FACTORS INFLUENCING HEALTH-SEEKING BEHAVIOURS FOR PREVENTION AND TREATMENT OF MALARIA AMONG HOUSEHOLD MEMBERS IN MABONDE DIVISION, TRANS NZOIA COUNTY, KENYA.

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DECLARATION

This research proposal is my original work and has not been submitted to any other University.

…….. ……

IrineMoraa Date

L50/70741/2013

This research proposal has been submitted for examination with my approval as the University Supervisor.

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Mr. Stephen Okelo Date

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DEDICATION

This research is dedicated to my husband Elijah Kerage for the financial support he has given me throughout this study and to my daughter Michelle and the community of Mabonde for their support during data collection..

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ACRONYMNS

DDT	Dichlorodiphenyltrichloroethane
IPTP	Intermitted Preventive Treatment in Pregnancy.
IRS	Indoor Residual Spraying.
ITNS	Insecticide Treated Nets
MOH	Ministry of Health
NGOs	Non GovernMalaria Organizations.
RDTS	Rapid Diagnostic Tests
SDA	Seventh Day Adventist
WHO	World Health Organization.

ABSTRACT

Malaria is one of the common parasitic diseases in the world and the common cause of morbidity and mortality to human beings, especially young persons. Large amounts of resources have been invested in its control and treatment; however it still remains a major problem to public health. Despite all the efforts that have gone towards trying to eradicate malaria, it is still considered a killer disease. The purpose of the study was to determine the factors influencing health – seeking behaviours for prevention and treatment of malaria among household members in Mabonde location, Trans Nzoia County, Kenya. The study was guided by the following objectives; to investigate the knowledge base of the people about malaria on the health – seeking behaviours for prevention and treatment of malaria; to identify the perceptions of malaria on the health – seeking behaviours for prevention and treatment of malaria; to determine the influence of infrastructure on the health – seeking behaviours for prevention and treatment of malaria and to examine the influence of socio- economic status on the health – seeking behaviours for prevention and treatment of malaria. Literature review helped to compare the findings of other scholars in different part of the globe on the same topic. In chapter three the study utilized a descriptive survey design, and, the target population comprised of the 540 households and Using the Krejcie and Morgan table of determining sample size (Krejcie and Morgan, 1970) a total sample of 247 respondents was obtained for the study. From this sample probability to proportion size was used to come up with the number of each respondent in each stratum. The questionnaires were used for the purpose of data collection as the data to be collected is quantitative. A pilot study was done in Kiminini division which was neibouring Waitaluk division and , reliability was achieved by doing test re-test on the study sample in the pilot study data were analyzed using statistical methods and expressed in the form of tables, frequencies and percentages. All ethical considerations were adhered to in the study. The findings revealed that; although the respondents had good knowledge about malaria, they were influence by negative perceptions, infrastructure and low socio economic status. The researcher recommended the following: more training on malaria ought to be done to enable many people in the area to have a sound knowledge base that would enable them to make adequate health seeking behaviours. The county government should work towards improving the road network for ease of access to the health facilities. It should also provide health facilities within reach of the community to enhance the health seeking behaviours of the community. The personnel at the health facilities should also be trained on customer relations. The community should be trained and advised to engage more in income generating activities to help them afford medical care. They should also be advised .on the importance of joining healthcare systems such as NHIF for cheaper health care services.

CHAPTER ONE

INTRODUCTION

1.1 Backgroundof the Study

Around the world, the malaria situation is serious and getting worse. Malaria threatens the lives of 40% of the world's population – over 2 200 million people. Each year, thereare an estimated 300-500 million clinical cases. Malaria is estimated to kill more than 1 million people annually, the majority of whom are young children. Malaria is also a major public health problem in parts of Asia, Latin America, the Middle East, Eastern Europe and the Pacific. In India, epidemics of malaria are frequently reported from areas that previously were not associated with malaria. In Bangladesh, the malaria situation has been steadily deteriorating since the late 1980s. The number of cases increased fivefold between 1988 and 1994.

The perception that Europe is free from malaria has changed rapidly and, since the early 1980s, the number of countries affected by local malaria transmission has increased from 3 to 10. At the beginning of the 1990s, the residual reservoir of malaria infection, aggravated by political and socio-economic situations, mass population migration, extensive development projects, and almost discontinued activities on malaria prevention and control, constituted conditions favourable for malaria transmission. In the European Region, malaria elimination remains on track: only 37 cases of locally acquired malaria were reported in 2013 (in Greece, Tajikistan and Turkey). At present, imported malaria remains a significant medical and health issue in many European countries. Non-immune travellers from malaria-free areas are very vulnerable to the disease when they

become infected. Malaria is preventable and curable. The WHO Regional Office for Europe continues to support countries in their efforts to reach the agreed targets and goals and to provide technical assistance in the certification of malaria elimination whenever possible.WHO(2013).

In Latin America, Brazil is worst affected with over 50% of all malaria cases in the Americas. Malaria is mostly a disease of hot climate. The Anopheles mosquito, which transmits the malaria parasite from one human being to another, thrives in warm, humid climates where pools of water provide perfect breeding grounds. It proliferates in conditions where awareness is low and where health care systems are weak. Malaria is one of the common parasitic diseases in the world and the common cause of morbidity and mortality to human beings, especially young persons. Large amounts of resources have been invested in its control and treatment; however it still remains a major problem to public health. The incidence of malaria worldwide is estimated to be in excess of 300 million cases per year with over 90% of cases in sub – Saharan Africa. The number of deaths caused by malaria is estimated to be more than one million per year, with over 90% occurring amongst persons less than five years of age.

Ninety per cent of malaria cases in the world occur in Africa south of the Sahara. Children under 5 years of age and pregnant women are the worst affected by malaria. Together with pneumonia, diarrhoea, measles andmalnutrition, malaria is responsible for over 70% of deaths in young children especially in developing countries. Malaria during pregnancy causes severe maternal illness and anaemia, and is also associated with low birth weight among newborn infants, a leading risk factor for infant mortality. Malaria's cost to human and social well-being is enormous. The mosquito-borne disease typically

strikes its victims not once but repeatedly. As a result, workers' output is diminished, and children miss school, often for periods of a week or more at a time. The economic loss from malaria was estimated atUS$2 billion in Africa alone in 1997. Malaria is a major cause of poverty, and poverty exacerbates the malaria situation. Taken together, the effects of malaria on lives and livelihoods are devastating for economic progress in hard-hit countries. The World Health Organization and the World Bank rank malaria as the largest single component of the disease burden in Africa, causing an annual loss of 35 million future life-yearsfrom disability and premature mortality. In Africa, malaria is responsible for about 20-30% of hospital admissions and about 30-50% of outpatient consultations.

The fatality of severe malaria may exceed 30%, epidemic are becoming more frequent, especially in Africa, as a result of climatic and ecological changes Chuma et al (2006). In Kenya, malaria remains a leading cause of morbidity and mortality, especially in young persons and pregnant women. The prevalence of malaria in Kenya is 20%, it accounts for 30% of out-patient attendances and 20% of admission to the health facilities. Malaria is the most important cause of death in persons under five years of age and is estimated to cause 20% of all deaths in this age group.

It kills daily over 70% persons under five years old and also has negative effects on the other sectors of national economic Oyediran and Achola(1999).In Trans Nzoia, malaria is very common health problem resulting in enormous human and economic losses as the area usually experiences malaria outbreak immediately after the peak seasons of rain, when ecological conditions provide favorable conditions for mosquito breeding. The local population has low immunity to the fatal consequences of the

infections, and this is due to their lack of previous exposure to the plasmodium parasite, thus putting both persons and adults at significant risks of severe morbidity of 64% and mortality of 45% the prevalence of malaria in Trans Nzoia County is 45% this has therefore exerted pressure on the local health facilities. Hence studies on health – seeking behavior, perception of malaria, treatment, and decision making for health care at the household level are crucial to malaria control. The studies must be accompanied by improved public awareness of the importance of seeking appropriate treatment and complying with recommended regimens.

1.2Statement of the Problem

Despite the many studies and interventions on malaria example scaling up of net ownership, passing health messages, indoor residual spraying that have been done and put in place to control malaria, there has been an increase in morbidity 40-46% and mortality 35 – 45% rate among persons and adults in the Trans Nzoia community (Trans Nzoia development health plan, 2010).

1.3 Purpose of study

The purpose of the study was to determine the factors influencing health – seeking behaviours for prevention and treatment of malaria among household members in Mabonde location, Trans Nzoia County, Kenya.

1.4 Objectives

The following are the objective guiding this study:

1. To establish how knowledge base of the people influence health – seeking behaviours for prevention and treatment of malaria

2. To determine how perceptions on malaria influence health – seeking behaviours for prevention and treatment.

3. To establish how infrastructure influence the health – seeking behaviours for prevention and treatment of malaria

4. To determine how socio- economic factors influence health – seeking behaviours for prevention and treatment of malaria

1.5 Research Questions

Therefore there is need to find out the factors that influence the health – seeking behaviours as regards to malaria among household members in Mabonde location specifically by answering the following questions

1. How does knowledge base of the people influence health seeking behaviours for treatment of malaria?
2. How do the effects of perceptions on malaria influence the health seeking behaviours?
3. How does the infrastructureinfluence health seeking behaviours for prevention and treatment of malaria?
4. How do socio-economic factorsinfluence the health seeking behaviours for prevention and treatment of malaria?

1.6 Significance of the Study

The study was of great importance to all the stake holders in the health and parenting issues as it helped them to understand the factors that impeded early treatment of malarial illnesses in persons within Mabonde community. These are;

The study was of great importance to the government as it would help the government through the health workers and the ministry of health to understand the issues in Mabonde community to understand the issues in the community and deal with them from a medical back ground. On the other hand, the government was also helped to come up with measures to use in demystifying all the myths that surround malaria as a disease and eventually came up with policies that ensure that the patients are screened for malaria at an early age to help in early management and healing.The information will also be of importance to the community health workers and the medical fraternity at large as they got to know where their services were most needed and therefore intervene in a timely manner.

1.7 Basic Assumption of the Study

This study was carried out with the assumptions that

1. All health workers were fully aware of the health issues affecting the community.
2. The targeted households were willing to share as much accurate information on the topic as possible during the interview and filling of questionnaires.

1.8 Limitations of the study

Many of the respondents were illiterate and therefore there was need for aninterpreter. However, the interpreter may have also interpreted the information wrongly. Also, due to the time factor, the study was rushed and therefore did not cover a large number of respondents.

1.9 Delimitation of the study

The study was delimited toMabonde division and not any other division in Trans-Nzoia County in Kenya. Whereas there were other illnesses,, the study was only delimited to factors influencing health – seeking behaviours for prevention and treatment of malaria among household members in Mabonde location, Trans Nzoia County, Kenya.. As much as the study was a wide topic, only four objectives namely; knowledge of the people about malaria, practices used to manage malaria, perceptions towards malaria and economic status was studied. The target population was all households of Mabonde division.

1.10 Definition of Significant Terms Used in the Study

Factors	A constituent or element which brings about certain effects or results
Influencing	A power affecting a person thing or course of events. In this case, the health seeking behaviours
Health-Seeking Behaviours	This is the aspect of seeking wellness from illness.
Prevention	Staying away from disease of injury such as malaria
Treatment	An attempt to cure or mitigate a disease. In this case malaria
Malaria	A serious tropical disease spread by mosquitoes
Household Members	A number of families
Knowledge base	A collection of data organized in a form that facilitates

	analysis by automated deductive processes, such as an expert system.
Perceptions	The way one thinks about or understands some thing
Infrastructure	Anything that prevents a person from accessing something in this case health services
Socio-Economic Factors	A family's economic and social status

1.11 Organization of the study

The study was organized in five chapters. Chapter one is the introduction to the study and it covers the following areas; background of the study, statement of the problem, purpose of the study, objectives, and research questions. It also covers significance of the study, basic assumptions, limitations, and delimitations of the study, definition of key terms and finally organization of the study. Chapter two analysed of literature by other scholars in relation to the topic by exploring further on each research objective. Chapter Three covers the research methodology, which comprises the research design, target population, sample size and sample selection procedures, research instruments, data collection procedures and data analysis procedures. Chapter four covered data presentation, data analysis and interpretation, while chapter five covers summary of the research findings, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter shows the way literature has been reviewed it is based on themes from the topics.Knowledge base, perceptions, infrastructure and socio economic status. In a study in Nigeria on health seeking behaviours, about66.5% patients waited for more than three before consulting a doctor. About 60 (30%) patients did not go to the doctor on the same day ofonset of fever, since they had no time, 51(25.5%) patientstried self-medication, 21 (41.1%) out of 51 patientssaid that they had taken antibiotic + antipyreticfor fever. When asked about the first thing done in case of fever, 72 (36%) patients said that they went toa doctor, 41(20.5%) patients went to chemist formedication without consulting a doctor. Twenty-eight (68.2%) patients out of 41(100%) (Table 2) had noidea what the chemist had prescribed. A number ofstudies have shown that people go to non-medicos fortreatment.

The fact that majority of patients wentafter three days or more of fever for treatment andalso that they preferred self-medication/chemists as thefirst line of management suggests that fever is not perceivedas a serious symptom and this has been substantiatedby the findings of other workers4. In anotherstudy by Singh *et al* 2.1% urban males and 1.3%urban females had tried self- medication which is quitelow as compared to our study. Home remedies andtraditional methods of treatment have always found aplace in every society and this study also comes outwith the same results. For home remedy differentmethods were followed for symptomatic relief by21(10.5%)

patients like hot milk with honey, coldlassi, "Kada" for throat and cold sponging. In otherstudies4,5 also different types of traditional methodsfor symptomatic relief have been tried.

Health seeking behaviours are actions undertaken by the malaria patients to get the proper treatment in order to getwell. Malaria is a threat to more than 40% of the world's population and responsible for more than 300 million acute cases each year, WHO (2013). About 90% of morbidity and mortality occurs in sub – Sahara Africa and it has been well documented that persons under five years and pregnant women are at the highest risk (WHO 2002). Malaria is known to constitute 10% of the disease burden of sub – Sahara Africa and account for about 25% of all people's mortality. It is also widely recognized that despite global, national and local initiatives, this situation has not improved quickly enough (Kerenrompet al 2003; WHO 2003; Sach 2002; Sachs and Malney 2009 and (Bremen 2010) case rate may double over the next 20 years.

2.2 Knowledge base of the people about malaria on the health – seeking behaviorsfor prevention and treatment of malaria

Numerousstudies have been carried out all over the world to determine the knowledge of the causes, transmission and treatment of malaria. The findings reveal a very saddening scenario. This were the findings of ,Singh, Anand and Yadav (2010) who concluded that many members of the poor rural communities lack the adequate knowledge base to enable them engage in health seeking behaviours towards the treatment of malaria. Hence this is a suggestion that in order for the people to engage in health seeking behaviours, they need to understand the causes, the transmission and the treatment of malaria in depth.

Malaria still remains one of the major causes of death in sub Saharan Africa.Snow, Craiig, Deichman& Marsh (1999). This was mainly due to improper health seeking behaviour amongst the inhabitants of this region. In Nigeria, where malaria accounts for 40% of the global malaria cases, poor health seeking behaviours are now a major source of concerns. This is based on the level of knowledge base on the causes, transmission, and treatment of malaria as well as the beliefs of malaria amongst the people.

A study carried out in Nigeria indicated that the people that had a sound knowledge base were quick in finding the cure to the malaria problem as opposed to those without a sound knowledge base. The study therefore concluded that the more knowledge base of malaria the people had, the more they would be committed towards health seeking behaviours. It was also recommended that people be trained to understand the causes, the transmission and the treatment of malaria if they were to engage in appropriate health seeking behaviours.

In a study by S. Matta, A. Khokhar& T.R. Sachdev(2004)it was found out that 50% the respondents were aware of two symptoms of malaria. These were the chills and fever. Only 31% knew three symptoms of malaria as chills, fever and general body ache. However, only 13% included head ache as an extra sign of malaria infection. The findings further showed that 58% of the respondents knew the symptoms of malaria. In another study in Ghana, a study by Alexander SuukLaar, Amos KankponangLaa, Philip AyizemDalinjong (2013) the respondents were asked about the signs and symptoms that a person with malaria presents. The results indicated awareness of common signs and symptoms in both adults and children. The most frequently mentioned signs and

symptoms of malaria included hot body fever (75%), vomiting (65.5%) and coldness/chills (54.4%). However, some respondents also mentioned yellowish urine (45.8%), restlessness (37.5%), and loss of appetite (33.3%) or headache (8.3%) as causes of malaria.

This therefore predisposed them to early and appropriate health seeking behaviours. However, in another study in Nigeria, 48% of the women believed that malaria was not caused by mosquitoes.Pinikahana J., Ogunmekan DA., Trent Rd. More surprising was when some respondents in a different study replied that malaria was caused by eating raw vegetables and drinking dirty water.Vundule C, MharaKurula S. Other studies associated malaria with witch craft, bed bugs and swimming. John G. et al (2000).Regarding knowledgeabout breeding places of mosquitoes, 91(45.5%) patients answered correctly. Garbage incorrectly thoughtto be a breeding place for mosquitoes was answered by 71(35.5%) patients. In another study,Rasania SK, Bhanot A, Sachdev TR(2014)

On the Knowledge about preventive measures of malaria, About 40.6% patients enumerated preventive measures of malaria correctly (Table 4). Fifty-one (34%) respondents answered mosquito net as the prime preventive measure for mosquito bite and out of 51, 21(10.5%) respondents said that they themselves were using mosquito nets. In another study Ongore D, Kamunvi F, Knight R, Minawa A .(1989) 51.9% respondents answered mosquito net as the prime preventive measure from mosquito bites and 10.2% respondents said that they personally use mosquito net. About 11 (5.5%) respondents who were from rural areas in our study answered burning fire/ burning dry

“Neem leaves”, smoke as personal protection measures from mosquito bites. In parts of East Africa there is a practice of burning LentaneRhodhesiensis/ Eucalyptus leaves.

A significant finding was that 89 (44.5%) patients enumerated options like checking coolers, tyres, and flower pots for mosquito breeding. They confused control measures of dengue those with of malaria. When asked to enumerate diseases transmitted by mosquitoes, 74.5% patients answeredcorrectly and 17% patients gave options like diarrhoea and typhoid. In another study6 responses to the same question were skin diseases, measles and respiratory tract infections which were enumerated by 97.3% respondents. From this study it may be concluded that there is a delay of more than three days in treatment seeking behaviourof malaria because of procurement of drugs from chemists/quacks. In the study done by Ettlinget al(1994).

On the knowledge of the availability of health facilities in Uganda, the participants were highly knowledgeable about thehealth facilities that existed in their community. This included those aware about health centers (100%), clinics(100%) and pharmacies / drug shops (91%). The healthcenters were government facilities ranging from healthcenter IIs (the lowest public facility in Uganda) to healthcenter IVs excluding hospitals. Clinics, pharmacies anddrug shops were privately owned facilities.The majority of participants (89%) were aware that mobileclinic services existed in their community. They reportedthat these clinics offered: immunization services(88%), laboratory testing (87%), medical consultation(86%) and health education (78%). However, only 28%had received such outreach services in the past 1 monthwhile 52% had received them in the past 6 months.

The majority of participants (84%) did not knowwhether Community Health Workers (CHWs) existedin their community while 12% mentioned that theywere non-existent. Among the 4% of participants whosaid CHWs existed, the services they mentioned wereoffered included health education (56%), referral ofpatients to health facilities (56%) and drug distribution. (33%) Only 22% did not know the services offered byCHWs. This influenced the health seeking behaviouras most of the participants (92%) did not have a regularmedical worker to care for their health or to consult.Among those who did not have a regular medical worker, 76% said it was because they used any health worker they found.

Other findings showed that knowledge among caregivers regarding malaria treatment was overwhelming, 98.4 percent were knowledgeable and only 0.8 percent did not know how malaria is treated among children less than five years of age. On the Knowledge on types of anti-malarial drugs.The study found that 72.4 percent (275/380) caregivers knew that Coartem was an anti-malarial drug used to treat malaria in children. While 18.9 percent (72/380) and 4.5 percent (17/380) mentioned Fansidar and Quinine, respectively, as anti-malarial drugs used in children. However, 3.9 percent (15/380) thought that Paracetamol was an anti-malarial drug, while 0.3 percent (1/380) did not know any anti-malarial drug currently in use, for treating childhood malaria.

When asked what they had ever used when sick, responsesgiven were: health facilities (99%), pharmacies/drug shops (94%), self-treatment with local herbs(81%) and traditional healers (30%). Regarding whatthey had done the last time they were sick, the majority(65%) had gone to a health facility for treatment while24% went to a pharmacy or drug shop for medication.Only 2% admitted to having sought treatment from

atraditional healer.The importance of presenting early to a health facility for treatment when ill has already been highlighted. Knowledge of breeding places of mosquitoes is not adequate. People tend to confuse between IECmessages of malaria and dengue and possibly for otherdiseases also.

It is suggested that while making amessage for the general public, IEC authorities mayconsider the following points.Integrated IEC message; fever as a serious symptomand its early management; treatment from a health facilityonly and nowhere else; more stress on breedingplaces of mosquitoes; and guidelines for not dispensingdrugs to patients with the prescription of a doctormay be made available to all chemists.Various other studies Ogunmekan DA. (1983); Ettling M, et al, (1994).Yadav SP, Tyagi BK, Ramnath T(1999) show that for successful control of malaria, proper health educationabout the disease and personal protection; andpreventive measures should be imparted to the community

2.3Perceptions of malaria on the health – seeking behaviours for prevention andtreatment of malaria

Each community has different understanding and recognition of diseases, for example, what is perceived as disease or health in a certain community may not be a disease in another community. Treatment and prevention also depend on the perceptions of the people in that particular community. The importance of social, culture and economic factors in malaria control have been emphasized and illustrated frequently (Reviewed in Agyepong et al. 2006). Since the key to effective treatment and understanding of health and health seeking behavior of a population in relation to various

health service options including traditional healers, government and NGOs as well as the predisposing enabling and the provider factors in any given setting is essential.

The success of such strategies relies on an understanding of human behavior – the social, cultural, political, and economic and environ Malaria context that influences those behaviours. Contributions from social science are identified as critical to malaria control (WHO/AFRO, 1998: Welcome Trust/MIM, 1997; WHO, 1997). Understanding treatment – seeking behaviour, willingness to accept and pay for preventive and curative services, local illness, classification and determinants of behaviour relating to changing national malaria treatment policies, are all examples of areas in social science contribution needed.

The major determinants of health care seeking were socio-cultural beliefs, age, gender, faith in the service provider, proximity, poverty, and perceived effectiveness of available services. Apart from the socio-cultural and behavioural factors, the availability of acceptable care can modulate the community perceptions and practices on malaria management. The current community awareness on symptoms of malaria and prevention is fair, yet the prevention and treatment practices are not optimal. Promoting active community involvement and ownership in malaria control and management through strengthening community based organizations would be relevant. Further, timely availability of drugs and commodities at the community level can improve their confidence in the public health system. Ashis Das et al (2013)

Understanding community perception about malaria and the underlying intervention for its management has a policy implication for mounting successful prevention and control initiatives. The results from this survey suggest that most

respondents showed some form of malaria awareness. Household heads perceived malaria as the most widespread and serious health problem in the communities; meaning a highhealth burden to the household emphasizing that malaria is prevalent all year round due to the presence of the Tono irrigation dam in the district.

This awareness is higherthan studies conducted in SwazilandHlongwana WK, Mabaso HLM, Kunene S, Govender D *etal.(2009)* and Ethiopia Karunamoorthi K, Abdi K: (2010). This difference in awareness may be attributed to differences in information, education and communication. Study participants attributed the cause of malaria to multiple factors. As shown in Table 2, some 65% of thestudy subjects indicated mosquito bites as the cause of malaria, which is comparable to findings reported else-- where in Ghana Ahorlu CK, Dunyo SK, Afari EA, Koram KA *et al* (1997).

There was a misconception in this study about the real cause of malaria by some of the respondents who associated malaria with alternative causessuch as genetic inheritance, eating of oily foods, eating of sugary foods, or heat from the sun. Such misconceptions or cultural explanations have also been reported from Ghana Agyepong IA: Malaria: Ethno-medical perceptions andpractice in an Adangbe farming community and implications for control. *Soc. Sci. Med.* 1992,131-137.(1992(,Ahorlu CK, Dunyo SK, Afari EA, Koram KA *et al* (1997). and other countries Legesse Y, Tegegn A, Belachew T, Tushune K☹2007) General knowledge of causes of malaria in this study was relativelylow (65%) when compared to the findings reported across sub-Saharan Africa Deressa W, Ali A, Enquoselassie F: (2003). However, some respondents (35%) in this study had not known the real cause ofmalaria.

These respondents associated malaria with traditional and local beliefs. A study from Ghana has also reported such misconceptions Ahorlu CK, Dunyo SK, Afari EA, Koram KA *et al.*: (1907). The community's sources of information for malariavaried with the main source being the skilled health workers from the NHRC (83.4%), which is similar to findingsfrom Ethiopia Jima D, Tesfaye G, Deressa W, Woyessa A *et al*(2005). Knowledge about malaria prevention was highamongst the respondents. They reported that malaria canbe prevented to some extent by avoiding mosquito bitesthrough the use of insecticide-treated bednets (ITNs),burning of coils and strong-scented leaves. The majority(92.5%) believe that regular usage of ITNs can prevent

Mosquito bites and malaria.Adongo and colleagues reported similar findings in Northern Ghana where 92% ofthe respondents believed that bed nets could prevent malaria Adongo PB, Kirkwood B, Kendall C (2005). The knowledge on prevention by this population could be attributed to their continued exposure to healtheducation by health workers of the NHRC in their communities. It is therefore not surprising that the population hasa good knowledge of malaria prevention. Studies acrossAfrica evidently suggest that ITNs are regarded as one ofthe most effective preventive methods E. Atieli HE, Zhou G, Afrane Y, Lee MC *et al* (2011). Accordingto Binka and colleagues, use of ITNs can substantiallyreduce the risk of morbidity and mortality due to malariaBinka FN, Kubaje A, Adjuik M, Williams LA *et al.* (1996).

The results showed that respondents used multiplesources of health care for malaria treatment. Hospital/clinic, local pharmacies, herbs and traditional healers werethe main providers of malaria treatment. Interestingly,more than half (54.2%) of the respondents preferred toseek treatment from a health facility for the reason of itbeing the

most effective although this was consideredmore costly and less convenient than traditional healers,usage of herbs and buying of drugs for self-medicationfrom local pharmacies;; these findings are consistent withother studies Hlongwana WK, Mabaso HLM, Kunene S, Govender D *et al.*: (2009). Malaria treatment was often reported to be a combination of both traditional and modernmethods. Treatment takes the form of self-medication athome with anti-malarial, herbal medicines and other modalities.

Despite the fact that traditional forms of treatment formalaria are widely used, most respondents mentioned thatthe first course of action when a child suffered from malaria was to consult a health facility. They have learnt fromexperience that the other forms of treatment are not mostefficient. Evidence has shown that people switch from onehealth care source to another as time passes and as theircondition persists Oberländer L, Elverdan B, (2000). The combination of both traditionaland modern methods has been common practice in Africa Comoro C, Nsimba SE, Warsame M, Tomson G: (2003), andBeiersmann and colleagues therefore assertthat treatment behaviour should be viewed as a process inwhich beliefs and actions are continuously debated andevaluated throughout the course of the illness Beiersmann C, Sanou A, Wladarsch E, De Allegri M *et al* (2007).

The findings clearly demonstrate that the majority ofthe respondents had adequate knowledge and desirablehealth seeking-behaviour.Still a sizable proportion hadmisconception of the cause of malaria. The correction ofsuch misconceptions about the relationship between mosquito bite and malaria through health education messagesis critical for the success of malaria prevention and control.Therefore there is the need to improve the behaviouralpatterns and attitudes regarding malaria management andcontrol

by dissemination of appropriate information onmalaria through active education campaigns using mediaadvertisements, community durbars and workshops amonghealth-workers, which should be based on a sound under--standing of the socio-cultural norms of the community.It was concluded that the local perceptions are crucial to the health-seeking behaviourand ultimately to the success and sustainability of malariamanagement and control.

Making educational messagesculturally sensitive is paramount to capitalize on the positive beliefs and behaviours that already exist in local com--munities. Understanding local concepts of illness and theirinfluence on health care-seeking can complement existingknowledge and lead to the development of more effectivemalaria control interventions. On the perceived severity of the feverMalaria was recognized as a major problem in all the FGDs and fever was also positively associated as the main symptom of malaria. Caregivers, however, classified fever as mild and severe body hotness.

Children with mild body hotness were not taken to the health facility, not until their fever became severe body hotness. "Most of the time when we see that the child has developed vomiting, shivering and mild fever, we wait for the child to develop severe body hotness also, before we take the child to the health facility. Most of the time when we take such a child with mild fever, they get his blood and test, they tell us that the child has no malaria, and thus we are sent back home on some other medication. If we take the child with high fever, they always find the malaria parasite; that's the reason we wait at home for the child to develop high fever" (FGD, male caregiver).

2.4 Influence of infrastructureon the health – seeking behaviour for preventionand treatment of malaria

Early and appropriate treatment of malaria is essential toreducing the morbidity and mortality associated with challenges of using health facilities. In a study by David M., Petra B., Ceri B., and Miph B. M. the findings revealed that nearly all of the participants (99.6%) had ever experienceda challenge while accessing health facilities. Themost outstanding challenges faced were regular stock-outof drugs, high cost of services and long distance tohealth facilities.The findings also revealed that the nearest health facilities to the participants' homeswere clinics (68%), health centers (21%), and pharmacies/ drug shops (11%). This meant that no hospital existed in the community.While sick, the majority of participants (75%) usedcommercial motorcycles to travel to health facilitieswhile 18% walked. The rest used either bicycles (5%)or vehicles (2%).

High cost of services and long distances to health facilities were the other main challenges established. Long distance that patients need to travel to get health services is a precursor to use of such services. This has been shown in several studies that distance to health facilitiesaffects health services utilization Kiguli J, Ekirapa-Kiracho E, Okui O, MutebiA,Macgregor H, Pariyo GW. (2009).The problem of distance to health facilities is aggravated by the high poverty levels in rural communities which affect expenditure on transport. Some patients including those that are disabled or pregnant may not attempt long distancesto seek health care without adequate means of transport. Although constructing more health facilities in the country could be a long term strategy to address this problem, providing more frequent mobile clinic services would greatly benefit the rural population.

In certain instances, caregivers could be highly motivated to seek prompt treatment, but are inadvertently set aback by infrastructure to access. There is enough

evidence in many African settings that suggest strongly that the further the caregiver lives away from the health facility, the more likelihood of seeking care late and the poorer the outcome of malaria infection (Chuma et al., 2010; Al-Taiar et al., 2008; Nonvignon et al., 2010). Many rural communities in Zambia do not have a health facility within the 5 kilometre radius; accessibility to the few health facilities in these rural settings is further constrained by geographical barriers such as mountains, thick forests and rivers lacking crossing points. The findings to the study showed that the study found that 310/380 (81.6 percent) of caregivers interviewed were found to reside approximately more than 5 km from the health facility and 70/380 (18.4 percent) lived within the 5 km radius of the health facility as shown in the figure below.

And when the study participants were asked as to their mode of transport to reach the health facility, the study found that 65 percent (247/380) of the respondents had to walk on foot to the health center, while 23.2 percent (88/380) were cycling and only 11.8 percent (45/380) used motor vehicles (hiking or public transport).In the quantitative analysis, statistical logistic regression analysis revealed that children of caregivers staying more than 5 km from the health facility were associated with delayed malaria treatment; equally during FGDs, long distances that caregivers needed to travel either by foot or cycling to reach the health facility was a prominent barrier that emerged.

This was compounded by the presence of infrastructure such as passing through thick forests and traversing mountains, which are common infrastructure in Mpika district. The respondents said that;

"*The problem is that we stay very far from the health center; for instance, I stay in Itongo area, which is very far. So, if we suspect the child has malaria, we wait until the next day to see whether the child will improve"*

2.5 Influence of Socio economic status on the health – seeking behaviour forprevention and treatment of malaria

The participants were generally low earners based ontheir average monthly household income. This clearlyrelates to the high poverty levels in Uganda particularlyin rural communities. Such low income levels can affectuptake and utilization of health services particularlyin communities with no public health facilities whereservices are supposed to be offered for free followingabolition of user fees..Mobile clinic services are crucial in supplementing servicesoffered at health facilities especially in communitieswhere these are few hence necessitating to travel longdistances to seek medical attention (among other challenges).

These services are known to be very beneficialto disadvantaged populations such as the poor (includingthose without health insurance), and where no servicesare provided.With a range of services offered at these mobile clinicsincluding immunization, laboratory testing, medicalconsultation and health education as established by thisstudy, the population would immensely benefit fromthem.Although the Ministry of Health, (Uganda) recommendsmobile clinic services for hard to reach areas anddisadvantaged groupsMinistry of Health, Uganda (2010).

Use of CHWs in health service delivery is a strategy usedin Uganda and other countries that serves as a community'sinitial point of contact for health. These CHWsare volunteers who carry out community mobilization,drug distribution, health education,

and referral of patientsto health facilities. Although CHWs are known toincrease access to health care and facilitate appropriateuse of health resourcesWitmer A, Seifer SD, Finocchio L, Leslie J, O'Neil EH.(1995) , several studies have indicatedhigh attrition rates amongst themRahman SM, Ali NA, Jennings L, Seraji MH, Mannan I, Shah R et al (2010) .

They also found out that the major challenges facing CHWs include inadequate,lack of community support, inadequate refresher training,unclear roles and expectations, inadequate supervision,and inappropriate selection of workers26. Althougheach village in Uganda is recommended to have on average5 CHWs in form of village health team membersMinistry of Health, Uganda,(2010)their numbers are often inadequate as they cover largegeographic areas with inadequate means of transport30.Indeed, with the majority of participants in this studyunaware of the existence of CHWs in their community,the strategy was not being fully utilized hence the needfor strengthening. Having a regular health practitionerenhances health services utilization and outcomes as itpromotes continuity ofMainous AG 3rd, Baker R, Love MM, Gray DP, GillJM (2001).

When a patient visits the same medical worker whenneverthey are sick, it enables the health practitioner tomonitor the health of the patient over time as opposed
to visiting a different one during every sickness episode.Indeed, studies have shown that patients with someform of constant care have better access to servicesthan those without a regular source of care, Xu KT.(2002). However,rural inhabitants are more likely to lack a regular medical worker.

The Government of Zambia has recognized that present poverty levels are unacceptably high. In 2010, 69.7 percent of the Zambian population was living below the poverty datum line, with expenditure below the level to provide for basic needs, compounded by low monthly incomes of below K500.00 (CSO, 2010).

Rural poverty is more prevalent, deeper and more severe than urban poverty. In situations like these, families worry more about their daily sustenance at the cost of seeking health care for their illness. This could be the reason for proportion of low access to prompt and effective malaria treatment in children under five years of age. They are several reasons children under-five years of age in malaria-endemic countries do not get prompt and effective malaria treatment. Moreover, not a single solution exists to tackle the problem holistically; instead, multiple-level interventions are needed. The present study in an epidemic-prone area of highlandKenya indicates that individuals in this area frequentlysought treatment for malaria from local shopkeepers, andthat treatment provided by these shopkeepers rarely hadefficacy against malaria, leading to lack of recovery anddelayed effective treatment for malaria.

There may be anopportunity to improve the management and response tomalaria epidemics by educating shopkeepers on theimportance of prompt treatment of individuals withmalaria symptoms with appropriate anti-malarial medication.A community-based malaria intervention was introduced through fixed and mobile clinics in rural Myanmar. This study attempted to identify treatment-seeking behaviour of caregivers for persons under five and the determinants of appropriate treatment-seeking behaviour in mobile clinic villages (MV) and non-mobile clinic villages (NMV) in malaria-endemic rural

areas in Myanmar. Findings revealed superficial knowledge on malaria transmission, prevention and treatment by the respondents.

Poverty and level of schooling were found as important determinants of malaria knowledge and practices. Allopathic treatment was uniformly advocated, but the 'know-do' gap became especially evident when in practice majority of the ill persons either did not seek any treatment (31%) or practiced self-treatment (12%). Of those who sought treatment, the majority went to the village doctors and drugstore salespeople (around 40%). Also, there was a delay beyond twenty-four hours in beginning treatment of malaria-like fever in more than half of the instances. In the survey, gender divide in knowledge and health-seeking behaviour was observed disfavoring women. There was also a geographical divide between the high endemic south-eastern area and the low-endemic north-eastern area, the former being disadvantaged with respect to different aspects of malaria studied.

The respondents in this study lacked comprehensive knowledge on different aspects of malaria, which was influenced by level of poverty and education. A gender and geographical divide in knowledge was observed disfavoring women and south-eastern area respectively. They preferred allopathic treatment for malaria, although a substantial proportion did not seek any treatment or sought self-treatment for malaria-like fever. Delay in seeking care was common. The implications of these findings for programme development are discussed.The households from SE area fared better than theother area when stratified in terms of asset quintiles e.g. the proportion of poorest households was 24% in the S.Earea compared to 18% in the NE area.

In general, the respondents were awareabout the cause ('mosquito bite') and presenting symptoms of malarial illness ('fever with shivering') irrespective of sex, and this awareness increased uniformly withyears of schooling as well as level of affluence. However, when they were asked about its mode of trans-mission, only around 39% in the SE area and 32% in theNE area could respond correctly ('by bite of mosquitowhich has bitten a malarial patient and was also found to be a factor of schooling years andaffluence.Interestingly, the use of bed net for prevention of malariawas singled out uniformly by the respondents. Other measures reported were: preventingbreeding of mosquito (13% in SE area and 18% in NEarea, using mosquito repellant/coil (16% in SEarea and 20% in NE area.

Though there wasnot much variation by sex the trendobserved earlier with education and affluence remainedvalid with one exception.The respondents almost unanimously reported allopathicmedicine to be the treatment for malaria, especially the more educated and the affluent ones.Neighbours and relatives were the most frequently mentioned group for malaria-related information (35% in SEand 49% in NE areas respectively, by therespondents, especially the females decreased gradually to be replaced by community healthworkers from government and NGOs. Mass media(Radio/TV/Newspaper) and printing media (poster/leaf-let) became increasingly important means of message dissemination in those instances.Around 2% of the respondents in SE area and 0.4%respondents in NE area reported to have had sufferedfrom fever with shivering within 15 days prior to the dayof survey No sex difference in fever prevalencewas seen.

Next, information on their health-seeking behaviour was elicited. Majority of these patientsdid not seek any treatment, women more thanmenand control strategies for malaria cannot be overemphasized Mwensi HA (2005) There is lack of this kind of data in Bangladeshand this baseline survey on malaria has attempted to filling this knowledge gap besides estimation of parasitological prevalence from a population based survey in the endemic districts. Findings revealed superficial knowledgeon malarial transmission, prevention and treatment, especially among the poor and the illiterate.

A gender and geographical divide with respect to different aspects ofmalaria prevention and treatment was observed, disfavoring women and south-eastern area respectively.While the respondents preferred allopathic providers fortreatment of malaria unanimously, a 'know-do' gap inpractices existed. In about half of the instances, a delay inseeking care for malaria-like fever was observed. These arediscussed below with its implications for programmeimplementation. The awareness of the respondents that malaria is causedand transmitted by bite of mosquito is usually a commonknowledge in malaria endemic countries such as India,Turkey, Nepal, Haiti, Latin America, Sudan and GhanaSharma AK, Bhasin S, Chaturvedi S (2007).

However, only a tiny fraction of the respondentscould accurately state the correct transmission route ('bybite of mosquito which has bitten a malarial patient') andnone could state how the mosquito becomes infective i.e.,the parasitological cause. The serious gaps in knowledgeare also revealed by one-third of the respondents statingthat they did not knew the mode of transmission andanother one-third stating that any mosquito bite causesmalaria. The poor and the semi-literate are especially disadvantaged in these aspects. Health education interventions should be designed according to the existing

knowledge and awareness level of vulnerable population as well as their current treatment-seeking practices, and should be implemented for sufficient length of time to be effectiveKroeger A, Meyer R, Mancheno M, Gonzalez M (1996)

The association of febrile illness with malaria has been known in Bangladesh for a long time Das ML, Paudel IS, Nirauta SR, Roy L (2007) This is also reiterated in this study, where the majority of the respondents mentioned fever (with shivering, at intervals) as the most common symptom of malaria and is consistent with observations from other countries Malhotra MS (2005.Knowledge on the use of bed net as a preventive measure against mosquito bite was high among the respondents in this study. Similar high level of knowledge on preventive use of bed net had been observed in Nepal Joshi AB, Banjara MR (2005) but not in countries such as Ethiopia Jima D, Tesfaye G, Deresssa W, Woyessa A, Kebedi D, Alamirew D(2005),Iran , Rakhshani F, Moghadam ARA, Alemi R, Moradi A: 26(2003), Delhi, India Tyagi P, Roy A,), Turkey Simsek Z, Kurcer MA (2005) and Haiti Keating J, Eisele TP, BeNEt A, Johnson D, Mcintyre K (2008)

This advantage will make the work of the programme easier in introducing insecticidal bed nets (LLINs/ITNs) as a strategic measure for preventing malaria transmission. However, the programme also needs to keep the equityperspective in focus, while distributing insecticidal bed nets, because the poorer households were found to be disadvantaged in this respect. The respondents were unanimous about seeking treatment from the allopathic providers, whether in the formal or informal sector. However, the 'know-do' gap became especially evident when in practice majority of the ill per-sons either did not seek any treatment or practiced self-treatment. The latter is consistent with

findings from Turkey, where the majority practice self-treatment for malariaSimsek Z, KurcerMA(2005).

Of those who sought treatment, the majority went to the informal allopathic providers, such as village doctorsand drugstore salespeople whose knowledge and capacity for curative treatment is not without question Ahmed SM, Hossain MA (2007)Also, there was a delay in the beginning of treatment in more than half of the instances of febrile episodes suggestive of malaria, and there was disruption of income-earningactivities due to prolonging of the illness. Thus, efforts will be needed to educate this population on the need forEarly Diagnosis and Prompt Treatment (EDPT)' for reducing its income-erosion effect.

Further, the capacity ofthe informal allopathic providers (important for treatment of poor) should be developed in the use of RapidDiagnostic Tests (RDTs), and the rational use of artemisinin-based combination drugs (such as Coartem so as to fast-track informed diagnosis and treatment. Throughout this study gender divide in knowledge, awareness and health-seeking behaviour was observed disfavoring women. This is not surprising, given thepatriarchal norms in the society and was also noted earlierin other studies Ahmed SM (2006)While designing interventions, pro-active measures should be undertaken by malarial prevention and control programmes to reduce this gender gap.

This is all the more necessary because experiences show that even women-focused interventions may not increase access of quality health care for women, if the genderissues are not explicitly addressed by the programme Ahmed SM, Petzold M, Kabir ZN, Tomson G (2006) lastly, there are regional differences. The SE area was found to have greater proportion of poorest households (in terms of asset quintiles) than the NE

area. The SE area respondents also appeared to be disadvantaged regardingdifferent aspects of malaria prevention and treatment than the NE area, though marginally. However, this difference has to be taken into consideration while allocating resources for specific interventions.

The findings of the survey have important implications for fine-tuning the current malaria prevention and controlprogramme. The programme should disseminate comprehensive information on different aspects of malaria for converting the 'unfelt' need to 'felt' need of the community to facilitate the uptake of preventive and curative measures. This is all the more necessary as it has been found elsewhere that Nganda RY, Drakeley D, Reyburn H, MarchantT(2004) knowledge of malaria influences the use of preventive measures such as use of insecticidal nets30). Intensive campaign for practicing EDPT is necessary so that the community is convinced about its need for reducing malaria mortality, especially among the vulnerable groups. Besides print and electronic media, various informal communication methods (e.g., folk songs, people's theatre etc.) can be used to reach the disadvantaged sections of this largely illiterate community. Finally, equity focus in terms of gender, SES and geographical location should be maintained at every stage of programme implementation

2.6 Theoretical Frame Work

2.6.1 Theory of Planned Behaviour

According to the Theory of Planned Behavior (TPB; Ajzen, 1991), intention is the most proximal predictor of behavior. Cognitions that affect a specific intention are attitudes, subjective norms, and perceived behavioral control (perception about being able to perform a specific behavior). Self-efficacy and behavioral control are seen as almost

synonymous constructs. However, self-efficacy is more precisely related to one's competence and to future behavior.

2.6.2 Self-Efficacy and health behaviour theories

Most prominent health behavior theories include self-efficacy (or similar constructs). Self-efficacy is a proximal and direct predictor of intention and of behavior. According to Social Cognitive Theory (SCT; Bandura, 1997), a personal sense of control facilitates a change of health behavior. Self-efficacy pertains to a sense of control over one's environment and behavior. Self-efficacy beliefs are cognitions that determine whether health behavior change will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and failures. Self-efficacy influences the effort one puts forth to change risk behavior and the persistence to continue striving despite barriers and setbacks that may undermine motivation. Self-efficacy is directly related to health behavior, but it also affects health behaviors indirectly through its impact on goals.

Self-efficacy influences the challenges that people take on as well as how high they set their goals. Individuals with strong self- efficacy select more challenging goals DeVellis&DeVellis, (2000). They focus on opportunities, not on obstacles

2.7 Conceptual Framework

Conceptual frame work indicates dependent and independent variables. Independent variables are knowledge base, perceptions, and infrastructure and socio economic factors while the dependent variable is health seeking behaviours. The independent variable are treated as a whole and not in isolation and are expected to have a positive influence on the dependent variables.

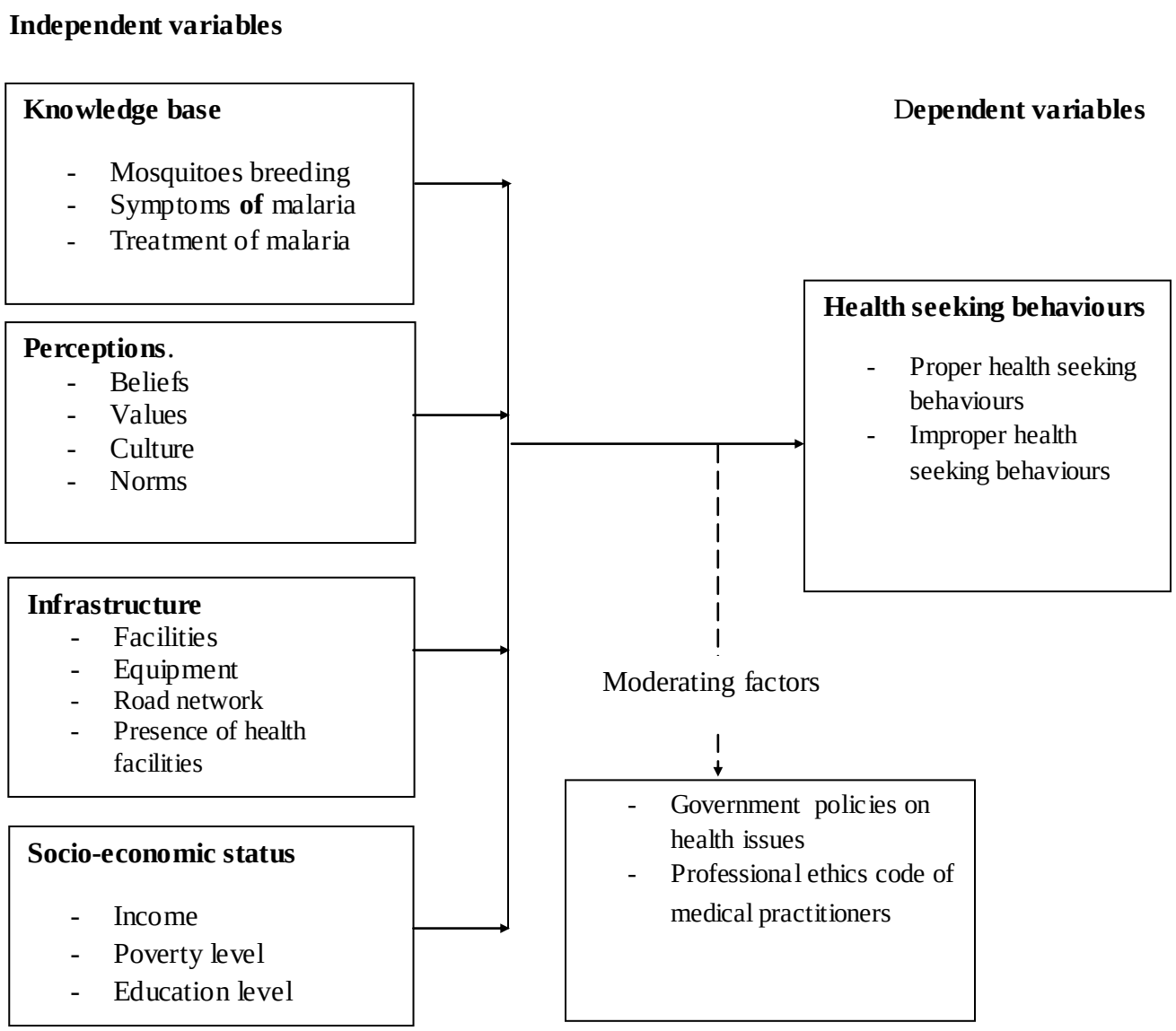

Figure 1: Conceptual Framework.

2.8Summary of Literature Review

The chapter looked at the works of other scholars to determine the gaps that needed to be filled and to build on to what the other scholars had done. From the literature review above it is clear that studies have been done regarding the prevention of malaria in Kenya, use of vector control, indoor residual spraying, use of Insect ides treated Nets (ITNS), Chemo prophylaxis and Intermittent Preventive Treatment (IPT). Still there is need for more knowledge to be given to people on matters concerning malaria prevention.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides the framework within which data was collected. It contains the research design, the study area, the target population, sample size and procedures for selection of the sample. Also included in this chapter are research instruments, piloting, data reliability and validity and methods that were employed in data collection and analysis.

3.2 Research design

The study utilized a descriptive survey design. A research design is the structure of research that is said to be the glue that holds all the elements of the study together. Kothari (2004) describes it as "the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure This design was considered an appropriate tool for collecting information when the goals of the research call for quantitative and qualitative data (Polland, 2005). Descriptive research is concerned with conditions or relationships that exist, practices that prevail, processes that are ongoing, attitudes that are held or trends that are developing (Best, 1970). The design facilitated the collection of information on health – seeking behaviour for prevention and treatment of malaria.

Surveys are one of the popular research method used in educational research because information from a small sample can be generalized to a large population

(Suntisukwongchote, 2004). This study yielded descriptive and inferential information that was useful in making generalizations.

3.3 Target population

60,000 people were stratified into households and each house hold the target population comprised of the 540 households. These were people who resided within Mabonde division. The study also targeted medical practitioners who practiced in Mabonde division.

Table 3.1: Target population

Respondents	**Target population**
Number of house holds	500
Medical practitioners	40
Total	**540**

3.4 Sample size and Sampling procedures

3.4.1 Sample size

A sample is a set of respondents selected from a larger population for the purpose of a survey. (Kothari 2004) confirms that a sample size is part of the population that took part in the study. A sampling frame has the property to identify every single element and include it in the sample. For this study, the sample frame that is used is a list of representative population. The sample size for this study was identified from the Kreijcie and Morgan tables as shown below.

Table 3.2: Sampling frame

Respondents	Target population	Sample size
Number of house holds	500	217
Medical practitioners	40	36
Total	**540**	**253**

3.4.2 Sampling Procedure

This is the process of selecting number of individuals from the population such that the selected group contains elements representative of the characteristics found in the entire group called a sample. (Kothari 2004) consequently samples can be selected by a sampling design. Stratified random sampling technique was used to determine the sample size. Respondents were grouped in strata of Small and Medium enterprises owners and random sampling technique used to get the intended respondents in each stratum. Using the Kreijcie and Morgan table of determining sample size (Kreijcie and Morgan, 1970) a total sample of 247 respondents was obtained for the study. From this sample probability to proportion size was used to come up with the number of each respondent in each stratum.

3.5 Data collection instruments

The questionnaires were used for the purpose of data collection as the data to be collected is quantitative and this was the most preferred instrument. A questionnaire is a document that consists of a number of questions that is written or typed in a definite order

or a form or set of forms. This instrument was preferred because it up holds confidentiality, saves on time, lack interviewer bias and enables collection of data from a large sample and from various regions of the study. The instrument is divided into two parts. The first part A gives the respondents demographic data while the second Part B have closed-ended questions to enable the respondents to express themselves in their own words. The researcher used documents record review.

3.5.1 Piloting of the study

A pilot study was done in Kiminini division which was neibouringWaitaluk division. 10% of the sample was used in the pilot study. The number of respondents used in the pilot study was 25 respondents. A data entry screen was developed using these questionnaires and their data keyed and analyzed. Results were used to make necessary adjustments to the instruments (Polland, 2005). The main aim of piloting was to determining the accuracy and consistence of the instrument before they were used for actual data collection. This also helped the researcher to establish to what extent the instruments measured accurately the attributes under investigation.

3.5.2 Validity of the instruments

Validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested. Kothari (2004); there are three types of validity. Content validity is the extent to which a measuring instrument provides adequate coverage of the topic under study. The researcher ensured that the questions in the questionnaire are framed in such a way that they bring out the answers to the research questions. Criterion-related validity relates to the ability to predict some outcome or

estimate the existence of some current condition. The researcher made a pre-visit to the study area in order to familiarize oneself with the location. On the other hand Construct validity is the degree to which scores on a test can be accounted for by the explanatory constructs of a sound theory.

3.5.3 Reliability of the instruments

Reliability of the instrument refers to a measure of how consistent the results from a test are. In this study the following was ensured during this process. All the initial conditions are kept constant and the same test is administered to the same subjects. The respondents were then given three weeks before the same test was administered again to the same respondents. Correlations were done on the scores from both testing periods to determine the coefficient of reliability. If a high coefficient of 0.7 were gotten then this implied that the instrument would yield data with high test re-test reliability. This were done on all the sub groups of the population and ensured that the results are consistent hence reliability of the instrument. (Kathuri& Pals, 1993).

3.6 Data collection procedures

On approval of the proposal by the Department of extra mural studies, the researcher got an approval letter from the Department of extra-mural Studies of University of Nairobi. The letter will be used by the researcher to acquire a research permit from the National Council of Science and Technology. The questionnaires were hand delivered by the researcher and one hired research assistant to the SME owners and given time of around 15 minutes to respond to the questions. The questionnaires will be administered in a period of two weeks. Before the interview the respondents will be given

an initial introductory and motivating talk by the researcher to prepare them psychologically and also to inform of them the rationale for the study. The researcher will however be as brief as possible to avoid boredom.

3.7 Methods of data analysis

The quantitative data were analysed using statistical methods and expressed in the form of tables, frequencies and percentages. Inferences and interpretation of the data is done using Descriptive statistical components like the Statistical program for social sciences (SPSS) was used to process and analyse the data, which were presented using frequency tables and %ages. After data analysis, the researcher compiled a final report and presented the same for approval by the Faculty Board upon completing of defence.

3.8 Ethical Consideration

Permission to conduct the study was sought from Research and Ethics Committees of the University of Nairobi and consequently obtained a permit and authorization letter from the National Council of Science and Technology, Ministry of Education Science and Technology Permission was sought from the Ambone division administration for entry into the research area. There was no coercion of any nature to the respondents e.g. promising what the researcher could give to the respondents and Consent would be sought from all the participants after explaining the aims, methods, anticipated benefits and potential hazards if any. Participants were then assured that data collected from the study would be kept confidential and used only for purposes of this study. This was also on voluntary basis and participants were free to withdraw from the study at any time. Any information sought would not reveal the identities of the participants.

Table 3.3 Operationalization of Variables

Objectives	**Variables**	**Indicators**	Scale of measurement	Tools of analysis
Influence of knowledge base about malaria on the health seeking behaviours	Knowledge base Health seeking behaviour	Knowledge base on breeding, symptoms and treatment of malaria	Nominal	Descriptive statistics
Influence of perceptions towards malaria on the health seeking behaviours	Perceptions Health seeking behaviour	Negative perceptions on malaria treatment options Positive perceptions	Ordinal	Descriptive statistics
Influence of infrastructure on the health seeking behaviours	Infrastructure Health seeking behaviours	Good road network Poor road network Presence or absence of health facilities	Ordinal	Descriptive statistics
Influence socio-economic factors towards health seeking behaviours	Socio economic factors Health seeking behaviours	Low socio economic status High socio economic status	Ordinal	Descriptive statistics

3.9 Ethical Considerations

Permit for the study was obtained before data collection began. Information consent detailing the nature, purpose, duration, procedure, benefits, possible and risks of the research was obtained from all participants. Each participant was informed that the research was voluntary and they could quit in the process. They were also informed that the information was only to be used for the purpose of the research. Total confidentiality was assured and observed in handling the findings.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSIONOF FINDINGS

4.1 Introduction

This chapter involves presentation, interpretation and discussion of findings. In this chapter of the research report, the researcher presented the data from the field and the data analysis procedures employed to answer the research questions that guided the study questions below; What is the knowledge base about malaria among household members in Mabonde location; What are the perceptions towards malaria among the household members in Mabonde location;What are the infrastructure that affected health seeking behaviours for malaria among household members in Mabonde location;What is the influence of socio-economic factors on the health seeking behaviours for malaria among household members in Mabonde location; Discussions were then formed to help assess the contribution of the data collected to the body of knowledge.

4.2 Response rate

A total of 253 (100%) questionnaires were administered to the respondents in the study area to fill the questionnaires, of which after six days 247 were collected, full filled. for analysis. These247 accounts for 98% response rate. According to Mugenda and Mugenda (1999) a response rate of 70% and above is sufficient and hence it allowed for data analysis.

4.2.1 Background Characteristics of respondents.

Information about background characteristics of respondents of Mabonde division had varied backgrounds. The researcher found it necessary to analyse this data. It includes gender, age, education level and, position in society. In the first instance, the study was conducted among 351 (100%) respondents from Mabonde division. Of the questionnaires that went out to the respondents, only 247 were considered for use in the study as the other were discarded. The study found it necessary to analyse the gender of respondents as there were need to demonstrate the heterogeneity of the respondents.

Table 4.1 Gender of respondents

Description	Frequency	Percentage
Male	144	58
Female	103	42
Total	247	100

The findings as indicated in Table 4.1 aboveshows that 144(58%) of the respondents were male while 103 (42%) were female. This implied that both sexes were adequately represented in the study and that the samples were heterogeneous. The difference in sex of the respondents implied that they viewed Malaria healthcare illness and access to medical help from different stand points.

4.3.2 Age bracket of respondents

The study found it necessary to analyze the age brackets of respondents. This was necessary to bring out the family member bearing age and people who most likely could be parents of the ill persons.

Table 4.2 Age bracket of respondents

Description	Frequency	Percentage
18-28	85	34
29-39years	81	33
40-50 years	65	26
50-60	9	4
Above 60	7	3
Total	247	100

Regarding the age of respondents, Table 4.2 indicates that 85(34%) of the respondents were in the age group of below 18-28 years while 81(33%) of the respondents were 29 – 39 years of age. Another 65 (26%) of the respondents were 40-50 years of age .50-60 had 9(4%) of the respondents and 7(3%)of the respondents were above 60 years. This implied that the majority of the respondents were at a family member bearing age and is better informed about Malaria illness in persons.

4.3.1 Level of education of respondents

Description	Frequency	Percentage
Primary	120	49
Secondary	100	40
Tertiary	27	11
Total	247	100

Regarding the levelofeducationofrespondents, Table 4.3 indicates that 120(49%) of the respondents hadeducationuptoprimarylevelwhile 100(40%) of the respondents wentuptosecondary school level. Another 27 (11%)went to school uptotertiarylevel. This implied that the majority of the respondents had acquired basic education andwerewellinformedabout malaria sickness.

4.5.1 Employment status of respondents

The study found it necessary to analyze the employment status

Description	**Frequency**	**Percentage**
Informal employment	167	68
Formal employment	80	32
Total	247	100

Regarding theemploymentstatusof the respondents, Table 4.5 indicates that 167(68%) of the respondents wereemployedinformallywhile 80(32%) of the respondents hadformalemploymenthencemadeitpossible to access the medical help as required by the patients.

4.3Knowledge base about malaria on health seeking behaviours

Therespondentswereaskedabouttheinfluenceofknowledgebaseaboutmalariaonhealthseekingbehaviours. The findings were as follows;

Description		SD	D	UD	A	SA	TOTAL
Malaria is caused by a mosquito bite from a female anopheles mosquito	Frequency	25	85	02	105	30	247
	Percentage	10	34	01	43	12	100
Mosquitoes only breed during rainy seasons	Frequency	95	21	15	82	34	247
	Percentage	38	09	06	33	14	100
Symptoms of malaria include chills, vomiting and high fever	Frequency	63	40	03	39	102	247
	Percentage	26	16	01	16	41	100
Malaria is preventable through indoor residual spraying and environmental sanitation	Frequency	172	15	13	25	22	247
	Percentage	70	06	05	10	09	100
Malaria is a dangerous disease that can cause death	Frequency	73	125	12	22	15	247
	Percentage	30	50	05	09	06	100
Malaria should be tested before starting treatment.	Frequency	54	92	13	56	32	247
	Percentage	22	37	05	23	13	100
Malaria can be treated by herbal medicines.	Frequency	27	72	21	77	50	247
	Percentage	11	29	9	31	20	100

The majority of respondents agreed that malariaiscausedbymosquitobite. While 25(10%)stronglydisagreed and 85(34%)disagreed to the same. 2(1%) wereundecided, 105(43%)agreed 30(12%)stronglyagreed to the same. This implied that a total of 44 % were not aware that malaria was caused by mosquito bitesfrom a female anopheles mosquito. These findings concur with the findings of Singh, Anand and Yadav (2010) whose findings revealed a very saddening scenario. They concluded that many members of the poor rural communities lack the adequate knowledge base to enable them engage in health seeking behaviours towards the treatment of malaria.Ontheotherhand,therespondentswereaskedifmalaria causing mosquitoesonlybreedduringrainyseasonsand 95(38%)stronglydisagreed. 25(10%)disagreed. 15(6%) however wereundecided. 82(33%) agreed while 34(14%)stronglyagreed. This implied that many of the respondents 116(48%) did not understand the breeding conditions of malaria.

Consequently, it made it hard to prevent the malaria and hence making them to only seek for medication when the symptoms are visible. Also, 63(26%)oftherespondentsstronglydisagreedthatsymptomsofmalariainclude chills,vomitingandhighfever. The findings revealed that 40(16%) however disagreed to the same. 3(1%) wereundecided on the other hand, 39(16%)agreed 102(41%)stronglyagreed to the same.This implied that 42% of the respondents did not know the symptoms of malaria. However 57 % of the respondents were aware of the same. These findings agreed with those of S. Matta, A. Khokhar& T.R. Sachdev(2004) who in their study found out that the findings further showed that 58% of the respondents knew the symptoms of malaria. This therefore meant that that more than half of the

population would engage in health seeking behaviour for malaria as they understood the symptoms for malaria.

Another172(70%) oftherespondentsstronglydisagreed that Malaria is preventable through indoor residual spraying and environmental sanitation15(6%)disagreed,13(5%)wereundecided25(10%)agreedthen22(9%)stronglyagreed. This implied that many of the respondents believed that malaria was caused by other causes which residual spraying and environmental sanitation would not be of any help. These findings concur with those of Pinikahana J., Ogunmekan DA., Trent Rd. in their study in Nigeria, the findings revealed that in another study in Nigeria, 48% of the women believed that malaria was not caused by mosquitoes.Vundule C, MharaKurula S. replied that malaria was caused by eating raw vegetables and drinking dirty water. However in other studies, the respondents were knowledgeable about the breeding places of malaria and hence agreed with the 19% that agreed to residual spraying and environmental hygiene.

Other studies byRasania SK, Bhanot A, Sachdev TR. (2014) found out that 39.2% respondents quoted garbage as the probable breeding place for mosquitoes.73(30%)stronglydisagreedthatmalariais a dangerous diseasethat can causedeath125(50%)disagreed,

12(5%)wereundecidedwhereas22(9%)agreedand15(6%)stronglyagreed. This implied that the respondents did not see malaria as a serious disease that can cause any serious effects such as death. This is an indicator of low knowledge base about the seriousness of the malaria infection and hence the influence on the health seeking behaviours.WhenaskedifMalaria should be tested before starting treatment,

54(22%)stronglydisagreed,92(37%)disagreed,
13(5%)wereundecided56(23%)agreedand32(13%)stronglyagreedwhereas whentherespondentswereaskedifmalariacanbetreatedby herbal medicines27(11%)stronglydisagreed72(29%)disagreed21(9%)wereundecided77(31%)agr eedand50(20%)stronglyagreed.

4.6 Perceptions towards malaria on the health seeking behaviours

Statements	**Description**	**SA**	**A**	**UD**	**D**	**SD**	**TOTAL**
Malaria is caused by witch craft	Frequency	91	99	07	15	35	247
	Percentage	37	40	03	06	14	100
Malaria is caused by being exposed to the cold	Frequency	89	101	05	25	27	247
	Percentage	36	41	02	10	11	100
Medications tend to worsen the disease	Frequency	87	58	09	43	50	247
	Percentage	35	23	04	17	20	100

InTable4.6 therespondentswereaskedabouttheInfluence perceptions towards malaria on the health seeking behaviours andthefollowingfindingsrecorded 91(37%)stronglydisagreedthatMalaria is caused by witch craft 99(40%)oftherespondentsdisagreed. Then 7(3%)wereundecided 15(6%) agreedand35(14%)strongly agreed.

Another89(36%) oftherespondentsstronglydisagreedthatMalaria is caused by being exposed to the coldMalaria101(41%)disagreed,5(2%)wereundecided25(10%)agreedthen27(11%)strongl

yagreed.36(87%)stronglydisagreedthatmedicationtendstoworsenthedisease41(48%)disagreed,20(9%)wereundecidedwhereas10(43%)agreedand11(50%)stronglyagreed this Ahorlu CK, Dunyo SK, Afari EA, Koram KA *et al*(1997). There was a misconception in this study about the real cause of malaria by some of the respondents who associated malaria with alternative causes such as genetic inheritance, eating of oily foods, eating of sugary foods, or heat from the sun.

4.5 Infrastructureon the health seeking behaviours

Statements	**Description**	**SD**	**D**	**UD**	**A**	**SA**	**Total**
The hospital is far from home	Frequency	50	13	22	42	120	247
	Percentage	20	5	9	17	49	100
it takes long time to reach	Frequency	24	78	6	105	34	247
the hospital due to poor means of transport	Percentage	10	32	2	43	14	100
remote areas with bad terrain make	Frequency	12	52	4	79	100	247
it difficult to seek medical attention from hospital	percentage	5	21	2	32	40	100

The majority of respondents50(20%) strongly agreed that the hospital is far from home. 13(5%) however disagreed to the same. 22(9%)wereundecided while 42(17%) agreed to the same. 120(49%) of the respondents stronglyagreed. Then24(10%)stronglydisagreedthatittakeslongtoreachthehospitalduetopoormeansoftransport78(32%)disagreed6(2%)undecided105(43%)agreedand34(14%)stronglyagreed. Howeverwhen asked ifremote areas with bad terrain make it difficult to seek medical

attention from hospital 12(5%) strongly disagreed 52(21%)disagreed4(2%)were undecided then79(32%)agreedwhereas100(40%)strongly agreed to the same.

4.5 Socio-economic factors towards health seeking behaviours

Statements		**SA**	**A**	**UD**	**D**	**SD**	**TOTAL**
It is cheaper to buy malaria medications from the shops	Frequency	102	83	05	31	26	247
	Percentage	41	34	02	13	11	100
It is not important to seek medical advice on malaria cases	Frequency	99	79	09	23	46	247
	Percentage	40	30	03	08	19	100
Traditional healers are as efficient as malaria drugs from the shop.	Frequency	41	39	13	83	71	247
	Percentage	15	16	06	34	29	100
It is difficult to identify malaria symptoms properly	Frequency	87	73	17	45	25	247
	Percentage	35	30	07	18	10	100
Negative experiences with health care services scare us from going to hospital.	Frequency	89	75	13	53	27	247
	Percentage	36	30	05	21	11	100

When the respondents were asked if it was cheaper to buy malaria medications from the shops, 102(41%) strongly agreed, 83(34%) agreed while 57(24%) disagreed on the same. this implied that a large number of the respondents preferred self- medication over going to hospitals for proper diagnosis. This agrees with 70% who agreed that it was not necessary to seek medical attention on malaria cases. Only 27 % found it important to seek medical advice. On the other hand, 31% felt that traditional healers were as efficient as malaria drugs from the shop. However, 63 % disagreed to the same.

Of importance though was the fact that 65% of the respondents agreed that it was difficult to identify malaria symptoms yet about the same number of respondent's preferred self- medication. This was risky as they may be treating a different disease thinking its malaria hence leading to fatality. 66% of the respondents also said that negative experience with health care services scared them from going to hospital. Hence, many resorted to self-medication as a form of health seeking behaviours.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses summary, conclusion, recommendations, contribution to the body of knowledge and suggested areas for further research in the following sub themes

5.2 Summary of findings

Based on the data and other information obtained and analysed to answer the research questions of the study, a number of research findings were presented in chapter four. The findings are summarized in this section

5.2.1 Demographic characteristics of respondents

On the gender of respondents, 144(58%) of the respondents were male while 103 (42%) were female. This implied that both sexes were adequately represented in the study and that the samples were heterogeneous. The difference in sex of the respondents implied that they viewed Malaria healthcare illness and access to medical help from different stand points. On the age bracket of respondents, 85(34%) of the respondents were in the age group of below 18-28 years while 81(33%) of the respondents were 29 – 39 years of age.

Another 65 (26%) of the respondents were 40-50 years of age 50-60 had 9(4%) of the respondents and 7(3%)of the respondents were above 60 years. This implied that the majority of the respondents were at a family member barring age and is

betterinformed about Malaria illness in persons.On the education level of respondents the findings revealed that 120(49%) of the respondents had education up to primary level while 100(40%) of the respondents went up to secondary school level. Another 27 (11%) went to school up to tertiary level.

This implied that the majority of the respondents had acquired basic education and were well informed about malaria sickness. On the employment status of respondents the findings revealed that 167(68%) of the respondents were employed informally while 80(32%) of the respondents had formal employment hence made it possible to access the medical help as required by the patients.

5.2.2 Influence of knowledge base about malaria on health seeking behaviours

On the influence of knowledge base about malaria health seeking behaviours, the findings revealed that the majority of respondents agreed that malaria is caused by mosquito bite. While 25(10%) strongly disagreed and 85(34%) disagreed to the same. 2(1%) were undecided, 105(43%) agreed 30(12%)strongly agreed to the same. On the other hand, the respondents were asked if malaria causing mosquitoes only breed during rainy seasons and 95(38%) strongly disagreed. 25(10%) disagreed. 15(6%) however were undecided. 82(33%) agreed while 34(14%) strongly agreed.

The findings revealed that 40(16%) however disagreed to the same. 3(1%) were undecided on the other hand, 39(16%) agreed 102(41%) strongly agreed to the same. This implied that 42% of the respondents did not know the symptoms of malaria. Another172(70%) of the respondents strongly disagreed that Malaria is preventable through indoor residual spraying and environmental sanitation15(6%)disagreed, 13(5%)

were undecided 25(10%) agreed then 22(9%) strongly agreed. 73(30%) strongly disagreed that malaria is a dangerous disease that can cause death 125(50%) disagreed,12(5%) were undecided whereas22(9%)agreed and15(6%)strongly agreed. When asked if Malaria should be tested before starting treatment, 54(22%) strongly disagreed, 92(37%) disagreed,13(5%) were undecided 56(23%) agreed and 32(13%) strongly agreed whereas when the respondents were asked if malaria can be treated by herbal medicines 27(11%)strongly disagreed 72(29%) disagreed 21(9%) were undecided 77(31%)agreed and 50(20%)strongly agreed.

5.2.3Perceptions towards malaria on the health seekingbehaviours

On the influenceof perceptions towards malaria on the health seeking behaviours and the following findings recorded 91(37%) strongly disagreed that Malaria is caused by witch craft 99(40%)of the respondents disagreed. Then 7(3%)were undecided 15(6%) agreedand35(14%)strongly agreed .Another89(36%) of the respondents strongly disagreed that Malaria is caused by being exposed to the cold Malaria101(41%)disagreed,5(2%)were undecided 25(10%) agreed then 27(11%)strongly agreed. 36(87%) strongly disagreed that medication tends to worsen the disease 41(48%) disagreed,20(9%) were undecided whereas 10(43%) agreed and11(50%)strongly agreed.

5.2.4Infrastructure on the health seeking behaviours

On the Influence of infrastructureon the health seeking behaviours50(20%) strongly agreed that the hospital is far from home. 13(5%) however disagreed to the same. 22(9%)were undecided while 42(17%) agreed to the same. 120(49%)of the respondents strongly agreed. Then 24(10%) strongly disagreed that it takes long to reach the hospital

due to poor means of transport 78 (32%) disagreed 6(2%) undecided 105(43%) agreed and 34(14%) strongly agreed. However when asked if remote areas with bad terrain make it difficult to seek medical attention from hospital 12(5%) strongly disagreed 52(21%) disagreed 4(2%) were undecided then 79(32%) agreed whereas 100(40%) strongly agreed to the same.

On the Influence socio-economic factors towards health seeking behaviours, the findings revealed that the respondents had low socioeconomic status which also determined their health seeking behaviours when they contracted malaria or when members of their house holds contracted malaria. Hence, When the respondents were asked if it was cheaper to buy malaria medications from the shops, 102(41%) strongly agreed, 83(34%) agreed while 57(24%) disagreed on the same. this implied that a large number of the respondents preferred self- medication over going to hospitals for proper diagnosis. This agrees with 70% who agreed that it was not necessary to seek medical attention on malaria cases. Only 27 % found it important to seek medical advice.

On the other hand, 31% felt that traditional healers were as efficient as malaria drugs from the shop. However, 63 % disagreed to the same. Of importance though was the fact that 65% of the respondents agreed that it was difficult to identify malaria symptoms yet about the same number of respondent's preferred self- medication. This was risky as they may be treating a different disease thinking its malaria hence leading to fatality. 66% of the respondents also said that negative experience with health care services scared them from going to hospital. Hence, many resorted to self-medication as a form of health seeking behaviours.

5.3 Conclusions of findings

Below are the conclusions drawn on the findings from the study by the researcher; this has been discussed based on the objectives.On knowledge base about malaria on the health seeking behaviours it was evident thatthe residents of Mabonde division had good knowledge base of the causes of malaria where majority agreed that it is caused by a mosquito bite. However it was not surprising that some of the residents did not have knowledge base on the causes of malaria. This was almost half of the respondents. Hence the knowledge base on the causes of malaria. On the breeding season for malaria causing mosquitoes, a few of the respondents believed it was true that malaria occurred only during the wet season. Consequently, this percentage of respondents was also more likely not to seektreatment especially during the dry season.

On theinfrastructureon the health seeking behaviours, most of the respondents were rural dwellers and lacked medical facilities to enable convenient access to malaria medication. The means of transport was also lacking in most areas hence affecting the health seeking behaviours of the respondents

On socio-economic factors towards health seeking behaviours, the residents of Mabonde division had low socio economic status which affected their knowledge base and the ability to access malaria medication and in general their health seeking behaviours.

5.4 Recommendations

On knowledge base about malaria on the health seeking behaviours, more training on malaria ought to be done to enable many people in the area to have a sound knowledge base that would enable them to make adequate health seeking behaviours.

On perceptions towards malaria on the health seeking behaviours, more advocacies should be done to help the community understand how malaria is transmitted and why it is important to seek medical attention at all times when one falls sick.

On infrastructureon the health seeking behaviours, the county government should work towards improving the road network for ease of access to the health facilities. It should also provide health facilities within reach of the community to enhance the health seeking behaviours of the community. The personnel at the health facilities should also be trained on customer relations.

On socio-economic factors towards health seeking behaviours, the community should be trained and advised to engage more in income generating activities to help them afford medical care. They should also be advised .on the importance of joining healthcare systems such as NHIF for cheaper health care services.

5.5 Contributions to the body of knowledge

Objectives	Contributions
Influence of knowledge base about malaria on the health seeking behaviours	The in habitants of Mabonde division have very low socio economic status this contributes highly to their inability to access Malaria health care for their ill persons. This is as evidenced by the level of education and the income levels.
Influence of perceptions towards malaria on the health seeking behaviours	Mabonde division has a rugged topography with a poor road network. This hinders access to the majority of rural dwellers who cannot access Malaria health care.it also has no psychiatrist in the only medical facility and this has made the condition worse for the parents with ill persons; hence the in ability to access Malaria health acre.
Influence infrastructure on the health seeking behaviours	The in habitants of Mabonde division are very cultural people and still believe that Malaria illness is as a result of witch craft and curses or punishment from the ancestors. This has contributed to the lack of access to Malaria health care services.

Influence socio-economic factors towards health seeking behaviours	The inhabitants perceive Malaria illness as a condition that cannot be healed and that it is a waste of time to seek medical services. They however revert to self-medication which may prove detrimental to Malaria.

Table 5.1 Contributions to the body of knowledge

5.6 Suggested areas for further research

The researcher suggests the following further areas of research

1. The researcher suggests that a similar study be carried out in an urban centre where parents have high socioeconomic status and there are better health care facilities to determine how the findings will differ
2. The researcher suggests that a study be carried out on the influence of advocacy on the access to Malaria health care services to rural populations.
3. The researcher further suggested that a similar study be carried out in a different sub county to determine if the findings will concur.

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APPENDICES

APPENDIX 1: TRANSMITTAL LETTER

Dear Respondents,

My name is IrineMoraaOngweso, a student in the University of Nairobi undertaking Master's Degree in Project Planning and management.

As requirement of a master's degree, I'm conducting a study on factors influencing health – seeking behaviours for prevention and treatment of malaria among household members in Mabonde division, Kiminini Sub-county, Trans-Nzoia County, Kenya.

Findings of this project will guide service providers and local leadership to address the health care concerns in the community. In this regard, your response will assist me in understanding and providing a professional position on this issue.

All information will be kept confidential and to this extent all questionnaires will also be anonymous. Your honesty in answering questions will be highly appreciated and your decision to participate in the study is voluntary.

Thank you in advance for your consideration.

Yours faithfully,

IreneMoraaOngwesa.

APPENDIX II QUESTIONNAIRE

Dear respondent,

Questionnaire meant to explore Factors Influencing Health Seeking Behaviour for the prevention and treatment of Malaria in Mabonde location, Trans Nzoia County.

(Please note that the study is specifically for learning purposes, all the information given will be treated with due confidentiality).

PART A: Social – demographic data.

1. Gender: Male ☐ Female ☐
2. Age: 18-28 ☐ 29-39 ☐ 40-50 ☐ above 60 ☐
3. Level of education : Primary ☐ Secondary ☐ Tertiary ☐
4. Employment status: Informal employment ☐ Formal employment ☐

PART B: 1.Influence of knowledge base about malaria on health seeking behaviours

In the following statements tick the appropriate answer to you, whereby:

1- STRONGLY DISAGREE, 2-DISAGREE, 3 UNDECIDED, 4-AGREE and

5 – STRONGLY AGREE

Description		SD	D	UD	A	SA	TOTAL
Malaria is caused by a mosquito bite from a female anopheles mosquito	Frequency						
	Percentage						
Mosquitoes only breed during rainy seasons	Frequency						
	Percentage						
Symptoms of malaria include chills, vomiting and high fever	Frequency						
	Percentage						
Malaria is preventable through indoor residual spraying and environmental sanitation	Frequency						
	Percentage						
Malaria is a dangerous disease that can cause death	Frequency						
	Percentage						
Malaria should be tested before starting treatment.	Frequency						
	Percentage						
Malaria can be treated by herbal medicines.	Frequency						
	Percentage						

PART B: 2. Influence perceptions towards malaria on the health seeking behaviours

Statements	Description	SA	A	UD	D	SD	TOTAL

Malaria is caused by witch craft	Frequency						
	Percentage						
Malaria is caused by being exposed to the cold	Frequency						
	Percentage						
Medications tend to worsen the disease	Frequency						
	Percentage						

PART B: 3. Influenceinfrastructure on the health seeking behaviours

Statements	Description	SD	D	UD	A	SA	Totals
The hospital is far from home	Frequency						
	Percentage						
it takes long time to reach the hospital due to poor means of transport	Frequency						
	Percentage						
remote areas with bad terrain make it difficult to seek medical attention from hospital	Frequency						
	percentage						

PART B: 4. Influence socio-economic factors towards health seeking behaviours

Statements		SA	A	UD	D	SD	TOTAL
It is cheaper to buy malaria medications from the shops	Frequency						
	Percentage						
It is not important to seek medical advice on malaria cases	Frequency						
	Percentage						
Traditional healers are as efficient as malaria drugs from the shop.	Frequency						
	Percentage						
It is difficult to identify malaria symptoms properly	Frequency						
	Percentage						
Negative experience with health care services scares us from going to hospital.	Frequency						
	Percentage						

PART C: The Kreijcie and Morgan tables for determining sample sizes

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

PERMITS

THIS IS TO CERTIFY THAT:
MS. IRINE MORAA ONGWESA
of UNIVESITY OF NAIROBI, 1017-3200
kitale,has been permitted to conduct
research in *Transnzoia County*

on the topic: *FACTORS INFLUENCING HEALTH - SEEKING BEHAVIOURS FOR PREVENTION AND TREATMENT OF MALARIA AMONG HOUSEHOLD MEMBERS IN MABONDE LOCATION, TRANS NZOIA COUNTY, KENYA*

for the period ending:
6th November,2015

Permit No : NACOSTI/P/15/9971/6007
Date Of Issue : 10th June,2015
Fee Recieved :Ksh 1,000

.....
Applicant's Signature

.....
Director General
National Commission for Science, Technology & Innovation

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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9th Floor, Utalii House
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NAIROBI-KENYA

Ref: No.

Date: **10th June, 2015**

NACOSTI/P/15/9971/6007

Irine Moraa Ongwesa
University of Nairobi
P.O Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Factors influencing health – seeking behaviours for prevention and treatment of malaria among household members in Mabonde Location, Trans Nzoia County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Trans Nzoia County** for a period ending **6th November, 2015.**

You are advised to report **the County Commissioner, the County Director of Education and the County Coordinator of Health, Trans Nzoia County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

DR. M. K. RUGUTT, PhD, HSC.
DIRECTOR-GENERAL/CEO

Copy to

The County Commissioner
Trans Nzoia County.

The County Director of Education
Trans Nzoia County.