female	Both
1. Babies
2. Children
3. Adolescents
4. Adults
5. All

51. Are there any taboos that if broken can lead to measles?

1. Yes 2. No 3. Don't know

52. If yes, give details

.....

53. Is measles a difficult disease to treat?

1. Yes 2. No 3. Don't know

54. If yes, give reasons

.....

55. If No, give reasons

.....

56. Do you have any suggestions as to what should be done to improve on the measles

problem?

.....

57. Any other comments?

.....

APPENDIX TWO

UNIVERSITY OF NAIROBI

FOCUSED GROUP DISCUSSION INTERVIEW GUIDE

1. In your understanding what is measles. what causes it, its symptoms, mode of transmission and therapy options?
2. How do people in this area respond to treatment of measles?
3. What do you think mostly influences the choice of therapy as concerns measles?
4. What should be done to cope with the high infant and child mortality and morbidity rates caused by measles?
5. What are the community's beliefs and attitudes towards the disease? Are they beneficial or should they be changed?
6. How best can people's beliefs and attitudes towards measles be changed?
7. How can it be prevented?
8. Is there any time of the year when this disease is particularly bad? Please specify.

APPENDIX THREE

UNIVERSITY OF NAIROBI CASE STUDY INTERVIEW GUIDE

- A.
1. Name of Respondent (Optional)
 2. Age
 3. Marital Status
 4. Level of Education
 5. Occupation
- B.
1. Name of child (Optional)
 2. Age
 3. Sex
 4. Has the child been vaccinated? If not why?
 5. When did the child get measles?
 6. How did the disease start?
 7. How did you detect that it was measles?
 8. Name the stages of the disease that the child went through (signs and symptoms)
.....
 9. For each stage of the disease, what did you do and why?
 -

10. Did you take the child to hospital? If not why?
-
11. How long did you take before you took the child to hospital?
12. (a) When the disease attacked, was the child still breastfeeding or has she/he
been weaned?
- (b) If not, for how long did the child breastfeed?
13. What kinds of food did you give the child?