FACTORS AFFECTING UTILIZATION OF MALARIA PREVENTIVE MEASURES AMONG PREGNANT WOMEN ATTENDING ISHAKA ADVENTIST HOSPITAL

A DISSERTATION IN PARTIAL FULFILLMENT FOR THE AWARD OF A DEGREE OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY AT KAMPALA INTERNATIONAL UNIVERSITY

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DECLARATION:

I, Semulya Moses hereby declare that the work presented in this document is my own original work and has never in any way or form been presented or submitted to any other institution for publication or any award whatsoever.

RESEARCHER

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SIGNATURE……..

DATE: …….

SUPERVISOR

DR. KINTU MUGAGGA

SIGNATURE: ……

DATE……..

DEDICATION

I dedicate this research study to mother Mrs.Nalwanga Marjorie, my siblings all who have been of great help to me both financially, spiritually and emotionally.

Above all my gratitude goes to God for helping me this far in medical school.

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I would like to acknowledge those who were instrumental in helping me in the development of this study;

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I also thank my colleagues for their moral support.

LIST OF ABBREVIATIONS

KIU-TH	Kampla International University Teaching Hospital
IPT	Intermittent Preventive Therapy
WHO	World Health Organisation
PAM	Pregnancy Associated Malaria
MIP	Malaria In Pregnancy
ITNs	Insecticide Treated Nets
M.o.H	Ministry Of Health
ANC	Ante-Natal Care
FP	Family Planning
MCH	Maternal and Child Health
UBoS	Uganda Bureau of Statistics
RH	Reproductive Health
HSSIP	Health Sector Strategic Investment Plan
UDHS	Uganda Demographic Health Survey
AHSPR	Annual Health Sector Performance Report

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ABSTRACT

Background

Malaria is an enormous global health problem affecting 300-500 million people annually. In Uganda there is stable Malaria prevalence of 95% in the country (Namusoke and Fatuma et al 2005), Malaria in pregnancy has important consequences for mother and baby. Coverage with the World Health Organization–recommended prevention strategy for pregnant women in sub-Saharan Africa of intermittent preventive treatment in pregnancy (IPTp) and insecticide-treated nets (ITNs) is low (WHO report 2004).

Methodology

A qualitative cross sectional and retrospective study was conducted on 30 respondents attending ANC by use of questionnaires in direct interview study with key informats, an indepth individual discussion and focused group discussions was carried out with the ANC staff, with random and purposive sampling of the respondents.

Results

30.0% percent of women reported using ITN, 96.7% percent of women used IPT, while 100.0% of the respondents had knowledge about malaria preventive measures. there was a statistically significant association between socio-economic staus, education and gavidity with utilization of Mlaria prevention strategies like usage of ITNs.

Conclusion

30.0% percent of women reported using ITN. 96.7% percent of women used IPT, the highest proportion of both ITN and IPT users were in the 26-35 years old age group. There is adequate knowledge about malaria prevention measures in pregnancy but the utilization of these measures is poor,there is still need to encourage nothers not only to know but to use the malaria prevention measures. Visiting ANC is associated with increased IPT use. This indicated that the more the women go for ANC, the more knowledge they acquire and the more likely they are to receive IPT

CHAPTER ONE

1.1 Introduction

Malaria is a life threatening protozoan disease transmitted by female Anopheles mosquitoes. It is the most highly prevalent tropical disease, with high morbidity and mortality and high economic and social impact (H. L. Guyatt et al 2004).

Malaria is an enormous global health problem affecting 300-500 million people annually. In Uganda there is stable Malaria prevalence of 95% in the country (Namusoke and Fatuma et al 2005).

Across the world, Malaria presents as one of the greatest challenges to the health economic productivity of millions of people particularly those living in Africa south of the Sahara(WHO 2008). According to the World Health Organization (WHO 2OO9 report), there were an estimated 243 million cases of Malaria in 2008. The vast majority of these cases (about 85%) were in the African region. In the same year, malaria accounted for about 863,000 deaths, of which about 89% were in the African region(WHO report,2009). High Malaria burden is major barrier to economic development. It is estimated that Malaria costs African countries US$ 12 billion each year and about 25% of household income is spent on Malaria treatment (WHO and RBM reports, 2003)

In Uganda, Malaria is highly endemic with 63% of the population exposed to high transmission levels and 25% exposed to moderate transmission levels while 12% live in areas with low or unstable Malaria transmission that are epidemic prone (MoH report, 2005).

Malaria in pregnancy continues to be a serious health risk for pregnant women in Uganda and is associated with increased risk for maternal anaemia and perinatal mortality. The prevalence of placental infection with Plasmodium falciparum Malaria in pregnant women can be as high as 62.1% in some areas (Ndyomugyenyi et al, 1999). Although all pregnant women may be at risk of Malaria, its complications are greatest in those with modified immunity such as primigravidae, secundigravidae, adolescents, immigrants/visitors from non-endemic areas and those infected with HIV (MoH report 2013)

The Ministry of Health (Uganda) Guidelines for preventing malaria in pregnancy includes Intermittent Preventive Treatment (IPT) which, in addition to use of ITNs. The current IPT

policy states that all pregnant women - even if they do not have fever or other signs of malaria- should take 3 tablets of Sulfadoxine-Pyramethamine (SP) once between 4 and 6 months of pregnancy and 3 SP tablets between 7 and 9 months. Pregnant women infected with HIV should take 3 doses of SP 1 month apart. Therefore this study intends to investigate what factors contribute to the poor utilization of preventive measures of malaria in pregnant women attending ANC at Ishaka Adventist Hospital.

1.2 Problem statement

Malaria is an enormous global health problem affecting 300-500 million people annually. In Uganda there is stable malaria prevalence in 95% of the country. This disease burden affects mostly the young children and pregnant women (Namusoke and Fatuma et al 2005) and thus is the most common yet preventable cause of maternal and perinatal morbidity and mortality in sub-Saharan Africa and Uganda in particular. There is thus great need great need to investigate what factors might be responsible for the under utilization of Malaria preventive measures among pregnant women.

1.3 Justification

This study seeks to identify factors leading to the poor utilization of malaria preventive measures amongst pregnant women. The data obtained will help the district health team to improve Malaria prevention strategies or intensify the measures that are being undertaken to cut down on the cases of Malaria in pregnancy and thus improving on the quality of obstetric care given to mothers attending the above Hospital and preventing the adverse outcomes of Malaria in pregnancy.

1.4Study objectives

1.4.1General objective

To identify the factors affecting utilization of preventive measures of Malaria amongst pregnant women attending Ishaka Adventist hospital.

1.4.2Specific objectives

- To establish the level of awareness about Malaria preventive measures
- To identify the Malaria preventive measures that have been employed by the mothers attending ANC at the above hospital.

- To identify the barriers to Malaria preventive measures

CHAPTER TWO

Literature Review

The burden of malaria, world wide is acceptably high (MoH Uganda report, 2006). Malaria is a major cause of morbidity and mortality in Africa, 90 percent of all deaths are due to malaria. An estimated one million people in Africa die yearly. (UNICEF, 2006). The malaria situation in sub – Saharan Africa is severe and the diseases constitute a leading cause of poverty. (WHO, 2006).

The impact of Malaria on development and economic growth is crippling, researchers estimate that Malaria stricken families spends roughly a quarter of its Budget on Malaria treatment.(UNICEF,2006)

Malaria is however curable and preventable. The Malaria control strategy in Uganda is advocating for ITN as the most effective method for rendering the risk of infection (Voice of Africa Radio,2004) Pierre Gullet of WHO said the long lasting ITNs are the most cost effective tool to fight mosquitoes (Indian national News paper 2007). While ITNs have proved to be the most promising Malaria control technology available, the level of awareness of their use is all below 17 percent (Julianna S et al, 2009).

While the proportion of under five and pregnant mothers sleep under nets is increasing the use of ITNs remains low (MOH report 2008). In Uganda the ratio of children to adult using mosquito nets treated nets is 6.8 (Uganda bureau of statistics 2006). Most people have a negative attitude towards these nets most people are worried about the chemicals put in these nets (Radio West report 2009, Western Uganda).

With increasing availability of insecticide and nets, ITN coverage and utilization in Uganda has increased. Based on a number of data sources the proportion of house hold at least with one net in 2008 ranged from 16 – 47 percent, in the barriers to increase and distribution of ITNs include taxes and tariffs regulatory issues and inadequate distribution systems. (Malaria Consortium survey, 2008).

The major barrier preventing people from buying and using the nets is the high cost of both nets and insecticide due to local taxes and import tariffs levied on these products (malaria consortium report 2008).

The essential factors affecting the use of ITNs is affordability it is recognized to be able to afford ITNs sold at commercial prices. The decision to give out bed net free of charge especially to the most venerable population is probably the most important step (Hill J et al 2013). Unfortunately, while it has proven to be the most promising malaria control technology available, the level of awareness in the community is still below 17 percent. The use of ITNs for the target group is estimated to be less than 6 percent national wide although the coverage appears to be increasing. Much as the coverage and use of ITNs has increased neither the nets nor the insecticides are widely available in most countries of sub – Saharan Africa. (Anne Philip 2008).

The children and pregnant women normally affected by debilitating effects of malaria do not have preferential access to ITNs with the house holds. (African malaria journal 2007).

Behavioral practices such as use of malaria prevention measures and health seeking behavior influence incidence of malaria in the community.

A number of agent, host and environmental factors may be responsible for this high incidence of malaria among pregnant women. Such factors include lack of use of malaria prevention measures, presence of mosquito breeding sites, poor housing, poor access and quality to health care services.

The World Health Organization (WHO) currently recommends a three pronged approach to the control of malaria in pregnancy in areas of stable transmission, that is, use of Insecticide Treated Nets (ITNs); intermittent preventive treatment (IPT) of asymptomatic mother; and prompt and effective case management. It is recommended that all pregnant women living in areas of stable malaria transmission should receive at least two doses of IPT after quickening- first noted movement of the fetus (WHO, 2004).

The Ministry of Health through the National Malaria Control Program(NMCP), is working towards increasing the proportion of women attending Antenatal care (ANC) services who have received IPT2 from 33% in 2004 to 85% by the middle of 2010. Also the Ministry aims at increasing the proportion of households having and using at least one Insecticide Treated Net (ITN) from 15% to 85%; and households with at least two ITNs from 10% to 60 % by the middle of 2010 (MoH, 2005). However, according to the annual health sector report of 2009, the proportion of women reported to have received two doses of IPTp is only 44%, and the percentage of households with at least one ITN is about 40 percent(MOH, 2009). Both of these

figures are far below the above set targets and this could be partly because a high proportion (41 percent) of pregnant women in Uganda make their first antenatal care visit during the fourth or fifth months of pregnancy, while 37% make their first visit during the sixth months of pregnancy or later (UBOS, 2006). Delay in seeking antenatal care is one of the factors that hamper the achievement of the set IPT targets.

CHAPTER THREE

3.0 Methodology

3.1 Study area

The study was carried out at Ishaka adventist hospital in ishaka town council- Bushenyi district south-western Uganda and it's a 110 bed community hospital.

Bushenyi district is in the south-western part of Uganda is bordered by Kasese in the north, Kamwenge in the north east, Mbarara in the east, Runkungiri in the west and Ntungamo in the south. The district has a total land of 3949 square kilometer and a total population of 738,355 (population and housing census, 2002). It is mainly inhabited by Banyankole.

It is 77km from Mbarara on Mbarara-Kasese high way.

3.2 Study design

A qualitative cross sectional and retrospective study was conducted by use of questionnaires in direct interview study with key informats, an indepth individual discussion and focused group discussions was carried out.

3.3 Sampling method

A random and purposive sampling method was used to obtain participants from among pregnant mothers, random selection was done i.e every odd-numbered in row was selected.

3.4 Sample size

30 randomly selected mothers were interviewed, one indepth discussion with the in-charge of the ANC and one focused group discussion with midwives

3.5 Data collection, presentation and analysis

Data was collected by the use of open and close ended questionnaires, data was analysed with SPSS and Epidata statistical packages and presented in form of frequency tables, charts and graphs.

3.6 Inclusion criteria

The respondents were pregnant mothers attending ANC at Ishaka Adventist hospital, midwives and the ANC staff of the hospital above.

3.7 Exclusion criteria

The non-pregnant mothers, and those who are not midwives nor ANC staff at Ishaka Adventist hospital fell into this category.

3.8 Pre-testing of the questionnaire

Questionnaires were given to few chosen individuals to assess the validility and reliability of the data collection tool before administering the questionnaire to the participants, necessary adjustments will be done to ensure adequate and effective data collection.

3.9 Ethical consideration

The participants' confidence was obtained by informing them that the information obtained from them is to be treated with confidentiality and their consent is valued and given utmost respect. Also an introductory letter was obtained by the researcher from the administration of Kampala international university faculty of medicine and dentistry which was presented to the relevant authorities of the area of the study.

CHAPTER FOUR

4.0 RESULTS

The data obtained from the study was analysed with statistical packages into tables, pie charts and bar charts.

		Frequency	Percent
Valid	18-25 Years	6	20.0
	26-35 Years	16	53.3
	36-45 Years	8	26.7
	Total	30	100.0

Table:1 Representation of the age of our respondents

From our findings, age range of 26-35 years (53.3%), 20.0% were in the age range of18-25years while 26.7% were in the age range of 36-45 years that had attended ANC during the time of our study.

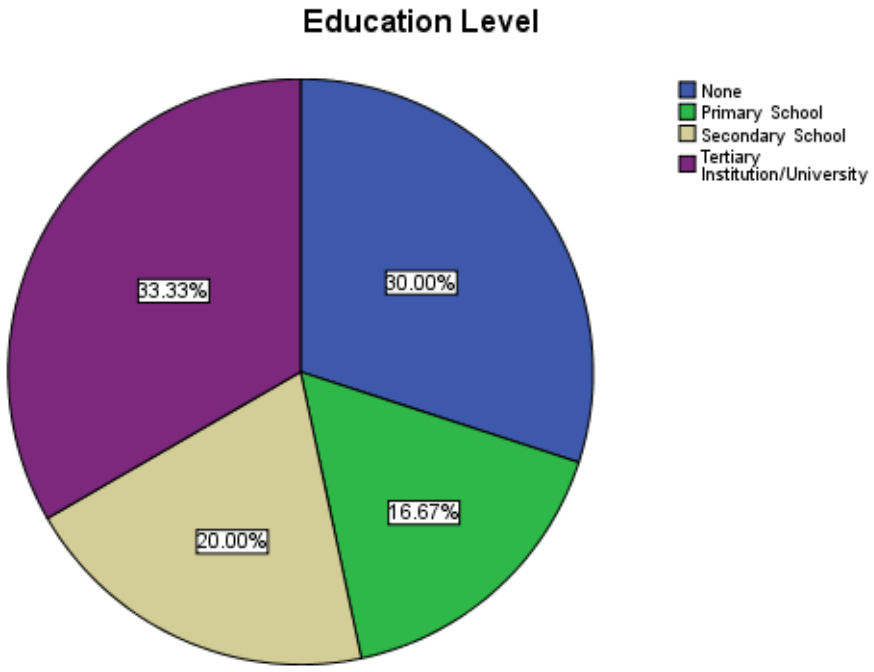

Figure:1 Representation of the educational level of the respondents

33.3% of our respondents were educated to the level of tertiary institutions, 30% and 16.6% reached secondary school and primary school respectively while 20.0% were illiterate.

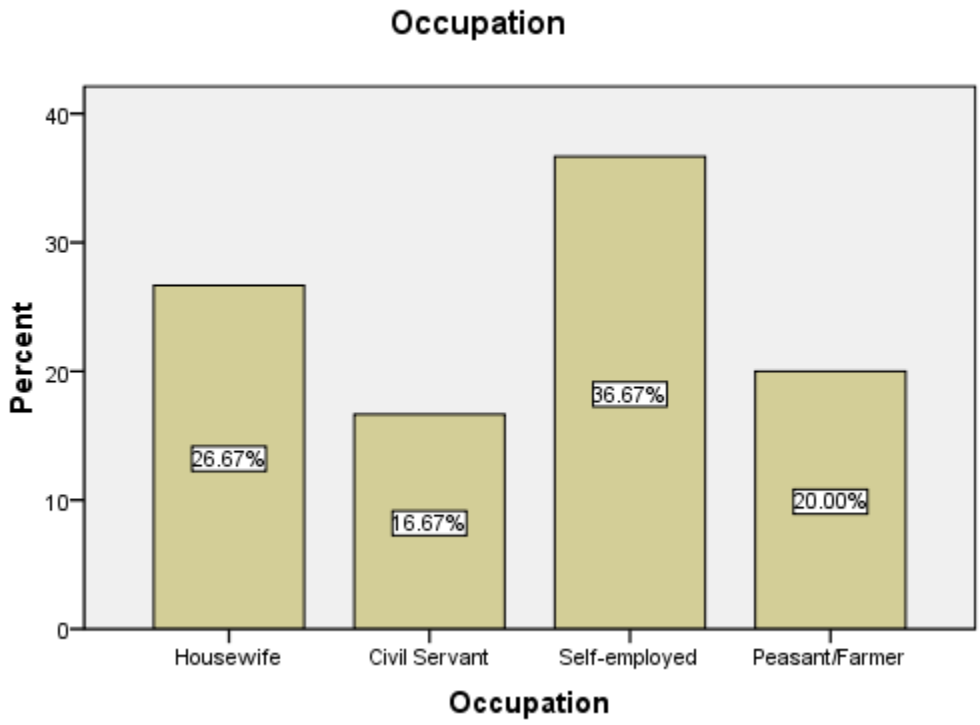

Figure:2 Graphical representation of the respondents occupation

36.67% of our respondents were self employed, 26.67% were house wives, with 16.67% of our respondents being civil servants while 20% of our respondents were peasants/farmers. the above data reveals the socio-economic status of our respondents.

		Frequency	Percent
Valid	Primigravida	7	23.3
	multigravida	23	76.7
	Total	30	100.0

Table:2 Gravidity of the respondents

Most of our respondents were multi-gravidas at 76.7% while only 23.3% were primigravida.

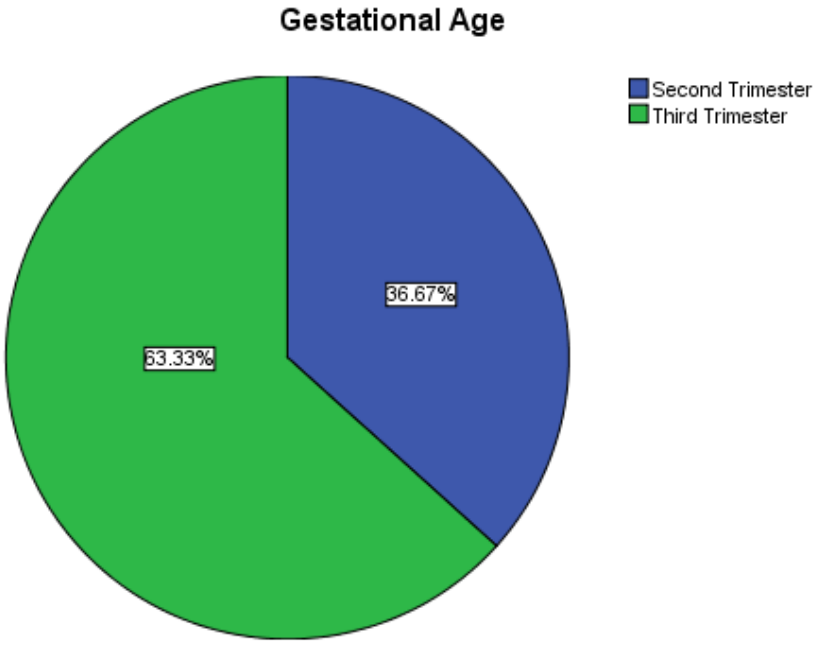

Figure:3 Trimester of our respondents

63.33% of our respondents mothers were in their third trimester, while 36.67% of the respondents where in their second trimester. And none of the respondents was in their first trimester.

		Frequency	Percent
Valid	Yes	30	100.0

Table:3 Knowledge of malaria prevention measures

All (100%) our respondents had knowledge about malaria prevention measures including, ordinary mosquito nets, clearing of bushes, discarding all stagnant water.

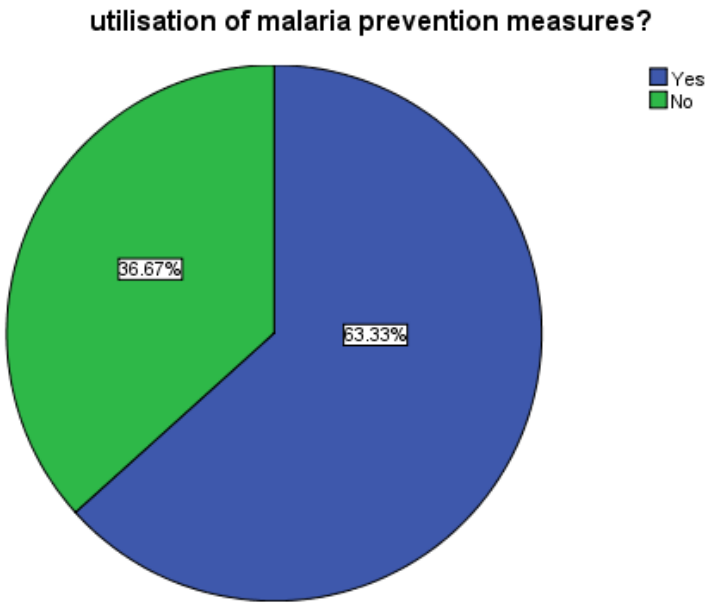

Figure:4 Current utilisation of malaria preventive measures

63.33% of the respondents claimed to be using a malaria preventive measures among those presented in figure five, while 36.67% were not using any malaria preventive measures

		Frequency	Percent
Valid	Yes	9	30.0
	No	21	70.0
	Total	30	100.0

Table:4 Use of Insecticide treated mosquito nets.

About utilization of insecticide treated mosquito nets only 30.0% of the respondents where using them while 70.0% don't use ITNs.

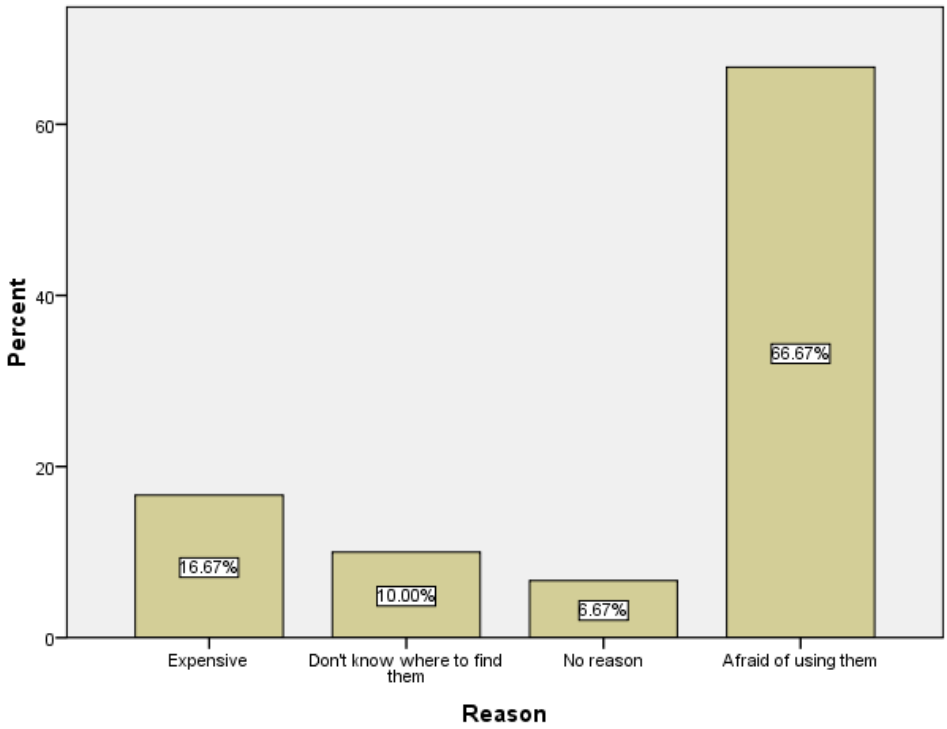

Figure:5 Graphical representation of the respondents reasons for non utilization of ITNs.

From the above figure we can see that 16.67% of the respondents claimed that the ITNs were expensive, 10% reported that they didn't know where to find them, while 6.67% had no reason for there non-utilisation of ITNs, And lastly 66.67% claimed they were afraid of using the ITNs.

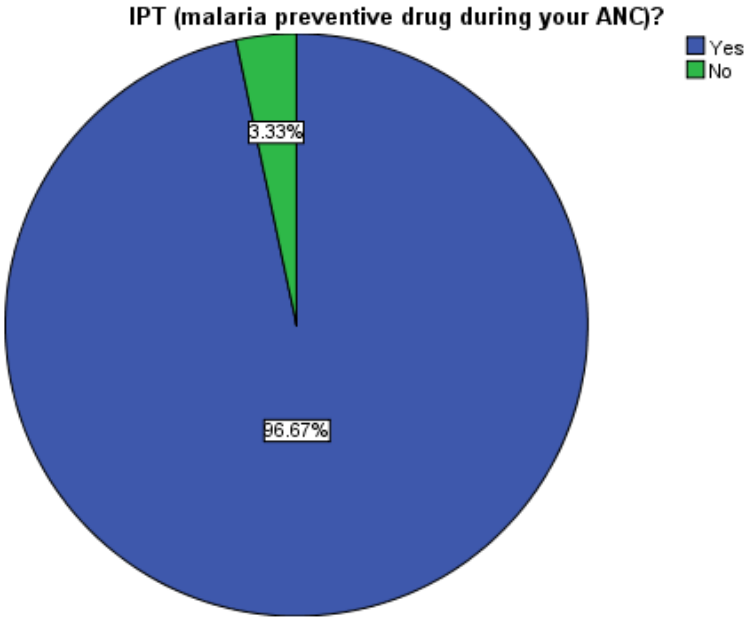

Figure: 6 representation of the mothers whom had received IPT during there ANC.
96.67% of the respondents had received a dose of IPT during there ANC visits while only 3.3% hadn't received there dose of IPT (fansidar/SP).

		Frequency	Percent
Valid	Fansidar	18	60.0
	Dont know	12	40.0
	Total	30	100.0

Table:5 Knowledge of drug given fpr malaria prevention at ANC

From the above table we note that 60.0% of our respondents had knowledge about which drug they were being given, while 40.05 didn't know it.

		Frequency	Percent
Valid	Yes	29	96.7
	No	1	3.3
	Total	30	100.0

Table:6 Attitudes towards the drug

96.7% of the respondents thought the drugs given to pevent malaria are effective, while 3.3% thought they were not.

		Frequency	Percent
Valid	0	1	3.3
	Once	17	56.7
	Twice	12	40.0
	Total	30	100.0

Table:7 Number of times IPT was given

Among the mothers who had received IPT, 56.7% of them had received the first dose (IPT1) while only 40.0% had received the second dose (IPTp2).

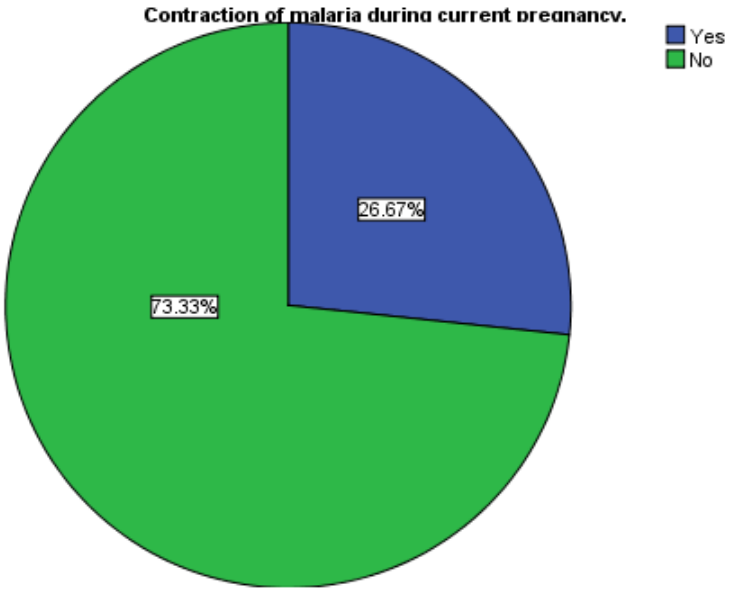

Figure:7 History of malaria episode during current pregnancy

26.67% of our respondent mothers had contracted malaria during there current pregnancy, while 73.33% had not.

		Frequency	Percent
Valid	Bought antimalarials at the drug shop	6	20.0
	Went to a health center for treatment	23	76.7
	Used some local herbs	1	3.3
	Total	30	100.0

Table:8 Representation of the measures taken by the mothers when they contracted malaria.

20.0% of the respondents just bought antimalarials from a drugshop, while 76.7% of the mothers sought medical care from hospital, and just 3.3% took some herbal medicines.

Education Level * use of ITNs Crosstabulation					
			use of ITNs		Total
			Yes	No	
Education Level	None	Count	1	8	9
		% within Education Level	11.1%	88.9%	100.0%
	Primary School	Count	0	5	5
		% within Education Level	.0%	100.0%	100.0%
	Secondary School	Count	0	6	6
		% within Education Level	.0%	100.0%	100.0%
	Tertiary Institution/University	Count	8	2	10
		% within Education Level	80.0%	20.0%	100.0%
Total		Count	9	21	30
		% within Education Level	30.0%	70.0%	100.0%

Table: 9 Correlation between education level and use of ITNs

From the above table above we noted that 11.1% of the respondents who were illiterate used ITNs, while 88.9% of them do not use ITNs, while 80.0% of the respondents who had attained an education level of a tertiary instituition/university used ITNs.

Occupation * use of ITNs Crosstabulation					
			use of ITNs		Total
			Yes	No	
Occupation	Housewife	Count	0	8	8
		% within Occupation	.0%	100.0%	100.0%
	Civil Servant	Count	2	3	5
		% within Occupation	40.0%	60.0%	100.0%
	Self-employed	Count	6	5	11
		% within Occupation	54.5%	45.5%	100.0%
	Peasant/Farmer	Count	1	5	6
		% within Occupation	16.7%	83.3%	100.0%
Total		Count	9	21	30
		% within Occupation	30.0%	70.0%	100.0%

Table: 10 Correlation between occupation and use of ITNs

From the table above we note a correlation between occupation and use of ITNs of which no housewife(0.0%) used an ITN, 40.0% of the civil servants interviewed used ITNs, 54.5% of those self employed used ITNs while 16.7% of the peasants/farmers used ITNs.

Gravidity * use of ITNs Crosstabulation					
			use of ITNs		Total
			Yes	No	
Gravidity	Primigravida	Count	1	6	7
		% within Gravidity	14.3%	85.7%	100.0%
	multigravida	Count	8	15	23
		% within Gravidity	34.8%	65.2%	100.0%
Total		Count	9	21	30
		% within Gravidity	30.0%	70.0%	100.0%

Table: 11 Correlation of gravidity and ITN use

We note from the above table that 14.3% of the primigravida used ITNs while 85.7% didn't, and 34.8% of the multigravida used ITNs while 65.2% didn't use ITNs.

Insight into malaria prevalence at the hospital	-Prevalence is fairly high
Possible reasons for that high prevalence	-poor co-operation by mothers to ANC health education provided about prevention of malaria -some mothers have negative attitudes towards the measures -financial reasons
Education about MIP prevention measures	-done at every ANC visit to the mothers
Mothers response to the education	-mostly positive
IPTp administration knowledge of midwife	-drug given is fansidar -given twice 2nd and third trimester
Attitude of midwife to IPTp drug	-positive the drug works
Mandatory malaria parasite testing(mps) at ANC fo prompt treatment	-meant to be done at every visit of ANC
Utilisation of ANC services by mothers at this hospital	-Fairly good but mothers may come for one or two visits

Table: 12 Discussion with the midwife about malaria in pregnancy prevention measures.

CHAPTER FIVE

5.1 DISCUSSION

Following the research carried out at Ishaka Adventist Hospital among mothers attending ANC services there, Utilisation of malaria preventive measures by the pregnant respondents, the demographic profile of the respondents shows that the most interviewed mothers were in the age range of 26-35 years (53.3%), that had attended ANC during the time of our study which statistic may be attributed to the fact that even most of our respondents were multigravida having there second or third pregnancy which is usually around the same age range.

The study revealed that most respondent mothers 100.0% had basic knowledge about malaria preventive measures like sleeping under a mosquito net, clearing bushes and stagnant water, but there utilization of any of the above methods was at 63.33%, though previous studies in Africa about knowledge of malaria prevention in pregnancy had statistics lower than this at 71.5% (GO Akaba et al, 2013), this may have been due to wide spread campaigns by the Uganda MOH to educate the mothers about MIP prevention and the mothers attendance of ANC, but also possibly due to a different study population and our smaller sample size.

30.0% of the respondents where using ITNs while 70.0% of them where not using the ITNs, a statistic which is low, however the 2009 USAID's baseline survey reports that only 44 percent of pregnant women in Uganda are sleeping under insecticide treated bed nets, the above difference in statistics may be attributed to our study being limited by lower sample size and study population.

From the study conducted, IPT usage was at 96.7% while only 3.35% hadn't received any dose of IPTp, but most of those who had received IPT, 60.0% had only received the first dose (IPTp1) while 40.0% had received the second dose(IPTp2), the above statistic was way above the expected as a study done by the Uganda MOH in its AHSPR (UDHS 2011/12 report) showed statistics of IPT usage to be at 44% in 2012, the above difference may be attributed to the difference in sample size and study population and possibly may also be a positive indicator in success of there country wide health education programs about malaria prevention.

60.0% of the respondents interviewed had knowledge about the drug they were given as they mentioned fansidar, while 40.0% didn't know, this is a high statistic as compared to past data of 43% (WHO 2009 survey), but this difference may be attributed to literacy level of 33.3% observed among our respondents.

But on the positive side of 96.7% of the mothers who were interviewed believed the drug was effective while only 3.3% thought it wasn't with reason that people still get malaria.

From among the respondents, 26.67% of them reported to have contracted malaria during despite having received IPT, the above may be attributed to malaria parasite resistance to IPT with

sulfadoxine-pyrimethamine or it being a rainy season currently predisposing the mothers to mosquito bites.

Further from the study, it was observed that there was a correlation between the socio-economic status, literacy, gravidity and the utilization of malaria preventive measures in pregnancy, as 80.0% of the studied respondents who had attained a high level of education were using ITNs while only 11.1% of the illiterate used ITNs, this correlates with past studies (Megha S et al 2013), which identified education, knowledge about malaria, socio-economic status, number and timing of antenatal clinic visits, and number of pregnancies as key determinants of IPTp uptake, and employment status, education, knowledge, age, and marital status as key determinants of coverage of ITN use. So, for example, highly educated women were more likely to receive IPTp or ITNs than poorly educated women.

Further correlation was established between socio-economic status and use of ITNs as most financially stable respondents(self-employed and civil servants) utilized ITNs more at54.5% and 40% respectively than the low income earners (the peasants/farmers 16.7% and housewives 0.0%) showing that financial constraints hinder mothers from utilization of ITNs and for the housewives may be lack of spouse support, according to Deressa W et al 2011. These financial constraints do little to encourage utilization of maternal health services among women and their families. Such obstacles can deter women from seeking and receiving appropriate care in the formal health care system.

Another comparison was done between gravidity and use of ITNs in pregnancy and it was found that only 14.3% of primigravidas used ITNs while 34.8% of multigravidas used ITNs, this may be attributed to more malaria in pregnancy preventive measures knowledge that the multigravids have so far obtained from there past ANC visits.

An in-depth discussion with the ANC staff and midwives yielded information on the views and knowledge of health care professionals managing the pregnant mothers, as they reported that despite the MIP preventive measures present, they still get quite a number of cases of malaria in pregnancy at there hospital, and cited reasons for possible big numbers of MIP cases to be poor co-operation the mothers towards ANC health education MIP prevention measures given to them, and their attitudes to using the preventive methods, further more citing financial constraints as a hinderance of some pregnant mothers accessing the malaria preventive measures.

The discussion with the midwives also shows that they are well versed with IPTp administration, the drugs used and dosages, timing of IPT administration and had a positive attitude towards IPT usage but reported that the pregnant mothers are poor at ANC attendance which is vital in IPT administration timing.

5.2 CONCLUSION

Malaria in pregnancy has important consequences for mother and baby. Coverage with the World Health Organization–recommended prevention strategy for pregnant women , like intermittent preventive treatment in pregnancy (IPTp) and insecticide-treated nets (ITNs) is vital.

From my findings above utilization of malaria preventive measures in pregnant women is still poor, despite adequate efforts by the governments to educate and provide services for prevention of malaria.

Factors like socio-economic, literacy status still matter in usage of malaria preventive measures, showing that knowledge dissemination about these measures to the uneducated and poor is still low which correlates with recent studies where key determinants of IPTp coverage were education, knowledge about malaria/IPTp, socio-economic status, parity, and number and timing of antenatal clinic visits. Key determinants of ITN coverage were employment status, education, knowledge about malaria/ITNs, age, and marital status.(Jenny H, et al 2012)

But our results may have been limited by the sample size and study population in comparison to the past studies about that have been done in Uganda thus the difference in data obtained.

5.3 RECOMMENDATIONS

-More efforts should be put in place by policy makers of ensuring free service delivery to the publis especially the financially constrained.

-Policy makers should also put more effort into encouraging full ANC attendance i.e four visits to ANC clinic by the mother

-They should also further encourage spouse support in pregnancy as some mothers fail to obtain these malaria preventive measures because of financial constraints(housewives)

-I also recommend provision of ITNs together with IPTp during ANC visits as this will make the ITNs more accessible to mothers

REFFERENCES.

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QUESTIONNAIRE.

Dear Madam/Sir,

Your participation is voluntary and the information you give is confidential. You may also stop the interview at any time you wish Hoping that this information will be used in improving the welfare of our children.

NB: Tick the correct answer and answer where necessary.

SECTION: SOCIAL DEMOGRAPHIC CHARACTERISTICS.

1. Age of the mother……..

2. Marital status of the mother

(a) Single ( )

(b) Married ( )

(c) Widowed ( )

(d) Separated/divorced ( )

3. Educational level of the mother.

(a) None ( )

(b) Primary ( )

(c) Secondary ( )

(d) Tertiary/University ( )

4. Occupation of the mother

(a) House wife ( )

(b) Civil servant ( )

(c) Self employed ( )

(d) Peasant/farmers ( )

5. Main occupation of the father.

(a) Farmer ( )

(b) Civil servant ( )

(c) Businessman ( )

(d) Unemployed ( )

(e) Others ( )

6. Tribe of the mother.

……

7. Religion of the mother.

(a) Catholic [ ]

(b) Protestant [ ]

(c) Muslim [ ]

8. Gravida and what gestational age……..

SECTION B, Knowledge on use of malaria preventive measures?

1. Do you know any malaria prevention measures?

   YES

   NO

   If yes, name them…….

   …….

2 Do you use any of the above, or have used any before?

   YES

   NO

   If no, why don't you use any, …….....

   ……...

3. Have had about ITNs(insecticide treated nets)

   (a) Yes

   (b) No

If Yes have you used one before or are you using it now?.....

If no why aren't you using one? (Are they expensive, you don't know where to find them or you don't believe they are important)……..

5. Have you received any malaria prevention drugs during your ANC visits? (IPT)

[ ]

YES

NO [ ]

6. Where you told the drug you where given?

YES

NO

If yes, which drug was it?.....

5. At what gestational age was it given and how many times (IPT1,IPT2) ……

6.Do you think these drugs work.

YES

NO

if no what is your reason for thinking so……

……

7. Have you suffered from malaria during this pregnancy

YES

NO

8. What measures did u take when u thought u were sick with malaria during this pregnancy.

……..

SECTION C, Discussion with midwives and ANC staff

1. Do u get many cases of malaria in pregnancy in this hospital
2. Have you taught the pregnant mothers attending ANC at this hospital about malaria prevention strategies,

   Yes

   No

   If Yes, which prevention strategies have have you taught them,……

3. How is there response to the above suggested malaria prevention strategies……

   …….

4. How many times do you administer IPT to the mothers……

5. Which drugs do you give to the mothers…….

6. Do you think it has helped the mothers prevent malaria in pregnancy,Yes….NO……
   If no, Why do you think it hasn't helped……

7. Are these mothers tested for malaria parasites at any of there ante-natal visits,

Yes…..No……

If No, why……