

**ASSESSMENT OF KNOWLEDGE AND PRACTICE TOWARDS
MALARIA PREVENTION IN SIBU SIRE WOREDA COMMUNITY, SIRE
TOWN,EAST WOLLEGA ZONE, OROMIAREGION, ETHIOPIA**

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SCIENCES DEPARTEMENT OF NURSING AND MIDWIFERY**

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ABSTRACT

Background: -Malaria is a barrier to economic and social development and a cause of immense hardship to communities throughout sub-Saharan Africa. It accounts for 20% of mortality among under 5 years of age Children and 10% of the continent's overall disease burden It imposes tremendous costs on households, businesses, health systems, and government budget and is believed to be one cause of the poor economic performance and persistent poverty of many African nation.

Objectives: -To determine level of knowledge and practice towards malaria prevention among sibu sire woreda community

Methods: -Cross-sectional study design was used to assess the knowledge, attitude and practice of malaria prevention of the study community. This study was conducted from March 20-30, 2014. Data was collected by using structured questionnaires used to interview the respondents by data collectors. 333 households were interviewed using self-administered structured questionnaires prepared by local language. The obtained data was analyzed manually by tallying and using calculators and other electronic materials. The findings of the study will be presented and summarized by using tables, graphs, diagrams and other descriptive methods for further elaboration and simplicity of understanding among people read them. Discussion was made both for findings and its relation with other articles cited. The interpretation was also be made according to its relation with the topic of the study and the conclusion also will be drawn accordingly as well

Result: All study subjects were participated in the study giving a response rate of 100%. From 333 respondent 272 (81.5%) were males and 61(18.5 %) were female . 197(59%) have knowledge on preventive method which is drainage of stagnant water preventive from malaria, and 165(49.5%) of the respondent practice preventive method which were indoor residual spray in house hold, and 213(64%) of the respondent practice preventive method which were use of mosquito net preventive from malaria and 120(36%) of the respondent responds not use of mosquito net because of use ITNS not prevent from malaria.

Conclusion and recommendation: Most of the study population had poor knowledge and unsafe practice towards prevention on malaria control .Health office, administrative sectors and other directly or indirectly concerned bodies should have work together in order to the awareness of the community raised through sustainable provision of health education on related topics. Moreover, further large scale study should be implemented on Malaria prevention and control in the current study area.

Keywords: knowledge, Attitude, practice, Malaria,

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Abbreviation /Acronyms/

DHS	District Health Service
IRS	Indoor residual spraying
ITNs	Insecticide treated nets
KAP	Knowledge, Attitude and practice
MES	Malaria Eradication services
MOH	Ministry of Health
OHB	Oromiya Health Bureau
UNICEF	United Nations international children Emergency Fund
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Background

Malaria is a barrier to economic and social development and a cause of immense hardship to communities throughout sub-Saharan Africa. It accounts for 20% of mortality among Children under 5 years of age and 10% of the continent's overall disease burden (1). It imposes tremendous costs on households, businesses, health systems, and government budget and is believed to be one cause of the poor economic performance and persistent poverty of many African nations (1)

Ethiopia's fight against Malaria started more than half a century ago. "Initially malaria control began as pilot control project in the 1950's and then it was launched as a national eradication campaign in the 60's followed by a control strategy in the 70's." [The effort has seen alternating periods of success and failures. "In 1976 the vertical organization known as the National Organization for the Control of Malaria and Other Vector-borne Diseases) evolved from the Malaria Eradication Service (MES)". As is the case everywhere else where malaria is endemic, the disease is far from being conquered. The agent – plasmodium – has developed resistance to a number of drugs while the vector mosquito has learned to fend off the chemical onslaught launched by humans. The early 21st century fight in Ethiopia was guided by the Abuja (Nigeria) declaration with the following targets for the year 2005 (2).

Ethiopia with an average of 5 million cases a year and 9.5 million cases per year between 2001- and 2005 The disease causes 70,000 deaths each year and accountant for 17% of outpatient visits to health institutions. It also accounts for "...15% of admissions and 29% of inpatient deaths" - a figure considered to be too low given that more than a third of the country's population does not have access to health services A number of contributing factors have been identified .The burden of malaria has been increasing due to combination of large population movements, increasing large scale (3).

Malaria remains a major public health problem particularly in sub-Saharan Africa. Each year, 300-500 million malaria cases lead to over one million deaths of which 90% occur in sub-Saharan African.

In Ethiopia, malaria is a public health concern for all groups of the population, although children under-five years of age and pregnant women are at a higher risk. About 75% of the country's land surface is malaria's and about two-thirds of the population is at risk of malaria infection. Malaria is also the leading cause of outpatient visits and deaths in the country. In Southern Nations and Nationalities and Peoples Region (SNNPR), about 65 of the population is living in malaria endemic areas (4)

1.2 Statement of the problem

Malaria is the leading cause of morbidity and mortality in Uganda.(1) malaria the number one health problem in sub Saharan in Africa with an average of 5 million cases a year and 9.5 million cases per year between 2006-and 2007 The disease causes 70,000 deaths each year and accountant for 17% of outpatient visits to health institutions. It also accounts for "...15% of admissions and 29% of inpatient deaths" a figure considered to be too low given that more than a third of the country's population does not have access to health services (4).

Uganda has the third largest malaria burden in Africa and the sixth largest in the world.5 Currently, 95% of our population is at a highly endemic risk, and the remaining 5% of the country is prone to malaria epidemics.6 Malaria is responsible for up to 40% of all outpatient visits, 25% of all hospital admissions, and 14% of all hospital deaths.1 An estimated 12 million clinical cases are treated annually in the public health system alone. Child deaths due to malaria are between 70,000 and 100,000 every year, a death toll that far exceeds that of HIV/AIDS.2 Additionally, malaria affects maternal morbidity and mortality and is attributed as a direct or indirect cause of 65% of maternal mortality and 60% of spontaneous abortion. Additionally, 15% of life years lost to premature death are due to malaria and families spend 25% of their income on this disease.(4)

Children under the age of five and pregnant mothers living in rural areas are disproportionately affected by malaria. Rural inhabitants contribute to 87% of the burden of disease and nearly half of all inpatient deaths among children under-five years of age are attributed to malaria.9 Pregnant women have a greater risk of developing severe disease due to a malaria infection than are non-pregnant adults living in the same area. The increased risk of malaria during pregnancy is due to malaria-related anemia. Populations living in rural areas have a higher rate of incidence of malaria but receive less treatment than those living in urban areas.(5)

Throughout the written history ,malaria has made itself as a companion of human race in a very wide belt around the world .it would seem that two third of the world population in habiting areas between 30'S and 65 N parallel were exposed to the risk of malaria infection. Waves of malaria epidemic have epidemic have frequently decimated the population and high mortality have been recorded (6).

On 25 April 2006, Africa heads of state government with senior representative from 44 malaria endemic area participated on in the first ever summated on health problem malaria in Abuja Nigeria .at the end of year 2005, though it is expected that malaria endemic African countries would have achieved at least 60% coverage level, of different preventive and treatment intervention, malaria remains a major contributor to disease burden in Africa. about 60% of the estimated 350-500 millions global clinical malaria episode and over 80% of the million deaths globally each year occurs in African countries .the burden on the health system, absentees among the school children and diminished least work productivity all contribute to make malaria in a significant contribute to law economic growth in endemic countries, estimated at casting African countries about US \$12 billion annually (7)

WHO has been playing a leading rode in the adoption and implementation of malaria prevention and control activities that are technically sound and suited to the local malaria epidemicity .efforts to ensure access to early diagnosis and prompt treatment with safe and effective drugs ,timing and targeting of selective vector control with emphasis on the use of insecticide treated nets and indoor residual spraying and strengthen the capacity in epidemic monitoring preparedness and response have been give due attention .(8)

Malaria the most important parasitic infection of humans, affects about 5% of the world population. it is estimated that incidence of malaria in the world is between 300 million and 500 million clinical cases per year. of the estimated 1.5 million to 2.7 million annual death from malaria worldwide ,about 1 million occur among children under five years of age in Africa south of Sahara (9)

In Ethiopia it is estimated that about 70% of the land is malarious and over 60% of the population is living in the area .the country has also experienced the worst malaria epidemic in 1958 with 3 million malaria cases and 150,000 deaths . Generally ,areas lying below 2000 meter altitude are malarias ,an estimated 68% of Ethiopian population resides in area of risk malaria .malaria affects about 4-5 million annually .the disease remains to be leading causes of morbidity and mortality in the country . In 2005 malaria accounted for 15.5% of outpatient visits ,20.4 % of hospital admission and 2of deaths(10)

The transmission of malaria in Ethiopia is closely linked to rainy reason, i.e. Thekiremt and belg rains. The major transmission season follows the June –September rains and occurs between

September –December, while the minor transmission season occurs between April-may following the February –march belg rains .the minor transmission is limited to few areas that receive belg rains, while the major transmission season occurs almost in every part of the country.(11)

The major vector of malaria is anopheles arebiensis .the other vector viz, anopheles funestes and anepholes nets are of secondary importance .p.falciparem and p vivax are the dominant accounting for about 60% and 40% of the cases respectively. The others are rare and accounts for less than 1% of the causes (12)

The increasing trends of malaria transmission over the last few years is also believed to have been aggravated by the unstable weather condition ,the ever increasing population movement to and from malerios areas and the declining efficacy of the anti malaria mono therapies(8)

The emergency and rapid spread of p.falciparum resistance to commonly use anti malaria drugs poses a serious challenge to the effectiveness of early diagnosis and prompt treatment as a priority within currently regional strategy for malaria control efforts. The rational use of an effective anti malaria drug reduce the risk of sever disease and death, it shortens the duration of the illness and the same time hinders the development of parasites resistance.(9)

The malaria epidemic over the past few years has not shown a marked reduction and disease continuous to be the leading cause of morbidity and mortality in the country. Preliminary finding of Ethiopian EDHS was filled prior to major ITN, distribution campaign in which over 3 million ITNweredistributed.(8)

Referring to information obtained from the head of communicable disease control department of east wollega zone health office ,till now there is no study carried out at Sire town here ,concerning knowledge,attitude and practice of malaria prevention . Taking this situation in to consideration I aimed at conducting study to determine the knowledge and practice toward malaria prevention of Sire population at sire town

1.3 Significance of the study

After analyzing the data, the finding will be forwarded to health planner, researchers' student and other concerned bodies so that they may use it to strengthen knowledge, attitude and practice towards malaria prevention among sibu sire worda community. And also the study may be used as baseline information for future study or intervention and also Encourage researchers, stakeholders, NGOs to give emphasis to the prevention and control program of malaria.

The basic reason to conduct this research is to get base line determine level of knowledge, attitude and practice towards malaria prevention among sibu sire worda community. and that the result of the research will be useful for respective health authority and others in primary health care activity to plan for awareness and development program me to teach about prevention and control program of malaria

CHAPTER TWO

LITERATURE REVIEW

Global about 3000-500 million people suffer from malaria each year worldwide, it has remained a major health problem esp. in developing countries and more than 90% of cases are from the sub Sahara Africa .each year 1.7 to 2 million people die from malaria, the majority of deaths occurs in Africa (13)

In much of sub Saharans Africa there is intense transmission of plasmodium falciparum, clinically immunity is acquired early in life and the greatest concentration of disease burden falls up on infant and young children .

in all areas regardless of the intensity of malaria transmission the evaluation of anti malaria for un complicated malaria should emphasize treatment efficacy in children less than five years with clinical apparent malaria .the rationale for this requirement is that even in population with little immunity, younger children often have a less favorable therapeutic response to anti malaria drugs than do older children and adult .obviously in areas of low malaria transmission ,exclusive enrollment of in children less than five years is likely to pose logistic difficulties is age because of the relative in frequency malaria in this age group . in such environment where young children are substantially low risk of infection than adults ,such as occurs with occupational exposure in some south east Asia countries ,patient of all age can be enrolled .nevertheless ,wherever possible ,it is recommended that a sufficient number of patient be enrolled to allow for stratification of result based on age (54yr and >5 yrs)(14)

resistant to anti malaria drugs arises as a result of anti malaria drugs arises as a result of spontaneously occurs ring mutation that affect the structure and activity as the molecular level of the drug target is the malaria parasite or affect the access of the drug to the target. mutant parasite are selected if anti malaria drugs concentration are sufficient to inhibit multiplication of susceptible parasite but are inadequate to inhibit the mutants, a phenomenon known as drug selection .the evolution of drug resistant is becoming clear. Available evidence indicates that for p.falciparum .some of this mutation are involved in Chiloquin resistant for p.vivax. The molecular basis for resistant to anti foliate such as sulfadoxinepyremathimine has been well characterized (15)

Plasmodium falciparum resistant to sulfadoxinepyrimethamine is primarily conferred by successive single point mutations in parasite dhfr, the gene that encodes the target enzyme dihydrofolatereductase /DHFR/ and by additional mutations in dhfs which encodes for enzyme dhyrofelateSynthetase(DHFS). Various factors relating to drug parasite and human host interactions contribute to the development and spread of drug resistance. The mechanism of drug action is a critical element in the spread at which resistance develops. In addition, drugs with long terminal elimination half life enhance the development of resistance, particularly in areas of high transmission .Similarly; increased drug pressure is significant contributor to drug resistance. An increased amount of a drug are used, the likelihood that parasites will be exposed to inadequate drug levels rises and resistant mutants are more readily selected. Parasite factors associated with resistance in clued the plasmodium species concerned and the intensity of transmission. Human host factors include the wide spread incorrect use or irrational use of anti malaria drugs and possible the levels of the host immunity.(16)

In Ethiopia majority of the population live in malarias area .the repeated epidemic that killed many people have been documented reports have showed that the number of people have been documented report have showed that number of people affected by malaria has dramatically increased since 1990.in 1998- 1990 the number of cases per year was 21 per 1000 population .even the situation worsened based on health institution report(2002/2003malaria is reported to be the first cause of morbidity and mortality accounting for 15.5% of POD visit,20.4% of admission ,and 27% of inpatient death (13)

The study conducted WonagoWoreda,Southern Ethiopia on knowledge of malaria shows that From the total respondents, 270 (42.3%) mentioned mosquitoes as the main transmission mechanisms for malaria. The other means of transmission reported included: living near stagnant water (21.5%), get cold (7.2%), presence of wastes (6.3%), and drinking dirty water (4.7%). ITNs, as the main preventive measure of malaria, were reported by the majority, 399 (62.6%); followed by taking tablets (14.0%), proper disposal of wastes (10.7%), use of traditional remedies (3.4%), fumigation (3.4%), use of aerosol sprays (3.1%), and drainage of breeding sites (1.7%). The majority 77.9%) of respondents had ever heard/seen messages about ITNs. Most (97.5%) of the respondents believed that sleeping under ITN has a benefit, and only (5.2%) respondents reported problems associated with sleeping under ITN (14)

Ethiopia has made un paralleled progress toward malaria prevention and control according to the malaria indicator survey (MIS) 2007 officially released by federal ministry of health result from the MIS show national effort had strongly positioned the country on the path to eliminate the disease as a major public health threat. About 52 million people in Ethiopia faced the risk of malaria .Primarily in areas below 2000 meter in altitude. During the 2003 epidemic outbreak, which historically occurred every 2-7 years, about 12 million malaria cases were recorded with an estimate 100,000 deaths. Thus with the past three years FMOH and its partner implemented swift malaria prevention and control program in country . more than 20 million insecticide nets has been considerably increased ,and more than 24,000 health extension were trained and deployed to improve malaria case management at community level.(17)

The MIS 2007 survey conducted among 8000 households between October to December 2007 ,show enormous advances in areas of malaria prevention and control .in this compressive presentation ,AtoAsefawGetachew .MIS 2007 coordinator discussed .

In Ethiopia malaria is a major public health problem .in 2008/4 the disease was reported as the leading cause of morbidity and mortality accounting for 15.5% outpatient consultation 20.4% admission and 27%in patient deaths. in light of the high morbidity& mortality caused by malaria, the country has been engaged in malaria prevention and control and one of the signatories of the Abuja declaration .despite the high burden of malaria, the intended coverage of prevention and control intervention tools that include access to diagnosis and treatment &use of insecticide treated net is not yet achieved (8)

In a, Attitude study carried at Tigray region, it found that in addition to high attitude regarding the benefits of malaria prevention and environmental measures of Malaria control;, 70% know that Mosquito bed net use could prevent Malaria and 100% belief that mosquito bed nets would be used if available. In that study affordability and willingness to buy mosquito net was appraised. Accordingly, 17% states that the government should provide the net freely. About 14% respondents said that they couldn't buy it others said they can buy it by them selves(18)

In door residual spray in the last 12 months was reported in 18.5% of household's .there were no significant difference between regions in proportion of households sprayed in the last year 18.6% Oromia, vs. 18.3 SNMPR, IRS coverage varied by cluster from 0 full coverage. In 43 of 64 cluster (67%) no house hold reported IRS in the last 12 months.(19)

CHAPTER THREE

OBJECTIVE

3.1 General Objectives

- ➔ To determine level of knowledge and practice towards malaria prevention among sibu sire woreda community, east wollega zone, oromia region from March 20-30, 2014.

3.2 Specific Objectives

- ✚ To assess the socio-demographic characteristics of sibu sire woreda community.
- ✚ To identify the level of knowledge toward malaria prevention among sibu sire woreda community.
- ✚ To assess the level of practice towards malaria prevention among sibu sire woreda community.

CHAPTER FOUR

METHOD AND MATERIAL

4.1 Study Area and Study Periods

The study was conducted from March 20-30, 2014 in sebu sire woreda, east wellega, oromia regional state. The woreda situated at a distance of 288 KM away from the capital city of the country, Addis Ababa.

Sibu sire town is one of the towns found in sibu sire woreda east Wollega administrative Zone and has 02 kebeles, with a total population of 1425(2012). Of which, 698 are male and the rest 727 are female. Regarding health infrastructure, the woreda has 1 governmental functional health centres, 1 health posts, 5 private clinics. Educational wise there were 3 elementary schools and 1 (one) high school. Majority of the district population earn their likely hood by the product of agriculture especially maize plantation and processing

4.2 Study Design

Cross-sectional study design was used to assess the knowledge, attitude and practice of malaria prevention of the study community.

4.3. Populations

4.3.1. Source population

All households found in Sibu sire town.

4.3.2. Study population

Sampled population from source population .The study subjects was selected or sampled households.

Inclusion Criteria: Age \geq 18 years.in the house hold

Exclusion Criteria: physical inability to complete the questionnaire.and critically ill were excluded.

4.4 sample size and sampling techniques

4.4.1 Sample size Determination

Sample size was calculated using statistical formula for estimation of single population proportion

$n = \frac{(z^{\alpha/2})^2 p(1-p)}{d^2}$ where :

d n= sample size

p= proportion of HHs using ITNs (0.5)

d= margin of error (5%)

$(z^{\alpha/2})$ = standard normal variable at $\alpha/2$ confidence level of interval.

$Z^{\alpha/2}$ = confidence interval (1.96).

N= Total households in sebu sire woreda, 1425

$$n_i = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} = 384$$

By using this formula, the sample size was 384 HHs. However our population size is, 10,000 and the final sample size could be determined by the following formula.

$$n_f = \frac{n}{1 + \frac{n}{N}} = \frac{384}{1 + \frac{384}{1425}}$$

$$n_f = 303$$

Contingency of 10%, therefore the final sample size will be 303+30= 333

K^{th} value = N where k^{th} value = interval at which to interview the house hold, 4th house will be interviewed.

$$n_f = 333$$

4.4.2 Sampling techniques

Systematic Random Sampling Technique followed by Simple Random Sampling method was used to select study units.

4.5 Study Variable

Dependent Variable

- Knowledge towards malaria prevention
- Attitude towards malaria prevention
- Practice towards malaria prevention

In Dependent Variable

- Sex, age
- Educational status
- Religion
- Ethnicity
- Marital status
- Income

4.6. Operational definitions and definition of terms

Knowledge: is a specific information or clear awareness about Malaria prevention and control the correct responses for knowledge questions would be corrected out of 100% and scored as: $\geq 50\%$ good and $< 50\%$ is poor.

Practice: is to do different methods and actions repeatedly in order to improve performance in prevention and control of Malaria , and the question will be from 100% and scored as $>60\%$ is safe and $<60\%$ is unsafe.

Community perception: is the idea of an individual or community actively participating towards the specific action of prevention and control program undergoing in the study area. Control of Malaria is the action of an individual, community, government and nongovernmental organizations to stop or overcome prevalence of Malaria by treating cases and stopping the multiplication of microfilaria as well as decreasing the prevalence of the disease over period of time.

ITNs: Nets treated with insecticides to kill mosquitoes.

ITNs UTILIZATION: Use of standardized, properly hanged ITNs over the bed or sleeping area.

VULNERABLE GROUP: Groups which are nationally identified as high risk and given priority for ITNs utilization, which include pregnant mothers and under five years' children, community affected by emergency and all others living in malarias area.

4.7 Methods of data collection and Measurement

4.7.1 Data Collection Procedures

The data was collected by 3 diploma holder nurses and they will take orientation on how to collect data using consent form and structured questionnaire as per scheduled work plan.

4.7.2 Data Processing and Analysis

The data was cleaned, edited and compiled and variables was calculated and analyzed using manual hand calculators and Descriptive statistics was used for most variables such as socio-demographic data

4.9 Ethical Consideration

Before preparing the draft proposal and undergoing the study, letter has already written from Jimma University (JU), College of public Health and medical Science to the concerned bodies and permission was taken from concerned authorities. Consent was obtained from the respondents and confidence was secured.

4.10 Data Quality Assurance

Primarily a standard questioner developed and translated to locally dominant language. And also training of data collectors was conducted. Finally to know the characteristics of questionnaires a pre test was carried out in randomly selected 5% of the total sample size which is 19 HHs two days before the actual data collection day. These HHs are not in the current study area but similar in many aspects. Thus, based on the findings of the pre test the investigator has made necessary modification. Additionally, close supervision of data collectors was undertaken.

4.11 Plans of utilization of the study / Dissemination of Findings

The result was submitted to Jimma University (JU), College of Health Science Department of Nursing health and Sibu Sire District health office at the end of Study. The data was collected by close-ended structured questionnaire prepared in English version and translated to local language and translated back to English language for data analysis and interpretation. And data was collected by trained data collector by close supervision of investigator.

CHAPTER FIVE:

RESULTS

All study subjects were participated in the study giving a response rate of 100%. For ease of understanding the results are presented under different subheadings here under.

5.1. Socio demographic characteristics

This study was carried out on a total of 333 house hold of sire towns , Sibu sire woreda, east wellega oroiya 2014. Among the study population 272 (81.5%) were males and 61(18.5 %) were female. Majority of respondent were between (22-67) age groups that accounted 235 (72.09%) of the total, the rest between (18-21) age group that accounted 85 (25.4%) and between (15 – 17) were 8 (2.45%) of the total. majority of respondent 223(67%) were oromos, the second largest 76(23%) were Amaharas, 16(5%) are Gurage and 18(5.52%) 6(2%) are Tiger and 10(3%) from other ethnic group. From the total respondent 203 (61 %) are orthodo ,60 (18 %) were Muslims, and 67 (20 %) are protestant and the rest 3 (0.9) are other Among the study subject 46 (7.2%) were illiterate, 53 (116%) can read and write, Gread 1-6 58(17%) Grade 7-12 ,122 (36.6) s and the remaining respondents 54 (16.2%) have high school and above educational level (**table 1**)

Table 1: Distribution of socio – demographic characteristics of sire towns , Sibu sire woreda, east wellega zone, oromia region, march, 2014

Ser no.	Back ground characteristic		Having awareness about malaria(n=333)	
			Yes	no
1	Sex	male	272	81.5
		female	61	18.5
		Total	333	100
2	Marital status	single	35	10.5
		married	279	83.7
		divorced	12	3.6
		widowed	7	2

		Total	333	100
3	Religion	orthodox	203	61
		muslim	60	18
		protestant	67	20
		other	3	0.9
		Total	333	100
4	Ethnicity	oromo	223	67
		Amhara	76	23
		gurage	16	5
		Tigre	6	2
		Others	10s	3
		Total	333	100
5	Educational status	illiterate	46	7.2
		Only read &write	53	16
		Grade1-6	58	17
		Grade 7-12	122	36.6
		Grade 12 compl.	54	16.2
		Total	333	100
6	Occupational status	Govt employ	88	26.4
		Farmer	36	10.8
		Merchant	103	31
		Daily laborer	59	17.6
		House wife	31	9
		other	16	4
		Total	333	100
7	Family size(children)	<2	77	23
		3-4	198	59
		>5	58	18
		Total	333	100
8	Monthly income	<400	62	18.5

		400-801	124	37.5
		801-1200	69	20.5
		>1200	78	23.5
		Total	333	100
9	Means of communication	radio	265	79.5
		TV	179	54
		Total	333	100

5.2. Knowledge on malaria privation related attributes

The study showed that only 65 (19.6%) of the total respondents there is surface or ground water with in or near your compound, and 60 (18%) respond that there is no surface or ground water with in or near your compound; and also 74(22.4) there is discarded materials which able to hold water near or within your compound and 134 (40.2%) there is no discarded materials which able to hold water near or within compound (**table 2**)

Table-2 the number of households in which areas suitable for mosquito breeding present or n which in or near their compound of sire town , Sibu sire woreda, east wellega zone, oromia region, march, 2014

Presence of vector breeding areas near resident area	Response			
	Yes		No	
	<u>no</u>	%	<u>no</u>	%
Is there surface or ground water with in or near your compound	65	19.5	60	18
Is there discarded materials which able to hold water near or within your compound	74	22.2	134	40.2
Total	139	41.7	194	59.2

The study shows that 111(33.6%) have source of information about awareness of malaria from Health institution and 79(23.9),79(23.9%),53(16%),11(3.3%) have source of information about awareness of malaria from Mass media ,Community meeting, Family/ neighbor and Other/specify respectively.(**table 3**).

Table 3 .Distribution of the source of information for awareness of malaria in sire town, Sibusire woreda, east wellega zone, oromia region, March, 2014

Source of information	Households	
	NO	%
Mass media	79	23.9
Health institution	111	33.6
Community meeting	79	23.9
Family/neighbor	53	16
Other/specify	11	3.3
Total	330	100

The study shows that 329(99.9%) educational status have knowledge about manifestation of malaria and 226 (68.4%) of illiterate have knowledge about manifestation of malaria at least one from all s/s and 290 (87.8%) of Grade 1-6 educational status have knowledge about manifestation of malaria and300(90.9%) of Grade 7-12 educational status have knowledge about manifestation of malaria this indicate that majority of the respondant have educational status have knowledge about manifestation of malaria.(table 4)

Table 4: knowledge about manifestation of malaria in relation to educational in sire town, Sibusire woreda, east wellega zone, oromia region, March, 2014

Manifestation	Educational status			
	Illiterate	Grade 1-6	Grade 7-12	Grade 12+
Fever	46	53	122	54
Chills	25	47	106	54
Loss of appetite	13	33	67	39
Feeling of thirst	33	19	78	44
Back/joint pain	45	51	116	52
Vomiting	22	27	69	19
Weakness	20	37	88	46
Dark/black urine	7	16	33	17
Other/specify	15	7	21	4

Among the respondents 54(11%) Grade 12 and above have knowledge about cause of malaria and 122(36.6%) have knowledge about cause of malaria and 46(13.8%) illiterate have knowledge about cause of malaria and 53(15.9%) have knowledge about cause of malaria this shows that majority of respondent have knowledge about cause of malaria (table 5)

Table 5: knowledge about cause of malaria in relation to educational status of community sire town, Sibu sire woreda, east wellega zone, oromia region, March, 2014

Cause	Educational status				
	Illiterate	Only read and write	Grade1-6	Grade 7-12	12+
Mosquito bite	46	53	54	122	54
Hot/cold env	16	20	39	81	33
Dirt env.	6	15	17	33	12
Mal nutrition	3	7	3	4	12
Small germ	3	5	5	6	7
Evil sprit	2	3	5	7	4
I don't know	6	4	4	6	3
Total	84	07	56	127	118

Among the respondents 180(54%) have knowledge of means of malaria transmission by Mosquito bite and 16(4.8%) have knowledge of means of malaria transmission by Contact with Among the respondents 180(54%) have knowledge of means of malaria transmission by Mosquito bite and 16(4.8%) have knowledge of means of malaria transmission by Contact with and 22(6.6%) have knowledge of means of malaria transmission by Contact with fomite 56(16.8%)have knowledge of means of malaria transmission by Poor environmental hygiene and 23(7%) have knowledge of means of malaria transmission by Exposed to sun and warm weather and 20(6%) have knowledge of means of malaria transmission by Exposed to rain. This indicate that 153(46%) of the respondent do not have knowledge of means of malaria transmission. (table 6)

Table 6: knowledge of means of malaria transmission in sibu sire woreda community, east wollega zone, oromia region from March 20-30, 2014

Means of communication	No of respondent (333)
Mosquito bite	180
Contact with sick	16
Contact with fomite	22
Poor environmental hygiene	56
Exposed to sun and warm weather	23
Exposed to rain	20
Other/specify	16

Based on the responses 224(67.2%) of the study population have knowledge of mosquito breeding site and the rest 109 (32.8%) of the respondents have mismatched knowledge on the breeding site of mosquito (**table 7**).

Table 7: knowledge of mosquito breeding site in relation to occupational status of the community in sibu sire woreda community, east wollega zone, oromia region from March 20-30, 2014

Breeding site	Occupational status					
	Government employ	Farmer	Merchant	Daily laborer	House wife	others
Marshy area	53	17	50	33	13	6
Surface water	12	5	17	15	6	4
Backyard/plantation	6	3	12	4	3	2
Discarded material	10	7	21	5	7	2
Human& animal waste	4	0	1	2	1	1
Other	3	4	2	0	1	1

From 333 respondent, 197(59%) knowledge preventive method drainage of stagnant water and 165(49.5%) of the respondent practice preventive method were Indoor residual spray and 213(64%) of the respondent practice preventive method were use of mosquito net and

120(36%) of the respondent responds not use of mosquito net because of use ITNS not prevent from malaria.(table 8).

Table 8: knowledge of malaria preventive of community in sibu sire worda community, east wollega zone, oromia region from March 20-30, 2014

No	Preventive method	No of households know	Poor<4	Satisfy	Good >6
1	Drainage of stagnant water	197	103	53	41
2	Indoor residual spray	165	102	30	33
3	Use of mosquito net	213	151	41	21
4	Application of insect repellent to exposed skin	91	72	10	9
5	Application of wire screening across window	67	43	17	7
6	Staying in door at night	98	44	30	24
7	House hold insecticide spray	167	77	49	41
8	Smoking local woods/animal dung	67	37	16	14
9	Wearing cloths which cover all the body during night	146	89	40	17
10	I don't know	11	5	3	3
11	Other	13	3	4	6

Out of the total respondents 153 (46%) of them have poor knowledge on malaria prevention and the remaining 180(54) have good knowledge on malaria prevention (**figure 1**).

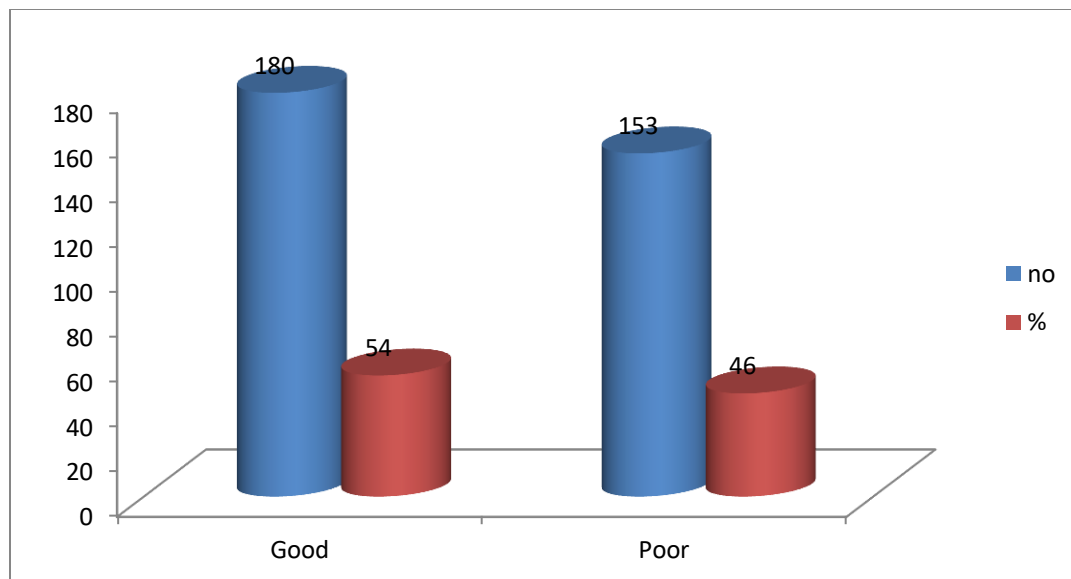


Figure 1: level of knowledge on malaria prevention among sibu sire worda community, east wollega zone, oromia region from March 20-30, 2014.

5.3. Practice on malaria prevention

The study which is carried Traditional medicine in 6moth treatment shows that 146(98.5%) taken to health facility, and 3(1%) treated by Traditional medicine and 5(2%) have no action this study indicate that majority of respondent have knowledge on treatment measures taken by community of sire town when affected by malaria

Table 9: Treatment measures taken by community in sibu sire worda community, east wollega zone, oromia region from March 20-30, 2014

Means of treatment	House hold
Taken to health facility	146
Traditional medicine	3
No action	5
Other action	0

Among the respondents of 113(33.9%) of house hold not utilizing malaria preventives methods because of Not accessible in our local area, and 43(12.9%) of house hold not utilizing malaria preventives methods because of It is expensive. 36(10.8%) of house hold not utilizing malaria preventives methods because of didn't want to use it and 13(3.9%) of house hold not utilizing malaria preventives methods because of Methods beyond individual/community effort.

Table 10: reason for not utilizing malaria preventives methods of community in sibu sire woreda community, east wollega zone, oromia region from March 20-30, 2014

Reason	No of house hold complain
It is expensive	43
Not accessible in our local area	113
I don't want to use it	36
Methods beyond individual/community effort	13

Out of the total 333 respondents, 151(70.8%) of them have safe practice and 182 (29.2%) of them have unsafe practice on malaria prevention (figure 2).

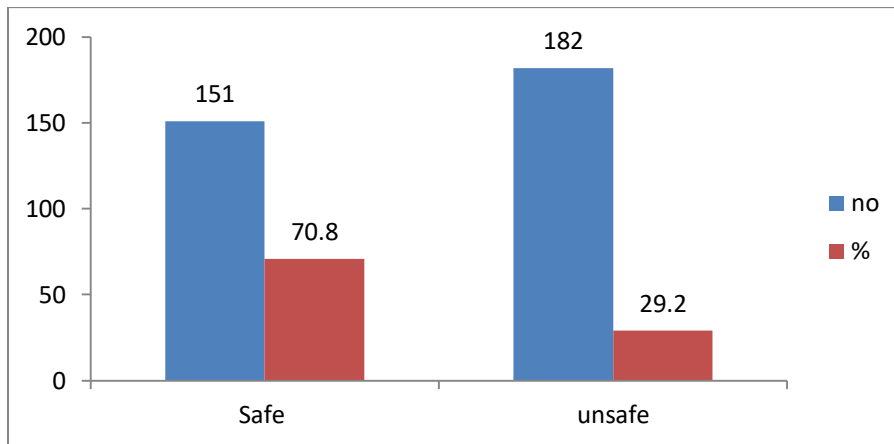


Figure: 2 level of practice on malaria prevention among sibu sire woreda community, east wollega zone, oromia region from March 20-30, 2014.

CHAPTER SIX

DISCUSSION

Among the respondents 180(54%) have knowledge of means of malaria transmission by Mosquito bite and 16(4.8%) have knowledge of means of malaria transmission by Contact with sick and 22(6.6%) have knowledge of means of malaria transmission by Contact with fomite 56(16.8%)have knowledge of means of malaria transmission by Poor environmental hygiene and 23(7%) have knowledge of means of malaria transmission by Exposed to sun and warm weather and 20(6%) have knowledge of means of malaria transmission by Exposed to rain. This indicate that 153(46%) of the respondent do not have knowledge of means of malaria transmission.(14) The study conducted Wonago Woreda, Southern Ethiopia on knowledge of malaria shows that from the total respondents, 270 (42.3%) mentioned mosquitoes as the main transmission mechanisms for malaria. The other means of transmission reported included: living near stagnant water (21.5%), get cold (7.2%), presence of wastes (6.3%), and drinking dirty water (4.7%). ITNs, as the main preventive measure of malaria, were reported by the majority, 399 (62.6%); followed by taking tablets (14.0%), proper disposal of wastes (10.7%), use of traditional remedies (3.4%), fumigation (3.4%), use of aerosol sprays (3.1%), and drainage of breeding sites (1.7%).

The majority 77.9%) of respondents had ever heard/seen messages about ITNs. Most (97.5%) of the respondents believed that sleeping under ITN has a benefit, and only (5.2%) respondents reported problems associated with sleeping under ITN It was similar with the study undergone for assessment of knowledge of Sire towns. The study shows that 111(33.6%) have source of information about awareness of malaria prevention from Health institution and 79(23.9),79(23.9%),53(16%),11(3.3%) have source of information about awareness of malaria from Mass media, Community meeting, Family/neighbor and Other/specify respectively. shows that (15)]

The proportion of children with fever, who received anti malaria drug increased to almost 10% compared to 3% in 2005(only traction of this fever was attributed to malaria as evidenced by the survey feedings) .the highest rate of fever, 44% was recorded in Gamella .On the contrary 20%

of patient with malaria were treated at home which required a closer. It was similar with the study undergone for assessment of knowledge of Sire town. The study shows that which is carried. Traditional medicine in 6 month treatment shows that 146(98.5%) taken to health facility, and 3(1%) treated by Traditional medicine and 5(2%) have no action. This study indicates that majority of respondents have knowledge on treatment measures taken by community of Sire town when affected by malaria.(13)

Ethiopia malaria is a major public health problem. In 2008/4 the disease was reported as the leading cause of morbidity and mortality accounting for 15.5% outpatient consultation, 20.4% admission and 27% in patient deaths. In light of the high morbidity & mortality caused by malaria, the country has been engaged in malaria prevention and control and one of the signatories of the Abuja declaration. Despite the high burden of malaria, the intended coverage of prevention and control intervention tools that include access to diagnosis and treatment & use of insecticide treated net is not yet achieved. It was similar with the study undergone for assessment of the last 6 months against sex, age, Sire town. The study shows that prevalence of malaria within the community in the last 6 months shows that 59(39%), 31(20.5%), 49(32.4%), 27(17.8%), 12(7.9%), are < 5 yrs, 6-8 year, >18 year, Pregnant mothers respectively(8)

In a knowledge, and practice study carried at Tigray region, it found that in addition to high knowledge regarding the benefits of DDT and environmental measures of Malaria control, 70% know that Mosquito bed net use could prevent Malaria and 100% believe that mosquito bed nets would be used if available. In that study affordability and willingness to buy mosquito net was appraised. Accordingly, 17% states that the government should provide the net freely. About 14% respondents said that they couldn't buy it others said they can buy it by themselves. It was similar with the study undergone for assessment of reason for not utilizing malaria preventives methods of community in Sire town shows that among the respondents of 113(33.9%) of house hold not utilizing malaria preventives methods because of Not accessible in our local area, and 43(12.9%) of house hold not utilizing malaria preventives methods because of It is expensive. 36(10.8%) of house hold not utilizing malaria preventives methods because of didn't want to use it and 13(3.9%) of house hold not utilizing malaria preventives methods because of Methods beyond individual/community effort(18)

In door residual spray in the last 12 months was reported in 18.5% of household's. There were no significant difference between regions in proportion of households sprayed in the last year 18.6%

Oromia, vs. 18.3 SNMPR, IRS coverage varied by cluster from 0 full coverage. In 43 of 64 cluster (67%) no house hold reported IRS in the last 12 months it was similar with the study undergone for assessment Among the respondents of 151 (70.8%) of house hold who utilize less than two methods (poor practice) and 41(19.2%) of house hold who utilize satisfactory practice of the community for malaria prevention and 21(10%) of house hold who utilize Good practice of the community for malaria prevention .(19)

CHAPTER SEVEN:

CONCLUSIONS AND RECOMMENDATIONS

7.1. Conclusion

Knowing the knowledge, and practice of the individual, the family, the community and the society as an entire is vital for malaria prevention and control. As in the result, the study under gone on knowledge malaria prevention Among the respondents 180(54%) have knowledge of means of malaria transmission by Mosquito bite and 16(4.8%) have knowledge of means of malaria transmission by Contact with sick and 22(6.6%) have knowledge of means of malaria transmission by Contact with fomite 56(16.8%)have knowledge of means of malaria transmission by Poor environmental hygiene and 23(7%) have knowledge of means of malaria transmission by Exposed to sun and warm weather and 20(6%) have knowledge of means of malaria transmission by Exposed to rain. In general 153(46%) of the respondent have poor knowledge on malaria prevention. shows that Among the respondents of 151 (70.8%) of house hold who utilize (unsafe practice) of practice of the community for malaria prevention and 41(19.2%) of house hold who utilize satisfactory practice of the community for malaria prevention and 21(10%) of house hold who utilize Good practice of the community for malaria prevention

7.2. Recommendations

Based on the finding of the study, the following recommendations were forward o:

1. Health office, administrative bodies and other related sectors should do in collaboration to increase awareness of the community for malaria prevention
2. Health education, specifically on:
 - route of transmission and means of prevention
 - the breeding site of mosquito
 - rationale use of ITN and should be addressed for the community to increase the Knowledge and practice on prevention
3. Further studies on knowledge and practice towards Malaria prevention and control should be undertaken in this study area

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ANNEX ONE: QUESTIONNAIRE

JIMMA UNIVERSITY COLLEGE OF PUBLIC HEALTH AND MEDICAL SCIENCE DEPARTMENT OF NURSING AND MIDWIFERY

Informed Consent Form for Quantitative survey questionnaires

My name is _____ I would like to ask you a few question on Assessment of knowledge and practice of malaria prevention in Sire town community Sibu sire district East Wollega zone Oromia region west Ethiopia 2006 EC
date _____

Dear respondent, you are kindly requested to give real experience, knowledge, attitude and practice about what are going to be asked by direct self-administered questioners. Feel free and confidential that you will not personally identified by name for the information you have given and also the result will be reported in group and not personally ,you have a right not to respond for any question you are not comfortable. Can I proceed?

General information

Name _____ house number _____

Socio demographic characteristic of the respondent

Age _____

Sex M _____ F _____s

Marital status a. single b. married c. divorced d. widowed

Religion a. orthodox ----- b. Muslim ----- c. Proant----- D. other -----

Ethnicity a. oromo----- b. amhara----- c. tigre----- d. gurage----- e. tigre -- f. other

Educational status a. illiterate -----b. only read and right c. grade 1-6 d. grade 7-12 e. grade 12 complete and above

Occupational status

a. Government employ b. farmer c. merchant d. daily laborer e. house wife f. other

Monthly income -----

Means of communication a. TV b. radio c. news paper d. other /specify

Is there any ground/surface water with in or near your compound? Yes _____ no _____

Is there any discarded domestic material or container rubbish that able to hold water ? yes____
no_____

KNOWLEDGE QUESTION

Do you know malaria yes____ no _____

If you know where do you get information ? a. mass media ___b. health institution c. community meeting d. family /neighbor e.other

What are manifestation of malaria –fever , chills ,headache ,loss of appetite , back/joint pain vomiting , weakness dark red or black urine , jaundice ,other

Did any one in the family had fibrile illness that resmbels malaria in the past 6 month ?

Yes_____ no _____

If yes to the above question how many of your family had malaria

If the one who had malaria was female did she had malaria when she was pregnant? Yes__ no__

Where does mosquito breed?

A.Marshy area _____B.Surface water_____C.Back yard plantation_____

D.Discarded material_____E.Human and animal waste_____

F.Other (Specify)_____

Is malaria preventable disease?A.Yes_____B.No_____

If yes to question above,what are preventive methods do you know?

A.Drainage of stagnant water_____

B.In door residual house spraing_____

C.Use mosquito nets_____

D.Application of insect repellent to exposed skin_____

E.Application of wire mesh/wire screening /across windows_____

F.Staying in door at night_____

G.House hold insecticide spray_____

H.Smokinglocal woods/animal dung_____

I.Wearing cloths which cover all the body during night_____

J.Other(Spesify)_____

K.I do not knowany methods_____

PRACTICE QUESTION

What did you do to treat this patient a. take to health facilities b. traditional medicine c. nothing
d. other

If traditional medicine to question above why you use traditional medicine

Belief the remedy , unable to afford drug ,health institution far other /specify

Do you know the cause of malaria? Mosquito bite , hot environment ,cold environment ,mal
nutrition, small germ ,evil sprit , I don't know other/specify

Can malaria be transmitted from person to person yes___ no _____

What thing do you use to prevent malaria?

A.Drainage of stagnant water(Destroying mosquito breeding site)_____

B.Indoor residual house spraying_____

C.Use of mosquito nets_____

D.Application of insect repellent to exposed skin_____

E.Application of wire mesh/wire screening/across windows_____

F.Spraying indoor at night_____