COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF NURSING

ASSESSMENT OF COMMUNITY AWARENESS AND PRACTICE TOWARDS MALARIA PREVENTION IN SELECTED KEBELES OF, WORABE TOWN, SELTE ZONE,SOUTHERN ETHIOPIA, 2021

A Research Thesis Submitted To Wolkite University College of Medicine and Health Sciences, Department of Nursing in Partial Fulfillment for the Degree Bachelor of Science in Nursing

By**:** DAWIT DESALEGN

AMIR MUSAFA

UMMAD ABDULE

AUGUST, 2021

WOLKITE,ETHIOPIA

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By**:** Dawit Desalegn

Amir Musafa

Ummad Abdule

Advisors: Betelihem Tadesse (BSc, MSc,)

Baye Tsegaye(BSc,MSc)

Acknowledgement

First of all, we would like to thank Wolkite University College of health science and medicine department of Nursing for providing the opportunity to develop this research proposal. Next we would like to express our sincere thanks to Advisors Betelihem Tadesse (Bsc, Msc) and Baye Tsegaye (Bsc, Msc) for their constructive comments and guidance during development of this proposal. Lastly but not the least we would like to express our special thanks to all who advised, supported and assisted us in the development of this proposal.

Contents

List of Tables

ABBREVATIONS AND ACRONYMS

ACTS	Artemisinin combination therapies
DDT	Dichloride Diphenyltrichloro ethane
EDHS	Ethiopia Demographic and Health survey
FMOH	Federal Ministry of Health
LLIN	Long-lasting insecticide-treated net
ITN	Insecticide Treated Net
KAP	Knowledge, attitude and practice
MDGs	Millennium Development Goals
MOH	Ministry of Health
NGOs	Non Governmental organization
PHC	Primary Health care
WHO	World Health organization
IRS	Indoor residual spraying

Abstract

Background: Communities knowledge and practices on malaria disease often remain unobserved during malaria control efforts. In Ethiopia, many studies focus only on increasing community awareness on malaria prevention but an integrated manner of the awareness with the practical methods of malaria prevention has received little attention. And also since Malaria is considered to be one of the main global health problems, with it causing approximately 438,000 deaths in 2015, 90%of these deaths occur in sub-Saharan Africa and 70% are of children under the age of 5 year old. So we investigate the awareness and practice of the communities on malaria preventive measures in an integrated manner.

Objective: To assess awareness and practice towards prevention and control of Malaria in selected kebeles of worabe town.

Methods: A cross-sectional study on assessment of community awareness and practices towards malaria was done among the residents of selected kebeles of worabe town. The selected sample of household was interviewed. Systematic random sampling technique was used on selecting the household. Data was collected by using Amharic questionnaire which was filled by Wolkite University undergraduate Nursing students. The respondents was either the heads of household or their spouses. Data was edited, compiled, and analyzed by the investigators manually by tallying and scientific calculator.

Required Budget: Expected activities of this research proposal and their time frame have been out lined according to plan from March 1 to July 25 2021 and a total estimated budget required for this study was 4320 Birr.

Key words: - Awareness, Malaria, practice, worabe, Ethiopia

1. INTRODUCTION

1.1 Background;

Malaria is the world most deadly parasitic disease and caused by infection with single-celled parasites of one of the four species of plasmodium, plasmodium falciparum, p. vivax, p. ovale,p. malariae and p.knowles, and transmitted by female anopheles mosquito [1, 2]. Of this p. falciparum and p. vivax are the most dominant one [2]. According to report of world Health Organization (WHO)2016, around 1 million malaria deaths worldwide occurred[3] , 90% occur in Africa become killing mostly young children [4, 5], who account for 78% of all death [6].

In Africa, it accounts for 40% of public health expenditure and 25% of the household income [7]. While malaria transmission was remarkably associated with rural environments due to mosquitoes affinity for clean and temporally pools of water, which are the most important in rural areas as anopheline larval sites [7,8]. Risk factors for malaria infection include location (house near to breeding site and larval habitats) [1], attributes of houses or living units [9], socio economic factors [1, 10], and genetic characteristics of the occupants [11]. The climatic change like heavy rain and higher temperature favor the breeding of mosquito.

In addition other studies are the malaria is one of the Top Ten causes of illnesses and deaths in these regions [19]. The main component of malaria control strategies in Ethiopia include the early diagnosis and effective treatment of cases the application of selective vector control measure such as indoor residual insecticide, spray, and environmental management [20]. However, the prevalence of malaria in the country is still high in adequate knowledge of local malaria vectors, their ecology and habit have contributed to challenges of the mosquito control programs . On top of this lack of public awareness on the cause, transmission and prevention methods and practice towards the use of Insecticide Treated Net (ITNs) have also contributed to challenges of malaria prevention and control strategy in the country. [12]

While according to Demographic and Health survey in Ethiopia indicated that only 1% of household has bed nets, with urban households to possess bed nets more than rural, 3% and 1% respectively[22]. In fact in Ethiopia the most frequently used malaria prevention measures are draining stagnant water, sleeping under mosquito nets and indoor residual spraying; Environmental management and ITNs for prevention of malaria are safe, socially acceptable and should be promoted for vector control to reduce the disease burden in the rural communities [21, 26, and 27].

1.2. Statement of the problem

Malaria has been a serious problem for the majority of human kind. It occurs throughout most of the tropical regions of the world, and also It has been happen on-endemic countries and a danger to younger children. [12].

Currently Malaria is found in about 100 countries, 2400 million individuals are infected and about a one third of the world population, are exposed to varying degree of malaria risk. It is estimated that there are 300-500 million cases per year with 15-27million death per year [13].

On the other hand Malaria remains one of the most difficult epidemiological, pharmacological and immunological challenges in the world particularly to Africa, more than 90% of cases are in sub-Saharan Africa where transmission reaches higher level than anywhere in the world and about 200 million are chronically infected of these about 100 million suffer acute manifestation of the disease in the course of a year. The prevalence of malaria in dares salaam, Tanzania among school children living in the urban area was 2-110% with predominant malaria parasite of plasmodium falciparum accounting for 90% of all cases [7]. Reviewing evidence from Kinshasa, the capital of the Democratic Republic of the Congo, showed that the prevalence rate varied from 4% in the urban zone to 46% in the per-urban zone with plasmodium falciparum was accounted for more than 75% of the infection [1]. But Most of the disease and death (in highly endemic area) occur in children under five and pregnant women [14]

While according (FMOH) About 90% of the estimated deaths are African children below 5 year of age. As far as 74% of the African population lives in highly endemic area and 5% of the African children are likely to die of malaria before reaching the age of 5 years, Most of the consequence of malaria especially, anemia and cerebral malaria are related to child hood deaths constitute nearly 25% of child mortality in Africa. Malaria is not only a direct cause of death but also contribute in directly to death due to respiratory infection, diarrhea, malnutrition, by impairing immunity via so far not fully understood mechanisms [15].

However pregnant women and children are high –risk groups for malaria as they are typically affected most severely by this disease and prevention efforts typically target these vulnerable groups in Ethiopia [2]. School-aged children (age 5-15) bear the most significant burden of malaria in terms of having the highest prevalence rate [10].

The prevalence of malaria in Ethiopia is highly depending on the geographical location and altitude of specific place. Therefore in Ethiopia, malaria is prevalent in 75% of the country's landmass where more than 48 million people reside and annually 100,000 lives died. In a non-epidemic year, 5-6 million clinical malaria cases and over 600,000 confirmed cases were reported from the heath facilities was only apportion of the actual magnitude [16,18].

According to Federal Ministry of Health office (FMHO) report,Amhara Regional state is the second highly affected next to Oromia, with malaria burden composed of the rest of largest region, Southern and Tigray [7,17].In addition Malaria is one of the major public health problems in Ethiopia.It accounts 12% of outpatient cases and 10% of admission reasons next to an admission for delivery[17]. It is a major cause of mortality with proportional mortality rates of 13-15 % [18]. About 75% of the land mass is endemic for malaria and 60% of the population is exposed to malaria in Ethiopia. It's generally considered as a low-to-moderate malaria transmission intensity country with primarily associated to altitude and rainfall [11]. While the health sector in Ethiopia is greatly affected by climatic change which has profound consequences on the transmission cycle of vector borne infections disease like malaria. Mostly seasonality has serious consequence for the substance economy of Ethiopia country side and for the nation in general [14].

While Ethiopian national malaria indicator survey of 2015 indicated that sixty-nine percent of households owned an LLIN in 2007 compared with 64 percent reported in the 2015 but 55 percent for 2011. 34% of households in non-targeted areas (> 2000 m) reported owning at least one LLIN which has impact on overall LLIN distribution. Thirty-four percent of households owned LLINs in areas >2,000m and ≤2,500m above sea level where malaria prevalence in children under five is negligible. A considerable number of survey supervisors reported that undistributed LLINs were observed in several woreda/ District health offices during data collection period for MIS 2015.Regionally Amhara and Tigray had the highest ownership of LLINs at 73 percent,while SNNPR had 69 percent of ownership.Forty percent of the household members slept under a net the night before the survey for this MIS-2015.The percentage of households with IRS in the past 12 months was found to be 29 percent. Across regions (Figure 4), more households in Benshangul Gumuz (44 percent) and Amhara (40 percent) had been sprayed compared with households in SNNPR (24 percent) Overall, 71 percent of households are protected either by owning an LLIN or having received IRS.Regarding awareness in malarious areas, sixty-eight percent of women have heard about malaria and there is a minor reduction in percentage. The percentage is not satisfactory in the literate women. Percent who recognize fever as a symptom increased from 44 percent to 75percent in MIS 2015comparing with MIS 2007 but almost no change when compared with 2011.Among women who had heard of malaria who recognize fever as symptom of malaria was maintained since 2011. Women who knows malaria is caused by mosquito bites and percent who reported LLINs as a preventive method was improved substantially but the denominator needs improvement[23].Thus understanding of the current knowledge of the community beliefs and practice with respect to the malaria disease is required to obtain and maintain the community involvement in surveillance and control activities [3].

So that for the sustainability of the programs capacity building must be done on the community awareness and practice towards malaria prevention and control options.

Therefore this study will be designed to assess the current level of awareness and practice of the community towards malaria prevention and control options the output of this study very important for the sustainability of the current malaria prevention and control options through assessing the current community knowledge on prevention and control methods.

1.3 Significance of the study

The study will provide information of Malaria control activities,used to identify indicators of a Strategies for intervention depending on the underlying causes of the problem and used as a reference for future study on the same topic.

2. Literature Review

Nowadays studies are being done related to awareness and practice of malaria prevention in a community in different areas with different results and conclusions.

A study done in a rural population of Northern India on 296 participants by a stratification study design reflects that all of the study participants had heard of malaria.Importantly, 97% of the study participants correctly associated malaria with mosquito bite. The majority (76.35%) of the study participants had knowledge of malaria symptoms,and a majority of them had knowledge that malaria could be both prevented (90.5%) as well as cured (93.2%). Further, a majority (77.7%) of the study participants knew that malaria could be fatal if not treated. An overwhelming (95%) number of the study participants had knowledge regarding various modes of disease prevention.The response to questions on knowledge with multiple options drew multiple responses. However, the most common response (68.2%) to questions on the source of information regarding malaria was television (TV)/newspaper. Adequate knowledge was also found among them regarding resting habits of mosquitoes with only 2.8% of responses registering "don't know." Regarding practices, a majority (71.6%) of the study participants preferred going to doctors at government hospitals for malaria treatment, and 56% of study participants were willing to seek medical help in <24 h in case of a child having a febrile episode. With regard to personal protective measures,37% preferred using mosquito repellents while bed net usage was at 30%. Regarding preventive practices, more than half of the respondents would avoid collections of stagnant water while a quarter of them would prefer indoor.[25]

A study done in Nsaabwa,Mukono district Uganda on 140 households using cross sectional study deesign revealed that Sixty one percent of respondents had medium knowledge about malaria prevention and control, scoring either 5 or 6 out of a maximum 7 points (Mean score =5.46 points, SD = 1.17). On the whole, respondents do recognise the threat posed by malaria as most (97.1%) agreed with the statement: ―I think that malaria is a serious and life-threatening disease.‖ Despite most households (79%) owning mosquito nets,participants of focus group discussions confirmed that some people do not use the nets because they associate them with breathing difficulties. 76% of the respondents had poor practices towards malaria prevention and control.[26]

A research done in a rural community of the Ho municipality,Ghana on 246 individuals using cross sectional study design, reflects on the awareness of the community on Preventive Measures. Majority of the respondents had knowledge of different preventive measures such as use of mosquito net (93%), mosquito mat, coils and liquid vaporizer (90%), and mosquito spray (84%). The preventive measures which less than half of the respondents had knowledge on were the use of fan (43%) and covering of the body with clothes (36%). It was revealed that most of the respondents (84%) had knowledge on the use of prevention of water stagnation as a strategy to eradicate the breeding sites of mosquitoes. Related to the practice of the community towards malaria prevention the research reflects that the main strategy for malaria prevention was the use of mosquito mats, coils, and liquid vaporizers (72%).More than half of the respondents also used water stagnation prevention (62%), cleaning house (62%), mosquito net (60%),and mosquito spray (54%) as their strategies for malaria prevention. The least recorded strategy, however, was the use of smoke to drive away mosquitoes (32%).[27]

A research done in North West Tanzania shows there has been a considerable number of reports about knowledge, attitude and practices relating to malaria and its control from different parts of Africa. These reports concluded that misconceptions concerning malaria still exist and that practices for the control of malaria have been unsatisfactory. Thus, advanced, knowledge of the community beliefs and practices with respect to the disease is required to obtain & maintain its participation in surveillance and control activities (15).

A study done on Community knowledge and perceptions on malaria prevention and house screening in Nyabondo, Western Kenya on 80 respondents using cross sectional study design showed that Insecticide treated mosquito nets was by far the most stated known (97.4%) and used (97.6%) personal protective method in the area and only 15.6% of the respondents were aware of screening of windows,eaves and doors. On environmental management practices, 65.7% of the respondents acknowledged clearing bushes/vegetation around houses in the community and 62.7% reported clearing household refuse/waste. About 60 and 46% reported filling breeding sites and clearing vegetation along canals respectively. There was high reported [recalled] application of environmental management practices at household level with 66.1% of the respondents reporting clearing bushes/vegetation around houses. Lighting of fire/coils was reported to be known (20.8%) and applied (8.5%) at household level and its use was associated with the respondents level of education.[28]

Various studies done in different part of the world showed us the awareness on prevention of malaria is still low. For example A study in Guatemala found that villagers who had poor awareness of malaria and its cause reported not taking measures of their own to protect themselves (14). In a similar study done in Gokwe district, Zimbabwe though the villagers ability to recognize malaria symptom was relatively high and ant malarial drugs were available through a number of channels ; the knowledge concerning the treatment of malaria was such that almost half (44%) of the villagers didn't know the names of ant- malarial drugs or the importance of completing a full course (11).

On the other hand a community based descriptive cross-sectional study in four villages like Danwarai, G ehuru, Jiga, and Kashin Zama of Aliero local government area in Kebbi Sate in northern Nigeria,Comprehensive knowledge about malaria prevention measures was high (90%), They have good knowledge of mosquito behavior breeding areas (64.5%), resting places (70%) and biting time (81%)are observed.[2] A community based cross sectional study was conducted 144 respondents in Woreta town,NorthWest Ethiopia reflected that About 95.8% (138/144) of the respondents indicated that malaria is preventable and curable disease. Only about 25% (36/144) of the study participants practiced frequent and proper use of insecticide treated bed nets (ITNs). Draining logged water was a highly rated, 83 (57.6%), practice of environmental management of malaria.[29]

A cross sectional study done on 422 households heads in the rural area of Raya Azebo district,Northern Ethiopia revealed that the presence of mosquito breeding sites near to home, bed bug infestation, outdoor sleep due to bed bugs and household with poor bed net practicing were significantly associated with malaria case households.[30]

A community based cross sectional study done on 384 individuals in Abeshige Woreda,Gurage Zone, Southern Ethiopia revealed that Sleeping under ITN (100%) and using IRS (63.3%) are the two most frequently applied methods for malaria prevention by respondents. Using bednet (100%),cleaning environment (73.4%) and insecticide spraying (53.7%) were most frequently mentioned methods to protect from mosquito bite. Removal of water collected in ditches (94.4%) is the most mentioned measurement taken by respondents to limit mosquito population. However, the study revealed that about 3.7% of the respondents do not take any measurement. All of respondents claimed that they possessed at least one ITN, thus making the coverage of ITN, 100% in the area. Further inquiries revealed that in 51.0% of the households, one and 44.0%, two used ITN were observed. Health extension worker (96.1%) followed by Woreda Health office (70.6%) are frequently mentioned sources of ITN in the houses. Two hundred thirty (59.9%) of respondents reported that they ever washed their net.From those practiced washing the net, 33.0% washed when it was dirty and 30.4% every six month.Further, the study assessed respondents' time of using,preferred shape and color of ITNs. Accordingly, most of respondents (66.9%) used ITN during the night. Conical (66.4%) and Blue (54.7%) are the most preferred shape and color of ITNs by respondents. All of the respondents have awareness about insecticide treated mosquito nets. The respondents further asked about the number of months ago the net was treated.About 43.2 and 26.8% of respondents replied that the net was last treated 1-2 and 3-4 number of months ago respectively. About 30.0% of them do not know/recall the number of months ago net was last treated. Kills mosquitoes (82.8%), children is more protected (77.1%),and works better against mosquitoes than untreated net (71.6%) are most frequently forwarded advantages of sleeping under treated mosquito net for children under five and pregnant women. Further, the study inquired the respondents about disadvantage of sleeping under treated mosquito net for children under five.Accordingly, the chemical of the net is danger (68.2%),child might chew/suck net (60.2%) and smell of net is bad were most frequently revealed disadvantages of sleeping under treated mosquito net. From total respondents, 66.4% used IRS in their houses for prevention of malaria. The local government (100%) is the only source of the spraying in the households. Those respondents used IRS were further asked how many times they sprayed their houses. About 55.7 and 44.3% of them reported that they spray their houses one time per year and two-three times per year respectively.Among 129 (33.6%) respondents who did not utilized IRS, service unavailable in the area (36.4%) and householders not at home at the time of IRS program (63.6%) were the reasons for their houses not sprayed with IRS. All of respondents (100%) were believed that malaria is treatable disease. About 96.4, 77.6, and 58.6% of respondents mentioned that Chloroquine, Coartem, andQuinine were the anti-malarial drugs, respectively.Despite this, about 3.6% did not know any kind of anti malaria drug.[31]

Little is known about the use of personal protection materials in Ethiopia. Bed nets do not seem to be extensively used as in some African countries (3). A study in Tanzania showed that benefit of insecticide treated bed nets in reducing malaria morbidity and mortality. Result of highly significant reduction (by 55-75%) in malaria morbidity for children aged 6 months to 2 years were found in netted villages (11).

The study conducted in Jimma Town, Ethiopia, on practice of households respondents on malaria etiology showed that most respondents (71.8%) replied that bed nets is good practice towards prevention of malaria, other reported that ITN (13.1%) and drainage stagnant water(1.4%) could be the prevention malaria and small number of respondents(13.8%)did not know the prevention methods of malaria, two third of the respondents (67.4%) replied that malaria is preventable disease and 21.3% did not know whether malaria is preventable or not through different methods ; while(11.3%) of them believe that malaria is non preventable disease [24].

Despite a study in northern Ethiopia that demonstrated a 40% reduction in the overall under-five mortality using chloroquine, there is still a general paucity of information and experience on the early diagnosis and treatment of malaria among children in Ethiopia. This makes it difficult to assess the impact of the current malaria control interventions on the treatment seeking behavior for malaria in children and the overall coverage of the interventions [30].

A cross-sectional study done in Areka town,southern Ethiopia showed that Regarding practice, 274 (67.7%) of the study participants had good practice while 131 (32.3%) had poor practice in terms of malaria treatment, prevention and control.The possible use of insecticide impregnated bed nets in highly malarias urban and agricultural development areas should be explored. [32].

The discrepancy between the findings of the present study and those of the previously mentioned ones could be attributed to the fact that the previous studies doesn't have an adequate concern on integrative approach of awareness and practice,and following up the community with such approaches.

3. Objectives of the Study

3.1 General objectives

- To assess community awareness and practice towards prevention of malaria in selected kebeles of worabe town,selte zone, southern Ethiopia, 2021.

3.2 Specific Objectives

- To determine the community awareness about prevention of malaria.
- To determine the community practice about control of malaria.

4. Methodology

4.1 Study Area and study period

The study was conducted in Worabe Town,located in Silte zone of the southern nations, nationalities and peoples region(SNNPR),at 169.7KM from Addis Ababa and 156.3KM from Hawassa.The town has a latitude and longitude of 8◦ 1'N 38◦ 20'E with an elevation of 2113 meters above sea level.Based on figures from the central statistical agency,the selected areas has an estimated total population of 1250 of whom 668 are men and 582 are women.There are 7 kebeles in the town and we selected 2 kebeles which named as Duna and Shama.

4.2 Study Design and period

Community based cross-sectional study was conducted from June 18-28/2021.

4.3 Population

4.3.1 Source population

The source population was Population of Worabe town.

4.3.2 Study population

The study population was Population of selected kebeles of Worabe town.

4.3.3 Study unit

The study units was adult individuals.

4.3.4 Sampling unit

The sampling unit was also the households.

4.3.5 Sampling frame

The sampling frame was list of households.

4.4Eligibility criteria

4.4.1 Inclusion criteria;

Head of household or their spouse or any family member aged 18 years or above who have stayed in the study area as permanent resident for at least 6 months was eligible for the interview.

4.4.2 Exclusion criteria;

Those households who existed for less than 6 months in the area.

4.5 Sample Size and Sampling Technique

4.5.1 Sample Size

The sample size was calculated by using single population proportion formula with assumption of 5% margin of error, 95% confidence interval and , p= 70% from the study done in Abeshige woreda,Gurage zone. [31]

$$n = Z^2 p(1-p)/w^2$$

$$ni = \frac{(1.96)^2\, 0.7\,(1 - 0.7)}{(0.05)^2}$$

$$ni = 323$$

Where – Z = the standard normal variable at 95% confidence interval

$z = 1.96$

ni = the initial sample size required

p =70% takes from the study done in Abeshige woreda,Gurage zone 2018.

W = the margin of sampling error tolerated (0.05)

Lastly, the final sample size was calculated by summing up 5% of non-response rate so that it becomes 339.

4.5.2 Sampling Technique

There are 7 kebeles in Worabe town and we selected 30% of the total number of kebeles which will be 2 kebeles out of the total.We use lottery method to select the 2 kebeles out of the total.

Systematic random sampling technique was used to select households. List of the households was used as sampling frame. First the number of households in the selected kebeles was listed. Then systematic random sampling was used to select households. The sampling interval (k) was calculated by dividing the number of households in the selected kebeles(Ni) to the final sample size (k= x)K= N/n(1250/339) Where K(4)= Sampling interval between households and we randomly selected a number to tell us where to start selecting individuals from the list.

N= expected number of households in the selected kebeles

n= Final sample size.

Accordingly every K(4) household was selected as study participants.

4.6 Study Variable

4.6.1 Dependent Variables (outcome variable)

- Awareness
- Practice

4.6.2 Independent Variables

- Socio demographic characteristic: Age, Occupation, Marital status, Educational status, Religion, Ethnicity, Income level.
- Health education.
- Availablity of preventive materials**.**
- Distribution of preventive materials.
- Skilled health worker.

4.7 Data Collection Instruments

The data Collection tool was developed by reviewing different literatures and it consisted socio demographic characteristics ,awareness related and practice related items. The English language questioner was translated to Amharic language (language spoken by in the study area) by Amharic language experts and then the Amharic language was translated back to English language by English language experts and comparison was made on the consistency of the two versions.

4.8 Data Collection Procedure

The data was collected by 3 trained preparatory students of the area by using interviewer administer structured questionnaires.

4.9 Data quality control

Before starting the actual work, the quality of the questioners was checked for serial number, quantity and procedure of collection. Pre-test was conducted on 5% of the sample size at each 'kebele' to ensure the validity of the data collection and to standardize the questionnaire. The invastigators checked the questionnaires for completeness every day. Incomplete questionnaires was returned to data collectors for correction by revisiting the households.

4.10 Data Processing &Analyzing

Collected data was cleared, edited and checked for completeness by the principal investigators. The data was entered and analyzed through SPSS version 25.Then the data was presented using simple frequency table and charts.

4.11 Ethical Consideration

All the ethical issues was considered and requested by using a legal letter written by College of Health science and Medicine Department of Nursing to Worabe zone health bureau and selected kebeles Health unit before the beginning of process of data collection. The purpose of study was briefly explained for the respondents and verbal informed consent was also obtained from the respondents.

4.12 Disseminations Plan

The finding of this study was disseminated to worabe zonal Health office bureau, and also it was presented to Wolkite University College of health science and Medicine, department of nursing more over the finding was disseminated for stake holder and influential person in worabe town Health sector.

5.Results

5.1 Socio demographic characterstics

A total of 339 individual were participated in this study. The mean age of the respondents was 33.03 years (SD+/-9.477) and ranged from 18–65 years. Most of the respondents were females (52.2%), aged 26-35 years (36%),attended grade 8-10(32.2%). Majority of the respondents were merchants (37.8%) followed by farmers (19.5%).Around 59.3% of the study participants has at least 1 under 5 child.The mean monthly income of the study participants was 3262.51(SD+/-1890.859).

Table 1:Socio-demographic characteristics of the study participants in selected kebeles of Worabe town,southern Ethiopia,2021.(N=339)

Characteristics	Categories	Frequency(%)
Age	18-25	85(25.1)
	26-35	122(36)
	36-45	103(30.4)
	46-55	22(6.5)
	56-65	7(2.1)
Sex	Male	162(47.8)
	Female	177(52.2)
Ethnicity	Silte	204(60.2)
	Gurage	57(16.8)
	Amhara	39(11.5)
	Oromo	33(9.7)
	Other	6(1.8)
Religion	Muslim	238(70.2)
	Orthodox	78(23)
	Protestant	20(5.9)
	Other	3(0.9)
Educational status	Unable to read and	30(8.8)

	right	
	Read and right only	40(11.8)
	Grade 1-8	51(15)
	Grade 8-10	109(32.2)
	Completed grade 12	55(16.2)
	Completed higher education	54(15.9)
Occupational status	Government employee	64(18.9)
	Merchant	128(37.8)
	Farmer	66(19.5)
	House wife	24(7.1)
	Daily labored	27(8)
	Other	30(8.8)
Number of under 5 children	1	76(22.4)
	2	86(25.4)
	3	33(9.7)
	4	69(1.8)
Average monthly income	1000-3000	187(55.3)
	3000-6000	128(37.8)

	6000-9000	23(6.8)

5.2 Community awareness towards malaria prevention

Most of the respondents(99.4%) perceived that malaria is preventable and curable disease and 94.1% of them believed that malaria can cause death. 65.8% of the study participants perceived that mosquito bite is the cause for malaria and 58.1% of them answered that mosquito bites at night.Most of the study participants(76.4%) perceived that stagnant water is a breeding site for mosquitos.More than half of the study participants(51.3%) believed that mosquito transmits malaria and 39.2% of the respondents answered that the mosquito brought the malarial parasite from a person having the illness.61.7% of the study participants believed that they know sign and symptoms of malaria;related to this 23.9% of the study participants mentioned fever followed by feeling cold with 15.1 respondents.Most of the study participants(63.7%) perceived that malaria can be prevented by using ITN.Around half of the respondents(48.1%) didn't know a medication to treat malaria.Most of the study participants(64.6%) didn't know that there are different malarial parasites which needs selectivity of appropriate medications.21.8% of the respondents answered that they have knowledge on traditional treatment of malaria and 4.4% of the respondents mentioned eating garlic with green pepper as a traditional treatment.

Table 2: Knowledge towards malaria prevention in selected kebeles of Worabe town,southern Ethiopia,2021.(N=339)

Variables	Categories	Frequency(%)
Is malaria preventable and curable?	Yes	337(99.4)
	No	2(0.6)
Can malaria cause death?	Yes	319(94.1)
	No	20(5.9)

Awarness about the timing of mosquito bite	At night	197(58.1)
	At the daytime	11(3.2)
	Anytime	115(33.9)
	I do not know	16(4.7)
Awareness about the place where mosquitos breed	Stagnant water	259(76.4)
	Grass	15(4.4)
	I do not know	65(19.2)
Awareness on the cause of malaria	Mosquito bite	223(65.8)
	Hot/cold weather condition	26(7.7)
	Dirty environment	78(23)
	I do not know	12(3.5)
Does mosquito transmit malaria?	Yes	174(51.3)
	No	165(48.7)
Awareness about the place where mosquito brought the malarial parasite	From a person having the illness	133(39.2)
	From marshy area	21(6.2)
	I do not know	17(5)
	Other	3(0.9)
Do you know sign and symptoms of malaria?	Yes	209(61.7)
	No	130(38.3)

Known symptoms	Fever	81(23.9)
	Chills	47(13.9)
	Shaking	46(13.6)
	Headache	12(3.5)
	Joint pain	11(3.2)
	Vomiting	5(1.5)
	Feeling cold	4(1.2)
	Fatigue	1(0.3)
	Nausea	1(0.3)
	Palpitation	1(0.3)
Do you know malaria can be prevented by using ITN?	Yes	216(63.7)
	No	123(36.3)
Awareness on antimalarial medication	Coartem	69(20.4)
	Chloroquine	67(19.8)
	Paracetamol	40(11.8)
	I do not know	163(48.1)
Do you know about different types of malarial parasites which needs selectivity of appropriate medication?	Yes	120(35.4)
	No	219(64.6)

Do you know malaria could be treated by traditional drugs?	Yes	74(21.8)
	No	265(78.2)
Awareness on the types of traditional measures	Eating garlic with green pepper	15(4.4)
	Steaming with bahirzaf	14(4.1)
	Never eat vegetables	13(3.8)
	Drinking juices of haregerasa	12(3.5)
	Eating red pepper	8(2.4)
	Eating garlic	7(2.1)
	Drinking endod juice	5(1.5)

5.3 Community practice towards malaria prevention

Most of the study participants (74.9%) expressed that they use ITN as a preventive measure at home. 67.6% of the respondents took clearing stagnant water as an environmental measure to prevent malaria.About 61.7% of the respondents mentioned that they have an experience of using ITN at a certain point of time in the past and 32.4% of the participants mentioned that they have an experience of using DDT.31.9% of the study participants responded that they have the experience of using antimalarial medications.About 15.9% of the participants have used Coartem.More than half(57.2%) of the study participants reported that they do not close windows early at night.15.6% of the respondents have the experience of using traditional healers for malaria and related to this 9.1% of the respondents used eating garlic followed by steaming bahirzaf with 6.5% respondents.42.5% of the study participants spend more time outside their home at night,corresponding to this 25.7% of the respondents haven't worn long-sleeved cloths and long underwears during those times.Of the total 13% respondents have a history of travel to malarious areas recently,related to this 9.4% of the respondents applied preventive measures as sleeping under ITN(7.4%) and malaria prophylaxis(2%).

Table 3:Practice towards malaria prevention in selected kebeles of Worabe town,southern Ethiopia,2021.(N=339)

Variable	Category	Frequency(%)
Practice on mosquito bite prevention at home	Using ITN	254(74.9%)
	Using insecticides	45(13.3)
	Warming the house	22(6.5)
	Nothing	18(5.3)
Environmental practice to decrease the spread of malaria	Clearing stagnant water	229(67.6)
	Clearing vegitations around the house	66(19.5)
	Disposing waste properly	41(12.1)
	Other	3(0.9)
Ever use ITN	Yes	209(61.7)
	No	130(38.3)
Ever use DDT	Yes	110(32.4)
	No	229(67.6)
Ever use	Yes	108(31.9)

antimalarial medication	No	231(68.1)
Type of medication used	Coartem	54(15.9)
	Chloroquine	41(12.1)
	Quinine	13(3.8)
Having practice on closing windows early at night	Yes	145(42.8)
	No	194(57.2)
Ever use traditional healers	Yes	53(15.6)
	No	286(84.4)
The traditional measure used	Eating garlic	31(9.1)
	Steaming with bahirzaf	22(6.5)
Having experience on spending much time outside home at night	Yes	144(42.5)
	No	195(57.5)
Having practice on wearing long-sleeved cloths and long under wears at night	Yes	57(16.8)
	No	87(25.7)
Having recent travel history to malarious areas	Yes	44(13)
	No	295(87)

Applying preventive measure during travel to malarious areas	Yes	32(9.4)
	No	12(3.5)
Preventive measures taken during travel	Sleeping under ITN	25(7.4)
	Malaria prophylaxis	7(2.1)

6.Discussion

This study was aimed to assess the household awareness and practice towards malaria prevention in selected kebeles of Worabe town. It provides scientfic information that could be of great importance for designing evidence-based intervention strategies and guiding appropriate prevention of malaria in the study area.

Regarding awareness,this study showed that most of the respondents(99.4%) perceived that malaria can be prevented,which is higher than from the study done in Raya Azebo district(87.9%)[30].The variation could be due to socioeconomic status like educational status.In this study 65.8% of the participants relate mosquito bite with malaria.This was lower than from a study done in Uganda,Nssabwa village(88%)[26] and Ethiopia, Woreta town (78.5%)[29].94.1% of the study participants acknowledged that malaria can cause death if left untreated,which is consistent with the finding 96% from Uganda,Nssabwa district[26].In this study fever, feeling cold and shaking are the most mentioned as common sign and symptoms of malaria which is somehow consistent with a study done in Abeshge woreda which showed feeling cold,shaking and headache as the most mentioned sign and symptoms[31] .58.1% of the study participants forwarded that mosquitos bites at night which is higher than a study done in rural population of northern India with a result of 43.2%[25] but lower than from the study done in Abeshge with 81.5%[31].Interms of acknowledging stagnant water as mosquitos breeding site our study has comparable result(76.4%) with the study done in the rural population of northern India(81%)[25],but lower than from a study done in Abeshge woreda with 100%[31].

Regarding practice,sleeping under ITN is the most prevalent preventive measure taken by the participants(74.6%),which is lower than from a study done in Uganda,Nssabawa district(87%)[26].About 67.6% and 19.5% of the participants were engaged in environmental malaria prevention activities through draining stagnant water and environmental clearing,respectively.The practice of draining stagnant water in the study area is higher from a study done in Woreta town(57.6%)[29] and the practice of environmental clearing is lower from the study compared previously(27.1%)[29].The study participants also practiced clearing vegetations and insecticide spraying activities.Similar community activities also reported from Abeshge woreda,Areka town,Woreta town,Uganda and India.[31][32][29][26][25]

The gaps(variations) in the above discussion could be from socioeconomic status as educational status,age,sex,average monthly income,occupational status and number of under 5 children in the family.

7. Strengths and Limitations of the study

7.1 Strengths of the study

This study assessed the community awareness and practice towards malaria prevention in an integrative manner.Additionally this study tried to include different adult individuals with different socio-economic status like age,sex,religion,ethnicity,educational status and occupational status.

7.2 Limitation of the study

This cross-sectional study design can create some bias in this study. It only provides information about a certain point of times and the response of participants may not the same in a different season.

8. Conclusion and Recommendation

8.1 Conclusion

The finding of this study revealed,that the overall awareness of the communities towards malaria prevention is relatively good and the practice of preventive measures towards malaria is relatively fair.However,relatively there is a significant gap interms of both awareness and practice.Interms of awareness the communities are less awared about the time of mosquito bite and whether mosquito transmit malaria.Interms of preventive measures also the communities have less experience on spraying insecticide and wearing long-sleeved cloths at night times.

8.2 Recommendation

Regarding to the study findings it's recommended that the local health bureau,health institutions,departments of disease prevention and control, and other stakeholders of the communities need to strengthen comprehensive public awareness creation on different preventive and control measures in both household and community level.On the other hand the local health bureau is recommended to allow health professionals specially health extension professionals to demonstrate different preventive measures in both household and community level.

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ANNEX -1

QUESTIONNAIRE:

WOLKITE UNIVERSITY COLLEGE OF HEALTH SCIENCE AND MEDICINE DEPARTMENT OF NURSING

ENGLISH VERSION PARTCIPANT INFORMATION SHEET

Good morning / afternoon?

My name is ____________________ I am a student at Wolkite University College of Health science and medicine Department of Nursing. The objectives of this study: is to assess awareness and practice towards prevention of malaria in worabe zone,02 kebele. The duration of this study is from June 10- 20, 2013 Ec. There is no foreseen risk by being participating in the study. I am going to ask you some questions that are very important for the programmers in community health service to plan improved interventions. Your name will not be written in this form and the information you give is kept confidential. If you do not want to answer, all or some of the questions you do have the right to do so. However, your willingness and support to answer the entire question would be appreciated and thank you very much.

Would you participate in responding to questions in these questionnaires?

Yes ____________________ No ____________________

Name and signature of Interviewer ____________________

GENERAL INSTRUCTIONS

All questions in this paper are based up on respondents recall. It is very important that you ask each question exactly as it is written on the questionnaires. It is important that you do not Read this alternatives allowed to the respondents response/ answers, and then circle the code next to the category that best matches their answers.

Study Title: Awareness and practice of the community towards prevention of Malaria in 02 kebele, worabe zone south Ethiopia 2021.

Part I: Socio demographic characteristics

1.Age ____________________

2.Sex

1,male 2.female

3. Ethnicity 1.Selte. 2.Gurage 3. Amhara 4. Oromo 5. Other

4. Religion 1. Muslim 2. Orthodox 3. protestant 4. other

5. What is your Educational status?

1. unable to read & write 2. read & write only

3. Grade 1-8 4. Grade 8-10

5. completed grade 12 6. completed higher education

6. What is your Occupational status?

1. Gov't employer 2. merchant

3. Farmer 4. House wife

5. daily labored 6. Others (specify)

7. Haw many Number of < 5 yrs old children in your family member? ____________________

8. What is your average Monthly income?

____

Part II: questions to assess awareness

1.Is malaria preventable and curable?

1.yes 2.no

2.Can malaria cause death?

1.yes 2.no

3.Do you know that when mosquitos bite?

1.at night 2.at day 3.anytime 4.I do not know

4.Do you know where mosquitos breed?

1.stagnant water   2.grass   3.I do not know

5. Do you know the causes of malaria?

1. Mosquito bite   3. dirty environment

2. Hot /cold weather condition   4. I don't know

6. Do you know mosquito transmit malaria?

1. Yes   2. No

7. If yes to Q4, from where mosquito brought malaria germ?

1. from a person having the illness   3. I don't know

2. from marshy area   4. others (specify)

8. Do you know the symptoms of malaria illness?

1. yes   2. No

9. If yes on the above question? What kinds of symptoms are there?________________________

10. Do you know malaria is protected by bed net?

1. Yes   2. no

11. What drugs do you know, that used to treat malaria illness?

a. chloroquine   d. coartem

b. paracetamol   e. I don't know

c. other (specify)

12. Do you know the presence of different malaria germs which need appropriate choice of anti malaria drugs?

1. yes   2. no

13. Do you know Malaria is treated by traditional Medication?

a. yes   b. no

14. If the answer is yes for question 12, What types of medications are there? ______________________

Part III: Questions to assess practices related to malaria

1. What protective measure do you take to avoid mosquito bite at home?

a. Bed nets b. use insecticides

c. fumigate the house d. do nothing

2. What environmental activities do you do to reduce mosquito infestation?

a. Drain stagnant water

b. clear wild vegetation /bush around the house

c. properly disposed garbage

d. other

3. Have you ever used bed net?

a. yes b. no

4. Did you spraying DDT?

a. yes b. no

5. Have you ever used anti malarial prophylaxis medication?

a. yes b. no

6. If yes for question 5 which type of medication are used?

a. chloroquine b. coartem

c. quinine d. other (specifies)

7. Have you ever screen the windows early at night? a. yes b. no

8. Does the house have hole? a. Yes b. no

9. Did you use traditional healers to prevent malaria? a. Yes b. no

10. if yes for question 9, which type ?

a. eating garlic with green paper b, drink juices of haregerasa c. polishing the floor with ten jut d. never eat vegetables

Name of the data collector __________________

Signature ______________

Date ________________

THANK YOU!!!

መጠይቅ

የወልቂጤ ዩኒቨርስቲ የህክምና እና የጤና ሳይንስ ኮሌጅ ፣ የነርሶች ትምህርት ክፍል

የአማርኛ ቋንቋ ተካፋይ የመረጃ ወረቀት

ደህና ጠዋት / ከሰዓት

ስም፡- ዳዊት ደሳለኝ፣አሚር ሙሰፋ እና ኡመድ አብዱል፤እኛ በወልቂጤ ዩኒቨርሲቲ የህክምና እና የጤና ሳይንስ ኮሌጅ ፣ የነርሶች ትምህርት ክፍል ተማሪዎች ነን ። የዚህ ጥናት ዓላማ በወራቤ ከተማ በተመረጡ ቀበሌዎች ወባን የመከላከል ግንዛቤን እና ልምድን መገምገም ነው ። የዚህ ጥናት ጊዜ ከሰኔ 10 እስከ 20 ቀን 2013 ዓ.ም. በጥናቱ ውስጥ በመሳተፍ ሊደርስ የሚችል አሉታዊ ተጽዕኖ የለም ። በማህበረሰብ ጤና አገልግሎት ውስጥ ላሉት መርሃግብሮች የተሻሻሉ መንገዶችን ለማቀድ በጣም አስፈላጊ የሆኑ አንዳንድ ጥያቄዎችን እንጠይቃለን ። ስምዎ በዚህ ቅጽ አይፃፍም እናም የሚሰጡት መረጃ በሚስጥር ይቀመጣል ። መልስ ለመስጠት ካልፈለጉ ሁሉንም ወይም

የተወሰኑ ጥያቄዎችን ያለመመለስ መብት አለዎት።ሆኖም ግን በመጠይቁ ላይ ያሉትን ጥያቄዎች በሙሉ ቢመለሱ ይበረታታል፣ በጣም እናመሰግናለን ።

በዚህ መጠይቅ ውስጥ ላሉት ጥያቄዎች መልስ ለመስጠት ፈቃደኛ ነዎት?

አዎ________________________________

አይ_________________________________

የቃለ መጠይቅ አድራጊው ስም እና ፊርማ____

አጠቃላይ መመሪያዎች

በዚህ ጽሑፍ ውስጥ ያሉት ሁሉም ጥያቄዎች በተጠያቂዎች ማስታወስ ላይ የተመሰረቱ ናቸው ። በመጠይቆቹ ላይ እንደተፃፈው እያንዳንዱን ጥያቄ በትክክል መጠየቁ በጣም አስፈላጊ ነው ። ለተጠያቂዎች ምላሽ / መልሶች የተፈቀዱትን እነዚህን አማራጮች ማንበብዎ እና ከዚያ ከመልሶቻቸው ጋር በሚስማማ ምድብ አጠገብ ያለውን ቁጥር ማክበብ በጣም አስፈላጊ ነው ።

የጥናት:- ርዕስ-በደቡባዊ ኢትዮጵያ ወራቤ ከተማ በተመረጡ ቀበሌዎች የህብረተሰቡ ወባን የመከላከል ግንዛቤና ተግባር ።

ክፍል I: ማህበራዊ-ስነ-ህዝብ ባህሪዎች

የጥያቄ ቁጥር	ጥያቄ
1	ዕድሜ?____________________________
2	ፆታ? 1. ወንድ 2.ሴት
3	ብሄርዎ ምንድነው? 1. ስልጤ 2.ጉራጌ 3.አማራ 4. ኦሮሞ 5. ሌላ
4	ሃይማኖትህ ምንድነው?

	1. ሙስሊም 2. ኦርቶዶክስ 3. ፕሮቴስታንት 4. ሌላ
5	የትምህርት ደረጃዎ ምንድ ነው? 1. ማንበብ እና መጻፍ አልችልም 2. ማንበብ እና መጻፍ ብቻ 3. ከ1-8 ክፍል. 4.8-10 ኛ ክፍል 5. የተጠናቀቀ ክፍል 12 6. የተጠናቀቀ ከፍተኛ ትምህርት
6	የሙያ ደረጃዎ ምንድ ነው? 1. የመንግሥት ሠራተኛ 2. ነጋዴ 3. አርሶ አደር 4. ቤት ማስተዳደር 5. የጉልበት ሠራተኛ 6. ሌሎች (ይግለጹ)
6	6. በቤተሰብዎ አባል ውስጥ ስንት የ <5 ዓመት ዕድሜ ልጆች አሉ? ___________________________
7	አማካይ ወርሃዊ ገቢዎ ስንት ነው?________________

ክፍል II: - ግንዛቤን የሚዳስሱ ጥያቄዎች

የጥያቄ ቁጥር	ጥያቄ
1	ወባ የምንከላከለው እና የሚድን ነው? 1. አዎ 2. የለም
2	ወባ ለሞት ሊዳርግ ይችላል? 1. አዎ 2. የለም
3	የወባ ትንኝ መቼ ይነክሳል? 1. ማታ 2.ቀን 3. በማንኛውም ሰዓት 4. አላውቅም

4	የወባ ትንኝ ማራቢያ ቦታ የት እንደሆነ ያውቃሉ? 1. የታቆረ ውሃ 2. ሳር 3. አላውቅም
5	የወባ በሽታ መንስኤዎችን ያውቃሉ? 1.የወባ ትንኝ ንክሻ 3. ቆሻሻ አካባቢ 2. የሞቀ/የቀዘቀዘ የአየር ሁኔታ 4.አላውቅም
6	የወባ ትንኝ ወባን እንደሚያስተላልፍ ያውቃሉ? 1. አዎ 2. አይ
7	ለጥያቄ 6 መልሱ አዎ ከሆነ፣የወባ ትንኝ የወባ በሽታን ጥገኛ ተውሳክ ከየት ያመጣል? 1. ሕመሙ ካለበት ሰው 3. እኔ አላውቅም 2. ከመርዝ አካባቢ 4. ሌሎች (ይግለጹ)
8	የወባ በሽታ ምልክቶችን ያውቃሉ? 1. አዎ 2. አይ
9	ከላይ በተጠቀሰው ጥያቄ ላይ አዎ ከሆነ ምን ዓይነት ምልክቶች አሉ? ____
10	የአልጋ አጎበር/ዛንዚራ በመጠቀም ወባን መከላከል እንደሚቻል ያውቃሉ? 1. አዎ 2. አይ
11	የወባ በሽታን ለማከም የሚያገለግሉ ምን ዓይነት መድኃኒቶች ያውቃሉ? 1. ክሎሮኩዊን 3. ኳርተም 2. ፓራሲታሞል 4. ሌላ (ይግለጹ) 5. እኔ አላውቅም
12	ተገቢ የወባ መከላከያ መድኃኒቶችን መምረጥ የሚያስፈልጋቸው የተለያዩ የወባ ጥገኛ ተውሳኮች መኖራቸውን ያውቃሉ? 1. አዎ 2. አይ
13	ወባ በባህላዊ መድኃኒት እንደሚታከም ያውቃሉ? 1. አዎ 2. አይ

14	ለጥያቄ 12 መልሱ አዎ ከሆነ ፣ ምን ዓይነት መድኃኒቶች አሉ? ____________________________________

ክፍል III ከወባ ጋር የተያያዙ የመከላከያ ልምዶችን ለመገምገም የሚረዱ ጥያቄዎች

የጥያቄ ቁጥር	ጥያቄ
1	በቤት ውስጥ የወባ ትንኝ ንክሻን ለማስወገድ ምን ዓይነት የመከላከያ እርምጃ ይወስዳሉ? 1. የአልጋ መረበች 2. ፀረ-ተባዮችን መጠቀም 3. ቤቱን ማሞቅ 4. ምንም
2	የወባ ትንኝ ወረርሽኝን ለመቀነስ ምን ዓይነት የአካባቢ እንቅስቃሴዎችን ያደርጋሉ? 1. የታቆረ ውሃን ማስወገድ 2. በቤቱ ዙሪያ ያሉ እጽዋትን/ ቁጥቋጦ ማስወገድ 3. ቆሻሻን በትክክል ማስወገድ 4. ሌላ
3	አጎበር/ዛንዚራ ተጠቅመው ያውቃሉ? 1. አዎ 2. አይ
4	ዲዲቲ ተጠቅመው ያውቃሉ? 1. አዎ 2. አይ
5	የፀረ ወባ በሽታ መከላከያ መድሃኒት ተጠቅመው ያውቃሉ? 1. አዎ 2. አይ
6	ለጥያቄ 5 አዎ ከሆነ ፣ የትኛው ዓይነት መድሃኒት ጥቅም ላይ ይውላል? 1. ክሎሮኩዊን 2. ኳርተም 3. ኩዊኒን 3. ሌላ (ይግልጹ)

7	ማታ ማታ መስኮቶቹን በጊዘ ይዘጋሉ? 1. አዎ 2. አይ
8	ቤቱ ክፍተት አለው? 1. አዎ 2. አይ
9	ወባን ለመከላከል ባህላዊ ፈዋሾችን ተጠቅመው ያውቃሉ? 1. አዎ 2. አይ
10	ለጥያቄ 9 አዎ ከሆነ ፣ ምን(ይግልጹ)? ____
11	ማታ ማታ ከቤትዎ ውጭ ብዙ ጊዜ ያጠፋሉ? 1. አዎ 2 . አይደለም
12	ለጥያቄ 11 አዎ ከሆነ በእነዚያ ጊዜያት ረዥም እጅጌ ልብስ እና ረዥም የውስጥ ሱሪዎችን ይለብሳሉ? 1 .አዎ 2 . አይደለም
13	በቅርቡ ወደ ወባ አካባቢዎች ተጉዘዋል? 1. አዎ 2. የለም
14	ለጥያቄ 13 አዎ ከሆነ የመከላከያ እርምጃዎችን ተግባራዊ ያደርጉ ነበር? 1. አዎ 2. የለም
15	ለጥያቄ 14 አዎ ከሆነ ምን ዓይነት የመከላከያ እርምጃዎችን ተግባራዊ አደረጉ? ____

የመረጃ ሰብሳቢው ስም____

ፊርማ____________________________

ቀን______________________________

እናመሰግናለን!

Statement of Declaration

By our signature below, we declare and affirm that this research is my own work. We have followed all ethical principles of research in the preparation, data collection, data analysis and compilation of this thesis. Any scholarly matter that is included in the research has been given recognition through citation.

This research is submitted in partial fulfillment of the requirements for a BSc degree of in nursing at Wolkite University. The research s will deposit in wolkite University library and will made available to borrowers under the rules of the library. We solemnly declare that this research has not been submitted to any other institution anywhere for the award of any academic degree, diploma of certificate.

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