

KNOWLEDGE, ATTITUDES AND PRACTICES OF MOTHERS ATTENDING
CHILD HEALTH CLINIC AT KATOOKE HCIII IN KYENJOJO
DISTRICT ON MALARIA PREVENTION AND CONTROL
IN CHILDREN UNDER-FIVE YEARS.

A RESEARCH REPORT SUBMITTED TO UGANDA NURSES AND
MIDWIVES EXAMINATION BOARD AS A REQUIREMENT IN
PARTIAL FULFILLMENT FOR THE AWARD OF
DIPLOMAIN NURSING SCIENCES

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ABSTRACT

Approximately, out of 3.4 billion people worldwide who are exposed to malaria annually, 1.2 billion are mainly children 0-5 years, and pregnant women. (WHO,2013). Malaria is the leading cause of morbidity and mortality in Uganda and is responsible for up to 40% of all outpatient visits, 25% of all hospital admissions and 14% of all hospital deaths. From Unpublished medical records of Katooke health Centre III (2016) indicated that approximately 15 malaria cases among under-five years children reported every week, equivalent to 720 cases that year.

A quantitative descriptive cross-sectional study employed simple random sampling technique to select mothers and care takers of under-five years children as participants in the study to recruit 67 respondents from whom data was collected using a structured questionnaire.

The results indicated that; majority of mothers and care takers were aged 20-30 years (50.7%), biological parents (86.4%). With low levels of education (with 66.6% primary level, and 22.3% none at all), peasants (80.5%). Majority (95.5%) had ever heard about malaria in under five years children; mothers knew fever (89.5%), vomiting (74.6%) and diarrhea (67.1%) as signs of malaria. Mothers lacked knowledge on vulnerable age group (<5years children). Majority (80.5%) were confident to use malaria prevention and control measures, where (83.5%) strongly agreed that sleeping under ITNs prevents malaria in <5, and (64.1%) strongly agreed that chemical spraying prevents malaria in under five. Whereas there were misconceptions in (67.1%) of mothers that contaminated food cause malaria, (38.8%) that immunization prevents malaria. Majority (59.7%) slashed near homes to prevent malaria in under five; only (46.2%) slept their < 5 children under ITNs. Mothers (62.6%) go to health unit for treatment of malaria in <5, however, majority (35.8%) seek health care late by 13-18 hours.

The study concluded that, Mothers had knowledge on malaria prevention; they knew symptoms of simple malaria like fever, but lacked knowledge on signs of severe and complicated malaria like jaundice, parlor, organomegaly and convulsions. They lacked knowledge on vulnerability to malaria of under five years to adults. Had positive attitudes towards ITNs, Spraying, while had misconceptions on contaminated food, misty weather as causes of malaria. Knowledge on malaria prevention in under five was high, but realistic practices on malaria prevention and control were very low, where majority did not use ITNs, and in case of suspected malaria, they delayed to seek health care early.

DECLARATION

I **KISEMBO RICHARD** declare that this research report is my original work and has never been presented in any institution for any academic year.

Signature.....

Date/...../.....

APPROVAL

I hereby accept this report for the above research study and approve it for submission to UNIMEB for marking.

Supervisor; MR. TURYASINGURA JONHAN

Signature Date/...../.....

Dean School of Nursing; MRS. KABANYORO ANNET

Signature Date/...../.....

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AUTHORISATION

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Author; MR.KISEMBO RICHARD

Signature..... Date/...../.....

DEDICATION

I dedicate this work to my beloved parents, all my sisters and brothers and friends for their value-full contributions towards my life as well as academic pursuit.

God bless the family.

ACKNOWLEDGMENT

No single mind is capable of completing magnitude project of this caliber without the assistance and vision of many caring people while in school.

Blessed be the almighty God for His grace and measure of life.

I am greatly indebted to acknowledge my parents and family members at large for the financial, spiritual and moral support rendered to me during academic pursuit.

My gratitude goes to my supervisor, Mr. Turyasingura Jonhan for his professionalism and whose commitment, guidance and corrections made me succeed to present a complete report.

I acknowledge my parents especially my mother, my sisters (Veronica, Annet, Agnes, and Jane), my brother Ramadhan who have continuously stood with me during my academic pursuit.

Lastly, thanks goes to nursing school staff members for nurturing us academically professionally and morally, my role model Mr. Niyonsenga Meshack and to my fellow students especially Saison, Evelyn, Gerald, Miriam, Yusuf, Joanita, Lydia and Cosmas that we have walked together since November 2014 up to now. They have been a blessing during the course of my study.

DEFINITION OF KEY TERMS

Attitude.	Is a way of thinking or feeling about malaria.
Chemo-prophylaxis:	use of anti-malaria chemical treatment prior to signs and symptoms as a way of preventing malaria.
Control	means minimizing the risk that is likely to happen due to the existing problem.
Endemic	this refers to the constant presence of a disease.
Health.	According to world health organization (who).health refers to a state of complete physical, mental, social and economic wellbeing of an individual and not merely in the absence of a disease or infirmity.
Knowledge.	This is the general context of what mothers of under five years children know about prevention and control of malaria in under five years children.
Neonatal mortality rate.	Is the total number of neonates dying before reaching 28 days of life per 1000 live birth in a given year due to malaria.
Practice.	This encompasses all interventions employed by mothers and caretakers of fewer than five years children to prevent and control malaria.
Prevention	this means inhibiting the occurrence of a disease or a problem of malaria. Prevention and control.

LIST OF ACRONYMS

AIDS:	acquired immune deficiency syndrome
IPT-SP:	intermittent presumptive treatment with pyridoxine and pyramethamine.
ITNs:	insecticide treated mosquito nets.
LLITNs:	long lasting insecticide treated mosquito nets
MOH:	Ministry of health
SMC:	seasonal malaria chemoprevention.
UNICEF:	United Nations international for children emergency fund.
WHO	World health organization

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CHAPTER ONE

1.0 INTRODUCTION

This chapter presents the introduction of the research study, background, problem statement, purpose of the study, specific objectives, research questions and justification of the research study.

1.1 BACK GROUND

Malaria is a mosquito born protozoan infection of humans and other animals caused by parasitic protozoa of genus *Plasmodium* (WHO, 2015).

Approximately, out of 3.4 billion people worldwide who are exposed annually, 1.2 billion are mainly children 0-5 years, and pregnant women. (WHO, 2013)

By 2009, malaria was one of devastating diseases killing more than 1 million people annually where pregnant women, children, and immune-compromised individuals had the highest morbidity and mortality, and Africa bearing the heaviest burden (Julianna and Nawal, 2009).

Children and Pregnant women are 3 times more likely to suffer from severely as a result of malarial infection compared to their counterparts.

In malaria endemic areas, it is estimated that at least 25% of children under 5 years are infected with malaria, with the highest risk of infection and morbidity in neonates and infants. This being because, in high transmission areas, partial immunity is acquired at childhood. However, if this is does not happen, there is rapid progression of disease to severity and death among children being enhanced

by severe anemia, hypoglycemia, cerebral malaria which are more commonly seen among children under five than their adult counterparts (WHO, 2014).

There are five species of malaria parasites which infect humans namely: *Plasmodium falciparum*, *Plasmodium vivax*, *Plasmodium ovale*, *Plasmodium malariae* and *P. knowlesi* (WHO, 2013). Of these, *P. falciparum* is the most virulent malaria parasite in Uganda (Bauer, 2015).

Among children, WHO recommended Insecticide-treated nets to be provided as early as possible to all households living in malaria endemic areas, epidemic and disaster situations and according to perceived need in the locality and be used throughout pregnancy to mothers, and postpartum to neonates and children (WHO, 2014).

1.2 PROBLEM STATEMENT

Malaria is endemic in over 95% areas of the country. According to a recent report from the World Health Organization (WHO), Uganda has the world's highest malaria incidence, with a rate of 478 cases per 1000 population per year (Bauer 2015).

Malaria is the leading cause of morbidity and mortality in Uganda and is responsible for up to 40% of all outpatient visits, 25% of all hospital admissions and 14% of all hospital deaths. The overall malaria-specific mortality is estimated to be between 70,000 and 100,000 child deaths annually in Uganda, a death toll that far exceeds that of HIV/AIDS (Bauer, 2015).

It's non selective in gender, yet children under-five years and pregnant mothers suffer its impacts than the rest of population. (Julianna and Nawal2009).

Unpublished medical records of Katooke health Centre III (2016) indicated that approximately 15 malaria cases among under-five years children reported every week, equivalent to 720 cases that year.

There is no research found in Katooke sub county records about the problem, to assess how mothers prevent malaria, their knowledge and attitudes towards malaria prevention and control particularly in children under-five years through a number of researches, will give a basis for best interventions to lower down this endemic.

1.3 STUDY PURPOSE

To assess knowledge, attitude and practices among Care Takers of under-five (5) years attending child health clinic at Katooke health center III in Kyenjojo District on malaria prevention and control.

1.4 SPECIFIC OBJECTIVES

- i. To examine knowledge among Care Takers of under-five attending child health clinic at Katooke HCIII, Kyenjojo District on malaria prevention and control.
- ii. To assess attitude among care takers of under-five attending child health clinic at Katooke HCIII Kyenjojo District on malaria prevention and control.
- iii. To assess prevention practices among Care Takers of under-five attending child health clinic at Katooke HCIII Kyenjojo District on malaria prevention and control.

1.5 RESEARCH QUESTIONS

- I. What is the knowledge among Care Takers of under-five years children on malaria prevention and control!?
- II. What are the attitudes of Care Takers of below 5years attending Katooke HCIII, towards malaria prevention and control!?
- III. What are the malaria prevention practices carried out by mothers/Care Takers of <5years children attending Katooke HCIII!?

1.6 STUDY JUSTIFICATION

In spite of the World Health Organization's recommendations and strategies on Malaria prevention and control more so in children under 5 years, malaria continues to be a threat to the lives of children. However, studies done in various places have demonstrated that even in small locations as Districts or villages, there is a variation in the micro-epidemiology of malaria Brooker et al(2004).This has attracted the

government to extend preventive measures like supply of insecticide treated nets to these areas not paying attention to educate people on how malaria spread and the different practices to eradicate the occurrences.

Thus, for successful malaria control and prevention measures should be based on an understanding of the location, extent, of the disease as well as the knowledge and perception of care takers.

The study findings will be beneficial to;

District health team

For planning malaria control and prevention interventions.

Nursing research

In knowledge enrichment and yardstick of reference and comparison of data obtained elsewhere in Uganda.

Community health team

For proper sensitization of the community members and health education about the knowledge, attitude and practices on malaria control and prevention in young children below 5years.

CHAPTER TWO: LITERATURE REVIEW

2.1.0 Introduction

This chapter includes review of other findings from related studies and findings from other scholars and researchers. It is arranged following introduction, literature on mother's knowledge on malaria prevention, attitudes on malaria

prevention and control, and existing malaria prevention and control practices.

Malaria is endemic in over 95% of the country. According to a recent report from the World Health Organization (WHO), Uganda has the world's highest malaria incidence, with a rate of 478 cases per 1000 population per year (Bauer 2015).

Malaria is the leading cause of morbidity and mortality in Uganda and is responsible for up to 40% of all outpatient visits, 25% of all hospital admissions and 14% of all hospital deaths. The overall malaria-specific mortality is estimated to be between 70,000 and 100,000 child deaths annually in Uganda, a death toll that far exceeds that of HIV/AIDS (Bauer, 2015).

2.1.1 Malaria Prevention

Current prevention of malarial disease in pregnancy relies on two main strategies: providing pregnant women with insecticide-treated bed nets (ITN) and intermittent preventive treatment (IPT) with anti-malarial medication of Sulfadoxine-pyrimethamine. IPT refers to the administration of 2 or more doses of chemoprophylaxis after 20 weeks of gestation in an attempt to reduce subclinical malaria load (WHO, 2014).

Although WHO (2014) recommends that all pregnant women living in malaria-endemic regions use insecticide-treated bed nets and IPTp-SP (intermittent preventive treatment in pregnancy with at least 2 doses of *sulfadoxine-pyrimethamine*), studies show poor uptake of both preventative efforts among pregnant women. The malaria disease can be prevented by avoiding mosquito bites through using insecticide treated mosquito nets (ITNs) and insect repellants, or with

mosquito-control measures such as spraying insecticides and draining standing water.(fettene et al,2009).

2.2 KNOWLEDGE ON MALARIA PREVENTION.

According to the research done in northern state in Nigeria, found out that about 36% of women were aware of ITNs in malaria prevention , but less than a third 27% had ever use it and only 19% were currently using it while 25% of the total had a member of their households using ITNs. (Musa et al 2010)

According to research study conducted among women attending ANC at Usmanu Danfodiyo university Teaching Hospital found out that 91% of women that had formal education had ever heard of ITNs(Ocheet al 2010).

A community based quantitative descriptive study in aliero, Kebbi state of northern Nigeria, used four villages as sample, and found that there was a comprehensive knowledge on malaria prevention (90%) of mothers, but not reflecting in their practices(16%) mothers had good knowledge on mosquito behavior/bleeding areas(64.5%, resting places(70%) and biting times(81%)(Rupashree et al 2014).

A study on care givers malaria knowledge, attitudes, beliefs and related factors in Bata district in Equatorial Guinea, out of 440 households selected from 18 rural villages and 26 neighboring urban areas found out that 42% urban and 65% of rural care givers did not know how malaria is transmitted and prevented. Together with being from rural, the other factors associated with limited knowledge on malaria prevention include low education levels and poor economic status. When asked the best way to prevent malaria, 55.12% of urban population, and 33% of rural population knew ITNs as best way to prevent mosquito bites. Urban population also frequently raised spraying households as a way to prevent malaria than rural

households, while there was crosscutting misconception that boiling water for drinking prevents malaria. Only 33.7 of urban households had received advice on malaria, major source being radios and Televisions, while their rural counterparts were 28%, main source being community health workers.(Maria et al 2016).

A study in Madagascar to assess effects of social demographic factors on knowledge of malaria prevention, indicated that both mothers education and household wealth influence their knowledge and practices on malaria prevention, where poor knowledge on malaria prevention was attributed to 21% of mothers that lacked primary education.(Sean et al 2015).

2.3 ATTITUDES OF MOTHERS ON MALARIA PREVENTIPON AND CONTROL OF UNDER- FIVE YEARS CHILDREN.

Insecticides Treated nets are safe; the chemical used in treating the nets has been selected to kill anopheles mosquitoes and other related vectors. The ITNs are harmless to children, pregnant mothers, and all individuals sleeping under the net. The insecticide used in treating the nets has been approved by (MOH and WHO, 2014).

A study conducted in Ethiopia on attitudes of mothers of under five year children towards ITNs in malaria control found mothers with negative attitude that ITNs have negative effects and their inappropriate usage, frequency are reported to hamper effective utilization of ITNs in different parts of Ethiopia (Dagne and Deressa 2008, Animet *et al*, 2008, Fettene *et al*, 2009).

A cross-sectional study to assess mothers perception towards childhood malaria in rural states of Ise-Orun, Nigeria, implication for malaria control, found out that 85.8% of mothers had poor perception on malaria transmission as they Associated

malaria to other sources other than mosquito bites whereas only 14.2% ascribed malaria to mosquito bites only. Majority of mothers (85.8%) practiced malaria prevention, including ITNs (70%), chemoprophylaxis (20.1%) and environmental sanitation(44.8%). Of 200 mothers whose children had had malaria in 3 months prior to the research study, home treatment was adopted by 87.5%, orthodox medicine and local herbs by 91.5%, reasons for not seeking medical health treatment at existing health facilities being mothers preference for herbal remedies(50.6%). Lack of formal education was the only independent factor of poor perception among mothers(OR=1.91,95% CI=1.18, 3.12) (Adebola and Kemisola 2015).

2.4 PRACTICES OF MOTHERS ON MALARIA PREVENTION AND CONTROL OF UNDER- FIVE YEARS CHILDREN.

According to current WHO strategy on malaria prevention in children under five years as released April 2017, recommends (LLINs), long lasting insecticide mosquito nets and insecticide treated mosquito nets(ITNs), use of seasonal malaria chemoprevention (SMC) in children 3-59 months in areas with seasonal high transmission , and intermittent presumptive treatment (IPTi) of malaria in children who live in areas with moderate to high transmission except those where SMC is used and prompt diagnosis and treatment of malaria in children.(WHO 2017).

A community based cross-sectional descriptive study in northern Nigeria found out that, Seeking hospital care for febrile child was a good practice observed among mothers and care takers,(68.5%), but attitude regarding the best anti-malarial therapy was limited (56.7%) chloroquine.(Rupashree et al 2014).

A cross-sectional study on knowledge, attitudes and practices on malaria in four municipalities of Colombia that istieralta, Buenaventura, Tumaco found out that higher percentages of people in high risk areas owned ITNs, however only 64.5% knew correct usage of the nets. Also overall educational level about malaria was higher, although relatives and friends took large percentages in disseminating information about malaria with 39% and 35% respectively, while health workers educated only 25% of population about malaria (David et al 2014).

On early diagnosis and treatment, WHO recommends administration of chemoprevention therapy monthly to all children under five years using amodiaquine plus (sulfadoxime and pyremethamine) (WHO 2016).

CHAPTER THREE: METHODOLOGY

3.1 Introduction;

This chapter presents an overview of the methods under which this research was carried out, including study area, study design and rationale, sample size determination, sampling procedure, definition of variables, selection criteria, ethical consideration, data collection and management, quality control, data analysis, dissemination of results and study limitations.

3.2 Study Design and rationale.

Quantitative Cross-sectional study design was used in which the researcher determined knowledge, attitudes and practices on mothers attending child clinic in Katooke health Centre III for data to be collected once. This was to allow quick data collection and getting the primary data directly from mothers and care takers of under five years children as direct data source.

3.3 Study setting and rationale;

The study was carried out at Katooke health Centre III, in Katooke sub-county, Kyenjojo district which is located at approximately 270 kilometers Fortportal road, west of Kampala, Uganda's capital, bordered by Kibale District to the north, Kyegegwa District to the east, Kamwenge District to the south and Kabarole District to the west.

Katooke health centre III serves a population of approximately 30,000 people including those from Katooke Sub County and beyond. The main health service consumers are farmers, carrying out basically livestock rearing and crop production on subsistence basis. This area receives moderate rain which facilitates adequate crop production throughout the year, a factor that has mushroomed steady population growth hence increased health service consumption at the health Centre. However, these well distributed rains facilitate dumpy and moist reservoirs for mosquito breeding which has made this region susceptible to malaria endemic.

3.4 Study population;

The study population was mothers and caretakers of under- five year's children attending child clinic in Katooke health Centre III.

This is because they are the first contact for these children right from birth and throughout their growth, hence deemed direct assessors of health and well being for these children and force for implementation of preventive measures on behalf of these children.

3.4.1 Sample Size determination.

The researcher determined the sample size of the population using the Fisher's formula, which is shown below;

$$n = \frac{Z^2 pq}{d^2}$$

Where;

n= sample size

Z = standard normal deviation at the required degree of accuracy which at 96% is 1.96 (3.8416)

P = proportion of women preventing malaria in under 5 years children (P = 0.5) constant

q = 1-p (Percentage of women that did not prevent malaria in under five children) q = 1- 0.5 = 0.5

d = level of precision 12% = 0.12

$$n = \frac{1.96^2 \times 0.5 \times 0.5}{0.12 \times 0.12} = 67$$

. Therefore, the sample size was 67

3.4.2 Sampling procedure;

Simple random sampling method was used for quantitative data collection. To reduce bias, the number of mothers of children under five-year in Katooke sub-county attending the young child health clinic at Katooke health Centre III were selected. “Yes” and “no” words were written on similar pieces of paper, folded them and put them in a basket in a ratio of 67:67. Then they chose one at a time with replacement, those who randomly picked “yes” were given questionnaires to fill until we got 67 respondents equivalent to the sample size.

3.4.3 Inclusion and Exclusion Criteria

3.4.3.1 Inclusion Criteria;

The participants included all consented mothers and care takers of under-five years children with sound mind, that were attending Katooke health Centre III during time of data collection. Those who could not read and write were assisted in filling the questionnaire, interviewing them using the understandable language.

3.4.3.2 Exclusion Criteria;

The study excluded all those who were mentally ill and those who were deaf and without sound mind that could not make them to consent.

3.5 Definition of variables

3.5.1 Independent variables;

Knowledge and attitudes of mothers on malaria prevention in under-five years children.

3.5.2 Dependent variables;

Mothers practices of malaria prevention in under-five years children.

3.6 Research instruments;

A self developed questionnaire with both open and close ended questions was designed and administered to the selected respondents who had consented to participate in the study. The researcher provided guidance and interpretation where there was a need through one on one interview for proper and accurate data collection.

3.7 Data collection procedure.

After the approval of the proposal by the research committee of school of nursing sciences, an introductory letter Was issued which the researcher used for seeking permission from Katooke health centre III. Before sampling process was done, the researcher introduced himself to the prospective participants and read to the individual participant the consent form that detailed the title and purpose of the study as well as the rights of the participant. Whenever a participant agreed to be interviewed he/she was asked to provide written consent by signing or fingerprinting. Whenever there was refusal to participate the interview would not proceed.

After obtaining the written consent, the researcher entered the questionnaire serial number and date of interview and proceeded from the first up to the last question using a language understood by the participant. The researcher entered responses given by the participant by ticking the appropriate responses and entering the same number in to the coding box. This was done to ensure data quality as the response

to number ticked is supposed to be the same as the one entered in the coding box. The researcher reviewed the questionnaires on a daily basis to ensure they are being completed correctly and any errors corrected to avoid being repeated. The process of data collection was continued until the sample size was achieved. All completed questionnaires were kept safe by the researcher until time of analysis.

3.7.1 Data management and data analysis.

The data obtained was recorded and checked for completeness and accuracy on a daily basis after data collection at the end of the day. This was followed by coding and entry of the data using Epi info 3.4.1 software for Windows. Then data was compiled and stored in a computer Microsoft Excel and Microsoft word where they were converted to frequencies (tables) and figures which have been presented in tabulations, pie charts and histograms. And entry into Statistical Package for Social Scientists (SPSS) version 16.0 software for analysis. Analysed data was interpreted manually to bring out the shown information to determine knowledge, attitudes and practices on malaria prevention and control.

3.8 Ethical Consideration

An introductory letter was obtained from the school of nursing administrator to authorities of Katooke HCIII for approval, then head of department of YCC (Young child clinic). Also the researcher sought permission from the participants by introducing himself and his assistant to participants, and obtaining their informed consent before carrying out the data collection. The participants were assured that all the information they gave was confidential and their participation were very important.

3.9 Limitations of the study.

The research data collection and report writing was done coincidentally with community placement hence limited time; however, this was counteracted by maximum use of little time that was available productively.

3.10 Dissemination of results

Five copies of the research print outs in hard copy have been produced and disseminated as follow;

To Uganda nurses and midwives examinations board for award of diploma in nursing sciences, Kampala international school of nursing and midwifery faculty library for other scholars' reference, in charge Katooke health Centre III for consideration of research based health education to mothers, Kyenjojo district health department to improve on malaria control measures, then to the researcher for further reference and future publishing.

CHAPTER IV: STUDY FINDINGS.

4.1 Introduction.

This chapter presents the findings obtained from the study about “knowledge, attitudes and practices of mothers and care takers attending child health clinic at Katooke HCIII on malaria prevention and control in under five years children”.

The findings are arranged following demographic characteristics of health mothers and care takers, who were the study population, under study objectives

that is; knowledge of mothers on malaria prevention and control, attitudes of mothers towards malaria prevention and control, practices of mothers on malaria prevention and control.

4.2 Demographic characteristics of mothers and care takers.

Mothers demographic characteristics were assessed as deemed focal to influence malaria prevention and control knowledge, attitudes and practices. They include age, whether they are parents of children or just caretakers, level of education, tribe, religion, occupation and parity.

Table 1: Demographic characteristics of study population n=67

Demographic characteristic	frequency(n)	Percentage (%)
Age.		
<20	2	2.9
20-30	34	50.7
30-40	20	29.8
Above 40	11	16.4
TOTAL	67	100
care status		
biological parent	58	86.5
caretaker/relative	9	13.5
TOTAL	67	100
level of education		
none	15	22.3

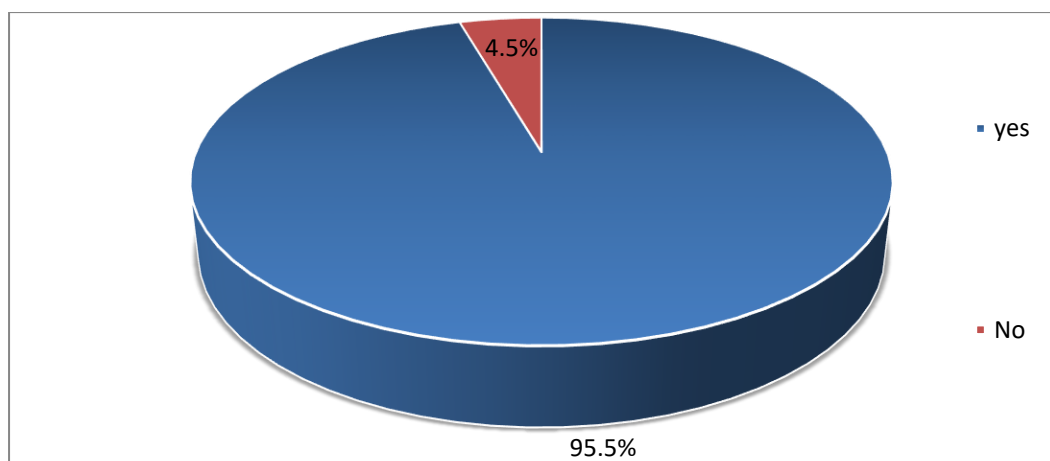
primary	40	66.6
secondary	8	11.9
tertiary	4	5.9
TOTAL	67	100
Tribe.		
mutooro	24	35.8
munyooro	21	31.3
munyankole	4	5.9
mukyiga	10	14.9
others	8	11.9
TOTAL	67	100
Religion.		
Muslim	5	7.4
catholic	28	41.7
protestant	23	34.3
Pentecostal	8	11.9
others	3	4.4
TOTAL	67	100
Occupation.		
peasant	54	80.5
businesswoman	11	16.4
civil servant	2	2.9
TOTAL	67	100

Parity.		
1	8	11.9
2-3	20	29.8
4-6	32	55.2
>6	07	10.4
TOTAL	67	100

Majority of the respondents were aged between 20-30 years 34(50.7%), biological parents dominating with 58(86.4%). majority of mothers had at least had primary education, with 40(66.6%), followed by those that had not had any formal education with 15(22.3%), Catholics and protestant formed the majority of religious faith with 28(41.7%) and 23(34.3%) respectively, while other religions being composed by remaining percentages. Basically, the biggest percentage of the respondents depend on subsistence farming/peasants with 54(80.5%), while a few were businessmen/businesswomen and civil servants with 11(16.4) and 2(2.9) percentages respectively. 4-6 parity mothers formed the mean 32(55.2%) parity range, where as Para 1, and Para 6 mothers formed least and slightly differing ranges with 11.9 and 10.4 percentages respectively.

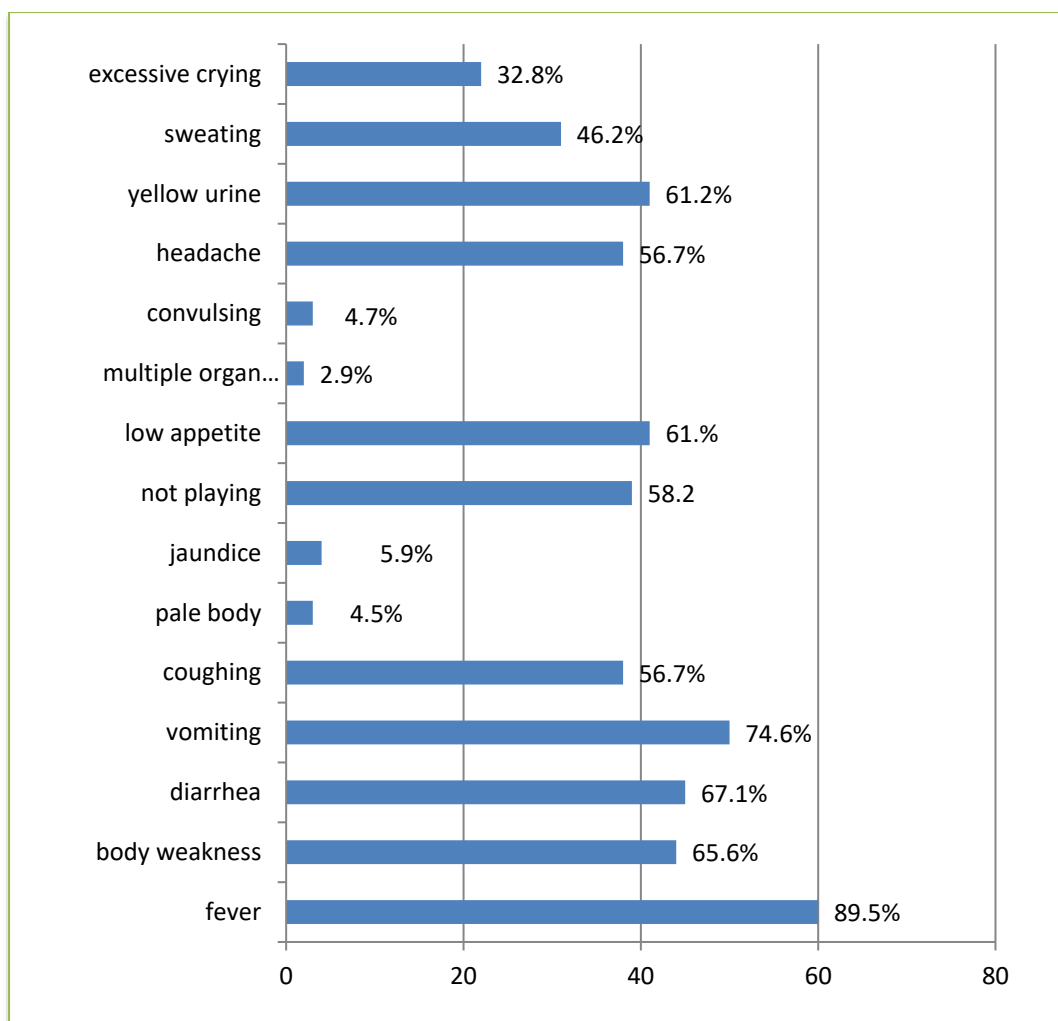
4.3 Knowledge of mothers on malaria prevention. n=67

Figure 1: Heard about malaria in under five years children



Majority of the respondents 64(95.5%) had heard about malaria in less than five years old children, while a few 3(4.5%) had never heard about it.

Figure 2: Knowledge on malaria presentation n=67



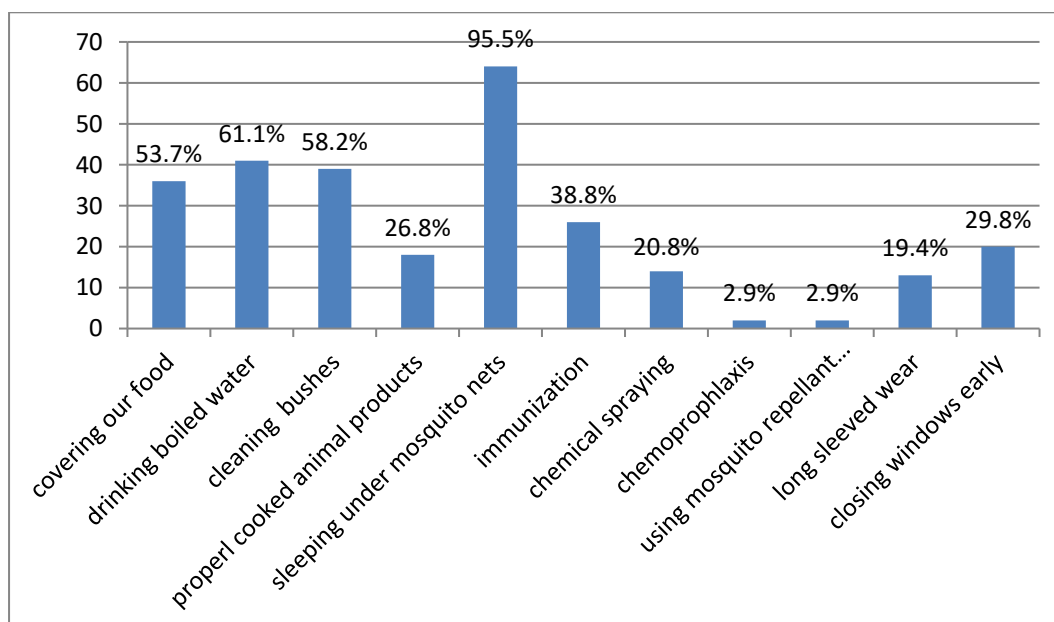
Majority of the respondents knew fever and vomiting and diarrhea as common signs of malaria in under five years children with 60(89.5) and 56(74.6) and 45(67.1) percentages respectively. While jaundice, pale body, multiple organ swelling and convulsions rarely known as signs of malaria. Others widely known signs of malaria in children under five years were low appetite, yellow urine not playing and coughing by 41(61.2), 41(61.2) and 39(56.7) percentages respectively

Table 2: Knowledge on most vulnerable age groups n=67

	Ranges	frequency(n)	Percentage (%)
Age group	0-5	13	19.4
	6-10	11	16.4
	11-15	17	25.3
	16-20	6	8.9
	above 20	20	29.8

Majority of the Mothers 20(29.8%) knew malaria being more dangerous in adults above 20 years while only a few 13(19.4%) knew age group 0-5 years as more vulnerable to malaria dangers than adults.

Figure 3: Knowledge on malaria prevention methods. n=67



Majority of the respondents 64(95.5%) knew about sleeping under mosquito nets as a preventive measure for malaria more than others methods like chemoprophylaxis

and using mosquito repellent which were reported as low as 2(2.9%) and 2(2.9%) respectively.

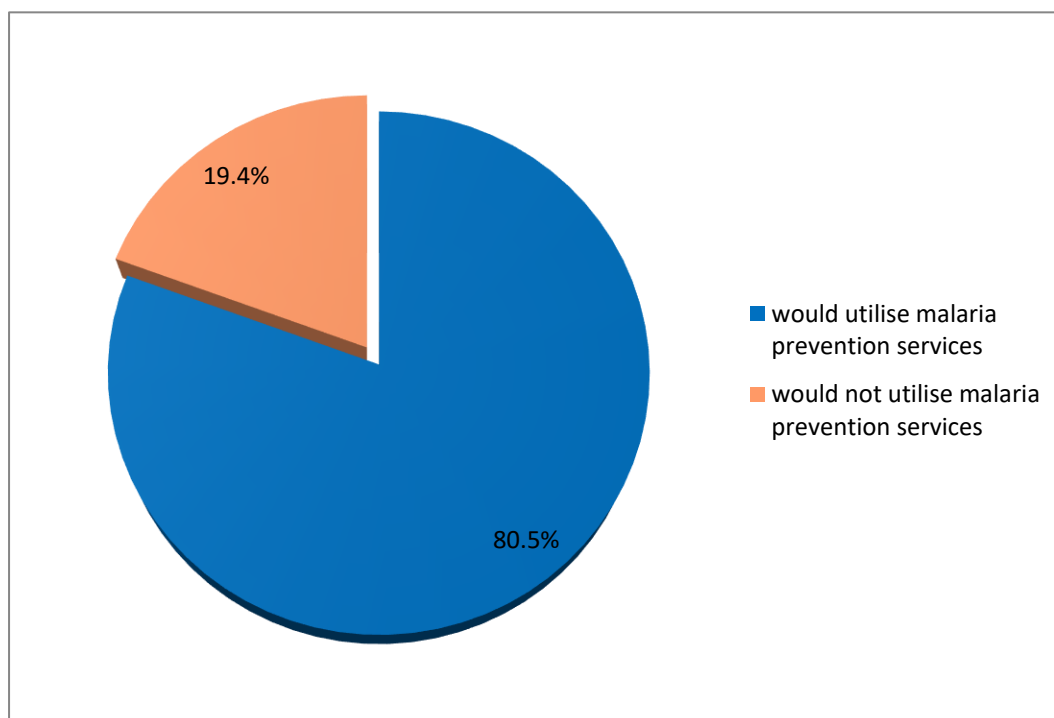
Table 3 : Source of knowledge on malaria prevention.n=65

source of knowledge	frequency(n)	Percentage (%)
radio	13	19.4
news paper	01	1.4
relatives	19	28.3
health workers	16	23.8
VHT person	06	8.9
religious leader	07	10.4
cultural leader	01	1.4
television	01	1.4

Majority of the respondents 19(28.3%) had had knowledge about malaria prevention from their relatives, followed by 16 (23.8%) from health workers, 13(19.4%) from radios, and the least 1(1.4%) from television and cultural leaders.

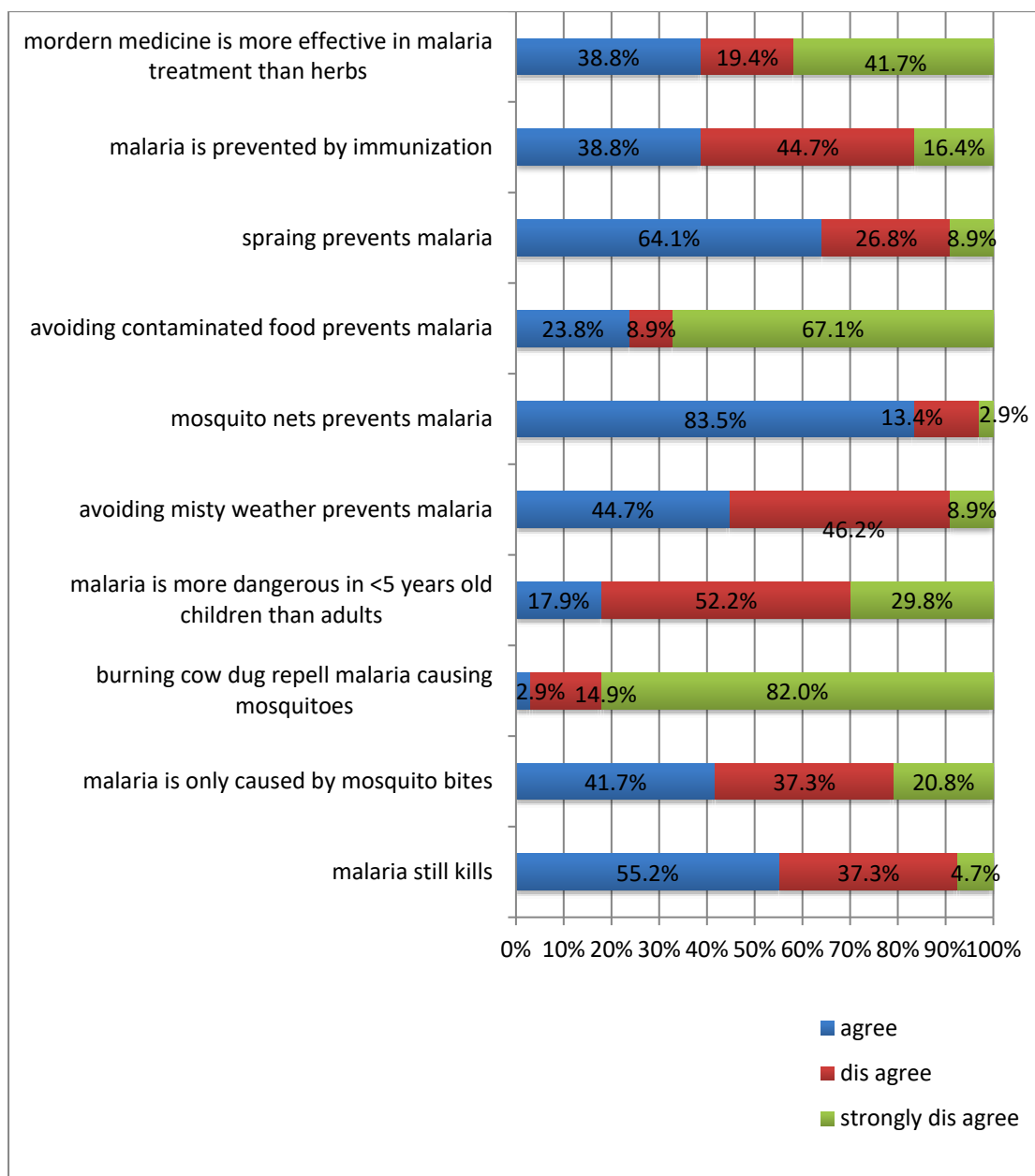
4.4 Attitudes of mothers towards malaria prevention.

Figure4: Confidence in malaria prevention practices



Majority of the respondents 54(80.5%) were confident enough to utilize malaria prevention services while 13(19.4%) would not utilize malaria prevention services.

Figure 5; Attitudes towards malaria causes and prevention methods n=67



Majority of the respondents 56(83.5%) agree that mosquito nets prevents malaria, 9(13.4%) disagree and 2(2.9%) strongly disagree that sleeping under mosquito net cannot prevent malaria from affecting the lives of children under five, this was followed by spraying 43(64.1%) Whereas other methods were also mentioned by the majority of the respondents as positive measures like avoiding contaminated foods 45(67.1%) agree, 6(8.9%) disagree, and 16(23.8%) strongly disagree,

immunization 26(38.8%) agreed, 30(44.7%) disagreed ,and 11(16.4%) strongly disagreed

Table 4: Malaria prevention practices by mothers to children under five n=67

prevention practice	frequency(n)	Percentage (%)
sleep under insecticide treated mosquito net	31	46.2
house spray with chemical insecticides	00	00
slashes long bushes around home	40	59.7
drainage of near home water reservoirs	15	22.3
take intermittent presumptive chemoprophylaxis	01	1.4
do regular testing and treatment of malaria	04	5.9
takes pre-travel prophylaxis	00	00
long dressing wear while outside when late evening	01	1.4
uses mosquito repellant Vaseline	00	00
closes windows early	23	34.3
planted mosquito repellant plants in compound	03	4.4

Majority 40(59.7%) slashes bushes around homes as malaria control measures, 31(46.2%) sleep under mosquito nets, 15(22.3%) drains water ponds near homes, while mosquito repellants, chemoprophylaxis, intermittent presumptive treatment, and house spray with insecticides were not employed by any community member as a malaria prevention measure.

Table 5: Sources of care for malaria in under five years. n=67

source of care	frequency(n)	Percentage (%)
health unit	42	62.6
VHT/CBHP	03	4.4
Spiritual leader	10	14.9
herbalist	12	17.9
others	00	00

Majority of the respondents 42(62.6%) go to health unit for treatment when they suspect malaria in under five years children, 10(14.9%) go to spiritual leaders for treatment when they suspect malaria, while 3(4.4%) and 12(17.9%) use VHT and herbalist respectively if they suspect malaria in under five years old child.

Table 6: Time taken to Seek health care for malaria suspected under five years child. n=67

time taken to seek care for malaria	frequency	Percentage (%)
0-6 hours	09	13.4
07-12 hours	15	22.3
13-18 hours	24	35.8

19-24 hours	19	28.3
more than 24 hours	00	00

Majority of the mothers 24(35.8%) seek health care within 13-18 hours when they suspect malaria among their under five years children, followed by those that seek health care within 19-24 hours 19(28.3%) while only 9(13.4%) of the study population seek health services for malaria in under five within 0-6 hours.

CHAPTER FIVE

DISCUSSION OF RESULTS, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATION TO NURSING PRACTICE

5.0 Introduction

This chapter presents the findings, gives conclusion, recommendations and implications about 'knowledge, attitudes and practices of mothers and care takers attending young child clinic at Katooke HCIII on malaria prevention and control in under five years, in relation to research objectives and answering research questions. The results are discussed in line with the research findings as presented in chapter four and also in comparison with other scholars' findings from introduction and literature review. In this study, a total sample of 67 respondents both biological mothers and caretakers in children under five years were considered a representative sample of the study whereby, 65 questionnaires were returned completely filled thus a response rate of 97%.

5.1 Discussions of the Study Findings.

5.1.1 Demographic characteristics

Majority of the respondents were aged between 20-30 years 34(50.7%), biological parents dominating with 58(86.4 %). This could be because, being an average reproductive age. During this age, mothers are actively producing, hence more involved in decision making in young children including those who know about malaria prevention and control among their under five years children and taking care of these children than others age groups. These findings agree with the study

by Maria et al (2016) on knowledge of mothers on malaria prevention in under five years children in Nigeriawhich found out that good knowledge was increased with medium age, where as poor knowledge being common to young aged mothers.

Majority of mothers had at least had primary education, with 40(66.6%), followed by those that had not had any formal education with 15(22.3%), there is a significant low level of formal education ranging from non to primary. Malaria prevention is one of the commonly taught in most of syllabuses in higher education system of Uganda, hence knowledge on prevention and control expected to be low due to this low level of formal education similarly to a study on care givers on malaria knowledge in Bata district in Equatorial Guinea, that found out that among factors associated with limited knowledge on malaria prevention included low education levels and poor economic status. (Maria et al 2016).

Catholics and protestant formed the majority of religious faith with 28(41.7%) and 23(34.3%) respectively, while other religions are composed by remaining percentages. This could be the true distribution of the population as far as religious affiliation is concerned in this area. Religious has not had a great impact on malaria prevention and practices, however, how each religion teach regarding diseases, control, and treatment vary. Hence if malaria prevention and practices in this area is driven by religious affiliation will majorly be dependent on how catholic and protestant faith teach about malaria prevention and control practices.

Basically, the biggest percentage of the respondents depend on subsistence farming/peasants with 54(80.5%), while a few were businessmen/businesswomen

and civil servants with 11(16.4%) and 2(2.9) percentages respectively. This is a clear indicator that majority are of low social economic class. Hence in case of financial needs for medical services like transport and treatment of malaria in under five years children in good private settings, most of members in the study population may not be able which may lead to delay in seeking medical intervention causing simple malaria cases progressing to complicated cases that would be more harder and more costly to manage. This agree with a study done in Madagascar to assess effects of social demographic factors on knowledge of malaria prevention which indicated that mothers' household wealth influence their knowledge and practices on malaria prevention, where poor knowledge on malaria prevention was attributed to 21% of mothers that lacked primary education and 65% from poor social economic class. (Sean et al 2015).

4-6 parity mothers formed the majority 35(55.2%) parity, where as Para 1, and Para 6 mothers formed least and slightly differing ranges with 8(11.9%) and 7(10.4%) respectively. This being near average fertility rate of Ugandan women (6.2%) (UBOS 2016) could be the reason why majority of women had 4-6 children. These women having ever nursed other children, taken care of them while sick of malaria are expected to have good knowledge, positive attitude to malaria prevention as well as good malaria prevention practices.

5.1.2 Knowledge of mothers and caretakers of under-five years children on malaria prevention and control.

Majority of mothers 64(95.5%) knew about malaria in less than five years old children, while a few 2(4.5%) had never heard about it. The population could have got knowledge from health education by health workers hence they are expected to have good knowledge regarding malaria prevention and control. These findings are similar to a community based quantitative descriptive study in aliero, Kebbi state of northern Nigeria(2014) which found out that, there was a comprehensive knowledge on malaria prevention, (90%) of mothers had good knowledge on mosquito behavior/bleeding areas(64.5%), resting places(70%) and biting times(81%) (Rupashree et al 2014.

Majority of the respondents knew fever, vomiting and diarrhea as common signs of malaria in under five years' children with 60(89.5%) and 56(74.6%) and 45(67.1%) respectively. This implies that if an under-five years old child presented with any of the above signs and symptoms, they are likely to seek for malaria treatment. Much as fever is a first sign in malaria, it may present with or without vomiting, and diarrhea may not present in malaria child at all unless it has an underlying cause, hence if a mother/ caretaker is not keen about other symptoms, may delay to notice sickness in a child, causing delay in seeking for health intervention which makes the cost and quality of treatment high.

While jaundice, pale body, multiple organ swelling and convulsions rarely known as signs of malaria. Others widely known signs of malaria in children under five years were low appetite, yellow urine, not playing and coughing by 41(61.2%), 41(61.2%) and 39(56.7%) respectively. This not being a primary presentation of

malaria may not sound so sensitive first encounter, but still a question remains, “what if malaria is complicated” implying that mothers may not seek for malaria testing and treatment in case the under five child under their care develops jaundice, pale body, multiple organomegaly, due to knowledge deficit on signs of complicated malaria and may take long to be convinced to accept malaria treatment in such a case which may lead to further complication leading to death.

Majority of the Mothers 20(29.8%) knew malaria being more dangerous in adults above 20 years while only a few 13(19.4%) knew age group 0-5 years as more vulnerable to malaria dangers than adults. This implies that dangers of malaria in this age group are not widely known, and its complications have not been clearly elucidated. Hence, more care regarding malaria prevention like priority of who sleeps under ITNs and others may be put to adults above 20 than children. This is contrally to (WHO 2014) and (Julianna and Nawal 2009) recommendation that Children and Pregnant women are 3 times more likely to suffer severely as a result of malarial infection compared to their counterparts.

Majority of the respondents 64(95.5%) knew about sleeping under mosquito nets as a preventive measure for malaria in under five years more than other methods like chemoprophylaxis and using mosquito repellent which were reported as low as 2(2.9%) and 2(2.9%) respectively. These results are similar to the findings in Northern state of Nigeria (Moses et al 2009) where they found out that majority (36%) of women were aware of ITNs in malaria prevention. This is a clear indication that majority of this population given access to ITNs is given freely or at an affordable cost can maximally utilize them to prevent malaria in under five years children.

Majority of the respondents 19(28.3%) had had knowledge about malaria prevention from their relatives, followed by 16(23.8%) from health workers, 13(19.4%) from radios, and the least 1(1.4%) from television and cultural leaders. The results agree with a cross-sectional study findings on knowledge, attitudes and practices on malaria in four municipalities of Colombia that is tierralta, Buenaventura, Tumaco which found out that overall educational level about malaria was higher, although relatives and friends took large percentages in disseminating information about malaria with 39% and 35% respectively, while health workers educated only 25% of population about malaria (David et al 2014)

Relatives may not necessarily be equipping mothers with full package information regarding malaria prevention and control due to lack of technical knowhow regarding its presentation and prevention, hence may be a reason for knowledge gaps in the study population regarding malaria prevention and control in under five years children.

5.1.3 Attitudes of mothers of under five years children towards malaria prevention and control.

Majority of the respondents 54(80.5%) were confident enough to utilize malaria prevention services while 13(19.4%) would not utilize malaria prevention services. There is clear evidence that there is at least high level of confidence in malaria prevention practices. However, it not clear which practice would they utilize most and why. Hence provided availability and affordability of malaria prevention services, the community can maximally utilize them for preventing malaria in under five years' children. The findings are similarly to a cross-sectional study to assess mothers' perception towards childhood malaria in rural states of Ise-Orun, Nigeria

where Majority of mothers (85.8%) would practice malaria prevention, including ITNs (70%), chemoprophylaxis (20.1%) and environmental sanitation (44.8%) (Adebola and Kemisola 2015).

Majority of the study population 56(83.5%) agree that sleeping under insecticide treated mosquito nets prevents malaria in under five years children, 9(13.4%) disagree and 2(2.9%) strongly disagree that sleeping under mosquito net cannot prevent malaria from affecting the lives of children under five, this was followed by spraying with chemicals 43(64.1%) Whereas other methods were also mentioned by the majority of the respondents as positive measures like avoiding contaminated foods agree, 45(67.1%) 6(8.9%) disagree, and 16(23.8%) strongly disagree, immunization 26(38.8%) agreed, 30(44.7%) disagreed, and 11(16.4%) strongly disagreed. The finding was also contrary to finding in Ethiopia by Dagne and Deressa (2008), Animut *et al*, (2008), Fetteene *et al*, (2009) on attitudes of mothers of under five year children towards ITNs in malaria control which found that mothers had negative attitude that ITNs have negative effects and their inappropriate usage, frequency were reported to hamper effective utilization of ITNs in different parts of Ethiopia (Dagne and Deressa 2008, Animut *et al*, 2008, Fetteene *et al*, 2009).

This implies that of the population have confidence in effectiveness of ITNs and home spray with chemicals than other methods, hence are more likely to freely use these methods in preventing malaria in under five years children.

There was a strong belief that eating contaminated food cause malaria in under five years children which this false belief may be due to knowledge gap on causes of malaria, mode of transmission and prevention. These findings are similarly to a cross-sectional study to assess mothers perception towards childhood malaria in

mothers 15-49 in Ise-Orun, Nigeria, by (Adebola and Kemisola 2015) which found out that 85.8% of mothers had poor perception on malaria transmission as they associated malaria to other sources like food contamination other than mosquito bites whereas only 14.2% ascribed malaria to mosquito bites only.

This is a blessing in disguise in that contaminated food though not greatly associated with malaria, is associated with other complications like diarrhea diseases, and entero-gastro infections which may also be life threatening to under five children . hence a need to demystify this belief, and equip the study population with relevant knowledge regarding food and hygiene for under five years children such that as this is done, they will not forego malaria prevention practices on expense of food hygiene.

5.1.4 Practices of mothers and care takers of under five years children on malaria prevention and control.

Majority 40(59.7%) slashes bushes around homes as malaria control measures, 31(46.2%) sleep under mosquito nets, 15(22.3%) drains water ponds near homes, while mosquito repellants, chemoprophylaxis, intermittent presumptive treatment, and house spray with insecticides were not employed by any community member as a malaria prevention measure. These findings in this particular community are contrally to Fettene et al (2009)'s which found out that Malaria disease can be prevented by avoiding mosquito bites through using insecticide treated mosquito nets (ITNs) and insect repellants, or with mosquito-control measures such as spraying insecticides and draining standing water.(fettene et al,2009)

The major malaria prevention method used by majority mothers to prevent malaria in under five years children is slashing, whose effectiveness is indirect in controlling mosquito –people contact hence its effectiveness depend on massive involvement in this activity and its efficiency has not been clearly been presented. Use of ITNs to prevent malaria in under five years children is still low compared to national ITN utilization data, implying that the majority of the children under five years still sleep outside ITNs, exposed to mosquito bites, and malaria with its related complications. The above findings are contrary to WHO recommendation on ITNs that Insecticide-treated nets to be provided as early as possible to all households living in malaria endemic areas, and be used throughout pregnancy to mothers, and postpartum to neonates and children (WHO, 2014)

Majority of the respondents 42(62.6%) go to health unit for treatment when they suspect malaria in under five years children, 10(14.9%) go to spiritual leaders for treatment when they suspect malaria, while 3(4.4%) and 12(17.9%) use VHT and herbalist respectively if they suspect malaria in under five years old child. Malaria parasitemia has been a major clinical diagnosis in majority of Ugandan health facilities contributing 40% of all outpatient visits, 25% of all hospital admissions and 14% of all hospital deaths. (Bauer, 2015) Given timely treatment, it normally responds to modern medicine interventions to complete cure from the infestation and prevention of malaria related complications. Given majority of study population seeking health services from health unit, malaria in under five years children is treated properly, and its related complications like anemia are also treated hence malaria related deaths less likely to occur frequently in this study population.

Majority of the mothers 24(35.8%) seek health care within 13-18 hours when they suspect malaria among their under five years children, followed by those that seek health care within 19-24 hours 19(28.3%) while only 9(13.4%) of the study population seek health services for malaria in under five within 0-6 hours.

There is a delay in seeking treatment for malaria if mothers have suspected malaria in under five years' children between 13-18 hours. This time can give simple malaria to progress into a complicated one, progressing of symptoms from simple fevers, lethargy, to convulsions and organomegaly. This increases cost of managing malaria in under five, and may necessitates referral from VHT and lower health centers. This may be associated in delay in referrals, transport and interventions resulting into complicated malaria and death. The findings are contrary to a community based cross-sectional descriptive study findings in northern Nigeria by Rupashree et al (2014) where he found out that, Seeking hospital care for febrile child was a good practice observed among mothers and care takers,(68.5%).(Rupashree et al 2014)

5.2 Conclusion from the Study Findings

Knowledge

Majority of the study population had heard about malaria in under five years children. They knew fever, vomiting and diarrhea as signs of malaria in under five year child, while jaundice, pale body, multiple organ swelling and convulsions rarely known by mothers as signs of malaria.

Majority of the study population also knew Malaria being more dangerous in adults aged 20 and above than in children five years and below, they also knew sleeping in an insecticide treated mosquito net, avoiding contaminated food and immunization as malaria prevention methods. The major source of knowledge on malaria prevention and control was relatives and friends.

Attitudes

Majority of the respondents had good attitudes towards malaria prevention practices and would utilize them to prevent malaria in under five years children. The biggest percentage having positive attitude towards use of ITNs followed by chemical spraying of homesteads. There was a belief that eating contaminated food and misty weather causes malaria, and avoiding these were also a mentioned as method of malaria prevention.

Practices

Majority of Mothers basically slash bushes around homesteads to prevent malaria in under five years children , but a few use ITNs, while other methods like, while mosquito repellants, chemoprophylaxis, intermittent presumptive treatment, and

house spray with insecticides were not employed by any community member as a malaria prevention measure.

Mothers seek health care for Malaria sick children from health centers, but there is a reasonable time length delay in seeking this health intervention where mothers take 13-18 hours before they respond to signs of malaria in an under five years child.

5.3 Recommendations from the study findings

Katooke sub county population

I recommend that people of Katooke Sub County get more involved in government malaria control strategy like sleeping under ITNs by all pregnant mothers and children under five years to control malaria in these most vulnerable age groups.

I recommend that malaria like symptom and sign in fewer than five children be given clear and faster attention in order to prevent cases of complicated malaria in under five years children, increasing outcome of treatment, and avoiding high cost associated with delaying malaria treatment interventions that range from money to costing lives of children under five.

Kyenjojo district health department

I recommend that malaria prevention in under five years should be emphasized at all levels of disease prevention by monitoring use of distribute ITNs, home spraying and sanitation promotion in order to control malaria in these children.

I recommend that a research based health talks be intensified at all health facility levels in Kyenjojo district in order to make the public more informed about malaria causes, presentation and prevention methods.

Ministry of health

I recommend that information about malaria in under five years children be published and distributed throughout all parts of Uganda in all native languages, so that literate mothers can be able to access it freely. This will equip them with

knowledge on malaria breeding time, causes, hence will at the end be able to control and prevent it effectively.

5.4 Implication to nursing practice.

Nursing practice

There is a knowledge deficit among mothers on malaria symptoms in under five children. Hence information sharing with mothers and care takers be intensified as they are perfectly involved in malaria prevention as an integral unit with all other members in preventing malaria.

Nursing research

A more comprehensive research study on factors influencing malaria prevention in children under five years be studied so as to come up with facilitators of malaria prevention prentices which can be promoted, and hindrances to be eliminated.

Nursing education.

Patient education should be emphasized in all levels of nursing training so as to impact the community on disease prevention and health promotion by participation in malaria prevention in children under five years.

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APPENDIX I: INFORMED CONSENT

Good morning/afternoon/evening?

My name is KISEMBO RICHARD from Kampala International University Western Campus School of Nursing Sciences. I am here to conduct a research on knowledge, attitudes and practices of mothers and care takers attending child clinic at Katooke HCIII on malaria prevention and control in under five years children as a partial fulfillment of the requirements for the award of diploma in nursing science. You have been selected at random (by chance) to participate in this study. The information gathered here will remain confidential and I will not write down your name or any information that can identify where you live or who you are. Your participation in the study is voluntary and you will not be affected in any way if you decide not to participate. You do not have to answer a question that you do not want to. You can stop the interview at any time. The relevancy of this study will depend so much on your honest response to the questions asked. If you agree to participate, the interview will take about an hour. Any questions or clarification you need before we begin? Do agree [☐]/ Do not agree [☐]

Signature of the respondentor

Thumb print.....

Date: _____/_____/_____

APPENDIX II: QUESTIONNAIRE ON MALARIA PREVENTION AND CONTROL IN CHILDREN UNDER FIVE YEARS.

SECTION A

1. Demographic characteristics of the respondents.

(Tick right of your choice)

Age	less than 20				Pentecostal	
	20-30			Occupation	peasant	
	31-40				businessman	
	above 40				civil servant	
Status	biological mother				Others.	
	just care taker			Parity.	1	
Education	primary				2-3	
	secondary				4-6	
	tertiary				above 6	
Tribe	Munyoro					
	mutooro					
	munyankole					
	mukiga					
	others					
Religion	Muslim					
	protestant					
	catholic					

SECTION B

Knowledge of mothers on malaria prevention and control.

2 (a) Have you ever heard about malaria in under five years children?

Yes ☐

No ☐

b) Which of the following are signs and symptoms of malaria in under five years

Children? **(Multiple choices)** Loss of appetite ☐

Fever ☐ Multiple organ swelling ☐

General body weakness ☐ Convulsions ☐

Diarrhea ☐ Headache ☐

Vomiting ☐ Yellowish urine ☐

Coughing ☐

Pale body ☐

Jaundice ☐

Loss of interest in the environment ☐

(c) Which of the following age groups is most susceptible to malaria than others?

(Tick right to indicate your answer)

age group	0-5
	6-10
	11-15
	16-20
	above 20

(d) Which of the following are the modes of malaria prevention? **(Tick right)**

Covering our food	<input type="checkbox"/>
Drinking boiled water	<input type="checkbox"/>
Home hygiene	<input type="checkbox"/>
Proper cooked livestock products	<input type="checkbox"/>
Sleeping in insecticide treated nets	<input type="checkbox"/>
Immunization	<input type="checkbox"/>
Chemical spraying	<input type="checkbox"/>
Chemoprophylaxis treatment	<input type="checkbox"/>
Using mosquito repellant Vaseline/chemicals.	<input type="checkbox"/>

e) Who told you this information about malaria? **(Tick right)**

radio	
news paper	
relative	
health workers	
VHT	
Television.	

SECTION C: Attitudes of mothers on malaria prevention and control

- b) Answer all parameters as shown below.(Chose agree, disagree strongly disagree)

ATTITUDE PARAMETER	agree	Disagree	strongly disagree
malaria is caused mosquitoes only			
burning cow dung repel malaria causing mosquito			
malaria is dangerous in under five than in adults			
dirty food/cold food cause malaria			
rainy and misty weather cause malaria			
Mosquito nets prevents malaria			
spraying homes prevents malaria			
fever , headache and general body weakness in under five can be a signs of malaria			
malaria still kills			
malaria is immunizable disease			
malaria can only be cured by modern medicine			

3. a) Would you like to utilize malaria prevention and control services?

i) Yes.

☐

b) No.

☐

SECTION D: malaria prevention and control practices.

4. a) which of the following malaria prevention and control practices do you use in preventing malaria in under five children? **(Tick right)**.

insecticide treated mosquito net	
house spray	
home hygiene	
draining water reservoirs in home surrounding	
intermittent presumptive chemoprophylaxis	
regular testing and treatment of malaria	
pre-travel prophylaxis	
long dress wear	
smearing with mosquito repellant Vaseline	
closing doors late night	
planting mosquito repellant plants in home compound	

(b) Where do you normally seek for treatment if you notice malaria signs and symptoms in under- five year child? **(Tick right)**

- | | | |
|---|--------------------------------------------------|--------------------------|
| 1 | Health worker/health unit | <input type="checkbox"/> |
| 2 | Village health team/ community based health team | <input type="checkbox"/> |
| 3 | Spiritual healer/diviner | <input type="checkbox"/> |
| 4 | Natural herbalist | <input type="checkbox"/> |
| 5 | Church for prayers | <input type="checkbox"/> |
| 6 | Others specify..... | |

c) How long do you take before seeking malaria treatment for your child after you have noticed malaria like symptoms? (**Tick right**)


0-6 hours	
07-12 hours	
13-18 hours	
19-24 hours	
more than 24 hours	

END

Thank you for your genuine response.

God bless you.

APPENDIX III. SCANNED COPY OF AUTHORIZATION LETTER

 **KAMPALA INTERNATIONAL UNIVERSITY**
WESTERN CAMPUS
EXPLORING THE HEIGHTS

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P.O.BOX 71 Bushenyi, Ishaka
Tel: +256 (0) 701 975572
E-mail: akabanyoro@gmail.com
Website: <http://www.kiu.ac.ug>

Office of the Dean - School of Nursing Sciences

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: KISEMBO RICHARD - DNS/0011/143/DU


The above mentioned is a student of Kampala International University – School of Nursing Sciences undertaking Diploma in Nursing Science and he is in his final academic year.

He is recommended to carry out his data collection as a partial fulfillment for the award of the Diploma in Nursing Science.

His topic is **KNOWLEDGE, ATTITUDES AND PRACTICES OF MOTHERS ATTENDING CHILD HEALTH CLINIC AT KATOOKE HCIII IN KYENJOJO DISTRICT ON MALARIA PREVENTION AND CONTROL IN CHILDREN UNDER FIVE YEARS.**

Any assistance rendered to him will be highly appreciated.

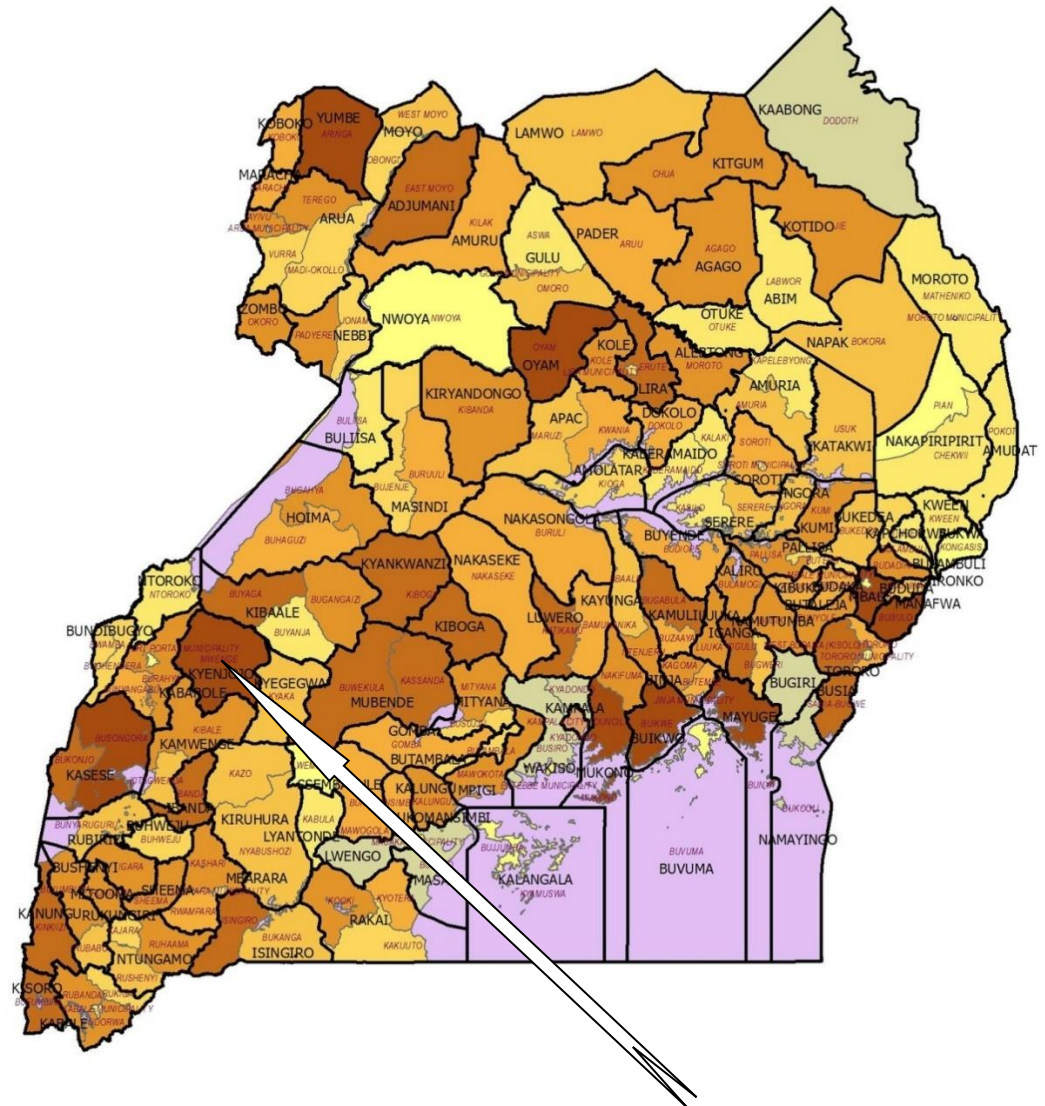
Thank you in advance for the positive response.

 1.4. AUG 2017
Nabulisa Sarah
RESEARCH COORDINATOR

Allowed to undertake research at this facility
1.2 SEP 2017
P.O. KYENJOJO DISTRICT

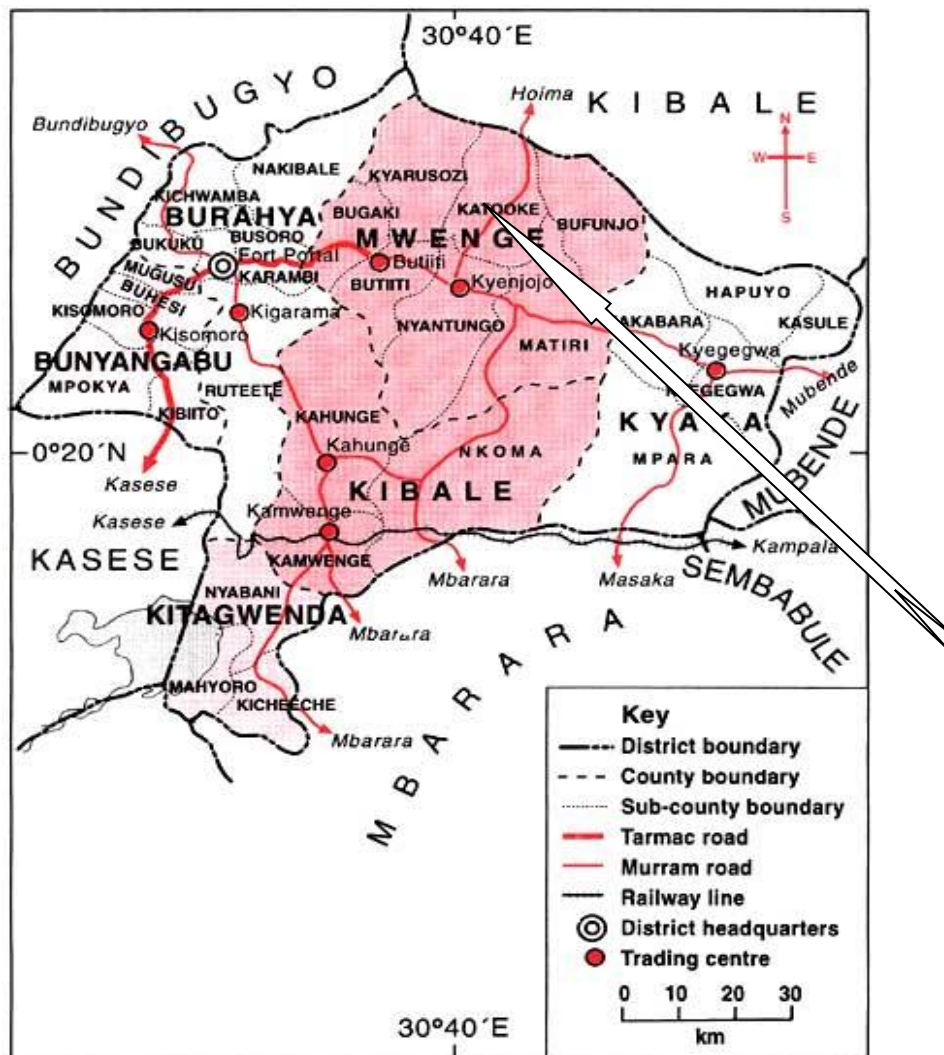
“Exploring the Heights”

**APPENDIX V: A MAP OF UGANDA SHOWING LOCATION OF
KYENJOJO DISTRICT WHERE KATOOKE IS FOUND.**



Location of Kyenjojo district shown by the direction of arrow

APPENDIX V: MAP OF MWENGE SHOWING LOCATION OF KATOOKE SUBCOUNTY IN KYENJOJO DISTRICT WHERE KATOOKE HEALTH CENTRE III IS LOCATED.



Location of Katookesubcounty shown by the direction of the arrow.