



**PRACTICES AMONG HOUSEHOLD HEADS TOWARDS
malaria control
IN MOSOCHO DIVISION OF KISII COUNTY, KENYA**

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Full Length Research

Practices among household heads towards malaria control in Mosocho Divison of Kisii County, Kenya

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Malaria is one of the leading causes of morbidity and mortality in the world. Its burden is greater felt in sub-Saharan Africa, with 15% of all disability adjusted life years (DALYs) lost to the disease. Malaria affects more than 70% of its population. The disease also remains a cause of much suffering due to social and economic problems. The understanding of malaria transmission, recognition of signs and symptoms, perception of cause, treatment seeking patterns and preventive measures are important in malaria control. Malaria is the most prevalent disease in Mosocho division rated at 14.4%.The study evaluated practices towards malaria control among household heads. A cross sectional study design was employed it involved a sample size of 384 household heads. Multi-age sampling was used to select participants for the study. Pre-tested structured questionnaire was used to gather information from household heads. Interview guides were used to collect data from key informants. The focus group discussions that were used involved household heads that were randomly selected. Statistical Package for Social Scientists (SPSS) was used for data analysis. Chi-square test was used to determine differences in the responses given. The findings revealed that Practices towards malaria control were high with two hundred and forty five respondents (63.8%) exhibiting above average practices towards malaria control. One hundred and eleven respondents (28.9%) mentioned that some of their household members failed to use mosquito nets every night. The study recommends that community health promotion interventions through behavior change Communication should be sustained. Locally tailored messages should be used to highlight the threat posed by malaria, non-adherence of malaria prescription and the importance of every one participating in malaria control interventions. Mosquito net hanging demonstrations should be regularly carried out to enhance net-hanging skills. Community members should be assured that mosquito nets are safe and effective and must be used in all seasons all around the year.

Key Words: Malaria, Practices, Mosquito

INTRODUCTION

Malaria is a leading health problem in the tropics and sub-tropical regions. It is one of the top diseases, causing three million deaths annually (WHO, 2008).Malaria has been noted to be a social, economic and medical problem instigating numerous challenges to affected populations (RBM, 2010). Increased knowledge, right attitudes and practices are keys to malaria control.

Malaria remains a major cause of morbidity and mortality in tropical and sub tropical regions of the world despite decades of malaria control efforts. Annually there are 300-500 million malaria cases affecting various risk

groups. The key groups are pregnant women, people living with HIV and Aids, displaced populations and children under the age of 5years. Furthermore, Malaria has been noted to kill a child every 30 seconds and causes 20% of all deaths in children younger than five years (IFRC, 2009; KEMRI, 2009).

According to Roll Back Malaria (RBM, 2010), Malaria is ranked fifth in causes of mortality and morbidity among all the infectious diseases (RBM,2010). The World Health Organization reported that nearly 3.3 billion persons reside in high risk malaria zones in one hundred and nine

territories or countries (WHO, 2008). The burden of malaria is greater in sub-Saharan Africa, with 15% of all disability adjusted life years (DALYs) lost to the disease with an estimated 90% of the total malaria incidence and deaths occurring particularly among pregnant women and children under five years of age. (WHO, 2008; WMR, 2009). Apart from the negative impacts of malaria on economies in various countries, it contributes to the poverty cycle experienced by people living in countries that are malaria endemic (WHO, 2007). This is because a large portion of the income is directed towards fighting the disease, leaving most of the countries residents living in poverty (WHO, 2007).

Despite the huge malaria burden in Africa, the use of effective control measures is currently limited (Njame *et al.*). In areas of high transmission, intermittent treatment with Sulfadoxine/pyrimethamine (Fansidar) (IPTp-SP) is recommended for all pregnant women and it is one of the cornerstones of malaria control together with Insecticide Treated Nets (ITNs). Knowledge on local understanding, perception and practices of case providers regarding management of childhood malaria are needed for better malaria control in urban, periurban and rural communities (Comoro *et al.*, 2003). Attempts to use ITNs/LLINs is often hindered by social and cultural considerations with potential factors affecting the use of malaria control interventions such as education levels of household heads, wealth index, colour and shape of the ITNs/LLINs, house structure and availability of the nets (Onwujekwe *et al.*, 2009).

Knowledge, attitudes, practices and beliefs have been reported to contribute immensely in sustainable control of endemic diseases such as malaria (Hans Habtai *et al.*, 2009). Operational Research indicates that a combination of Indoor Residual Spray (IRS) and Long Lasting Treated Nets (LLTN) is more effective than either intervention alone (WHO, 2009).

Malaria epidemics in Kenya occur in two malaria epidemiological zones, in the western highlands and the arid and semi arid areas of Northern Kenya accounting for 30-50% of all out patient attendance and 20% of all admissions to health facilities (KEMRI, 2009). It is estimated that at least 14,000 children are hospitalized annually due to malaria related illness with 34,000 deaths among children under five each year. Pregnant women tend to have a greater burden since the malaria parasite has a strong affinity for the placenta.

Combination of tools and methods to combat malaria includes long lasting insecticidal net LLINs, and artemisinin based combination therapy and intermittent preventive treatment in pregnancy IPTp (WHO, 2008). To accelerate progress in malaria control the 2005 world health assembly set targets of 80% coverage for the key intervention areas (WHO, 2005).

Sustainable malaria control requires a community based approach since malaria is a behavioral as well as

a medical problem (Heyen, 2011). Social cultural and economic factors must be understood and incorporated in the design and implementation of malaria control programs (Kin, 2000). People at the community level should be knowledgeable about all disease causation affecting the community (Nyamongo, 2002). Lack of education and information relating to malaria treatment and control exacerbates this situation. A change in approach is required to empower the community to exert firmer prevention and control over malaria (Okrah *et al.*, 2002).

Malaria remains primary cause of child mortality in Kenya affecting more than 70% of its population despite the various prevention and control strategies currently in use. Dattani *et al.* (2009) observe that malaria infection during pregnancy can have adverse effects on both mother and foetus. Malaria can cause maternal anemia, fetal loss, premature delivery, intra-uterine growth retardation and delivery of low birth weight infants. It is a particular problem for women in their first and second pregnancies. Proven effective options to reduce morbidity and mortality include early diagnosis combined with prompt effective therapy, and malaria prevention through reduction of human vector, (Guwatudde *et al.* 2003). Although Kenya has officially adopted the use of highly effective anti-malarials, the actual use of the anti-malarials on the ground is less than 10% (MIS, 2007)

Understanding of malaria transmission, recognition of signs and symptoms, perception of cause, treatment seeking patterns and preventive measures is important in malaria control (DOMC, 2009; WMR, 2009). Several myths, misconceptions, culture and religion about causes, symptoms, prevention and control of malaria pose a great challenge in the fight against malaria in Kenyan communities (WHO, 2003). Kisi central is one of the malaria epidemic prone districts in the western highlands of Kenya. Malaria Indicator Survey (MIS) and the Kenya Demographic health Survey (KDHS) both noted that there was a low utilization level of the various malaria control approaches in the region (MIS, 2007, KDHS, 2009).

Global prevalence of malaria

Malaria is a life-threatening parasitic disease transmitted by mosquitoes. It was once thought that the disease came from fetid marshes, hence the name malaria (bad air) (RBM, 2001). In 1880, scientists discovered the real cause of malaria to be a one-cell protozoan parasite called *Plasmodium*. Later, it was discovered that the parasite is transmitted from person to person through the bite of a female Anopheles mosquito, which requires a blood meal for her eggs to develop (RBM, 2001).

According to World Health Organisation (2009), half of all the people living on earth today are at risk of contracting malaria. Further, out of the 243 million cases of malaria reported in 2008, an estimated 863 000 to

1000 000 persons die each year, most of whom are children in Sub-Saharan Africa (CDC, 2010). In Africa, expectant women and children below five years of age bear the burden of the disease due to undeveloped as well as low immunity. Children who may survive from malaria infection may suffer cerebral and anaemia problems affecting their long-term development. In southern and Eastern Africa, nearly 30% of maternal deaths are related to malaria infections (AMREF, 2008).

Malaria control strategies

The 2000 Abuja Declaration restated international commitment to Roll Back Malaria and called upon the African Member States to undertake reforms in the health care system. This was to be achieved through enhancing participation in mutual ownership as well as control of RBM alliance. The key Abuja declaration objectives constituted ensuring that 60% of those suffering from malaria access treatment within the first 24 hours after the onset of fever, at least 60% of expectant women receive 2 doses IPTp, at least 60% of the population at risk sleep under treated mosquitoes nets (The African Summit on Roll Back Malaria, 2000).

The vertical malaria control programmes of the 1970s focussed on indoor residual spraying and were uniformly applied in all continents. However, changing from eradication to control, the current strategies are more horizontal as opposed to the vertical, with control of malaria being incorporated into Primary Health Care system and relying on community participation. Whilst there has been strong lobby for the incorporation of Indoor Residual Spraying in mosquito eradication as successfully implemented in most parts of the world, Roll Back Malaria approach gives most emphasis on insecticide treated nets coupled with artemisin combination therapy (CDC, 2010).

These approaches rely on community and individual understanding and action. Spielman (2003) noted that bed nets must be hung in households and most of those nets need insecticidal impregnation at intervals at the expense of the community. LLITNs with a life span of five years without retreatment exists, However, the nets are not widely accessed to in Africa (UN News Centre, 2003).WHO(2002) notes that over half of the children under five years in Africa die of malaria within 48 hours. Up to eighty percent of Sub African malaria episodes were found to seek treatment from the informal sector (WHO, 2002).

Most of the communities employ a combination of biomedical and traditional treatment and there exists a hierarchy of resort where failure of one treatment leads to communities resorting to other forms of treatment. In addition to this, most of the at risk groups of people have no access to appropriate health care systems hence RBM supports home based care management of malaria to make treatment more effective and accessible to the communities (AMREF,2008).

Practices towards Malaria Control

Malaria control starts with individuals embracing recommended practices and making them habitual. Most of the LLINs distributed in the community have been targeting the children less than five years and expectant mothers (Njau *et al.*, 2009; Wacira *et al.*, 2007; Matovu *et al.*, 2009). Young adults experience a notable drop in net coverage because most of these people tend to pass on the LLINs to their younger siblings in the household (Njau *et al.*,2009).

Udonwa (2010) found that only 25% of the respondents made use of ITNs as with only a third of them having slept under an LLIN. The small proportion noted in this study was consistent with Dressa *et al.*, 2007whorealized a 13% LLIN usage as a measure to control malaria. The study findings were similar to a study carried out in Kyela district, Tanzania where 17% of the school going children used LLINs (Edson and Kayombo , 2007) as well as that of Khumbulani who found 38.8% LLIN usage in Swaziland (Hlongwana *et al.* , 2009).

Concerning treatment therapy, studies have noted that the average number of children less than five years who accessed ACT treatment upon exhibition of fever was 37% in the years between 2006 and 2007 in Sub Saharan Africa. Nevertheless, these results varied from country to country ranging from 10%-63% (WHO, 2008). A study conducted in Swaziland to assess the community's KAP on malaria reported that most of the people who had fever visited health facilities for treatment (Khumbulani *et al.*, 2009). These encouraging results are however contrary to many of the African Countries where community members seek treatment in Private sources. Deressa *et al.*,(2007); Khumbulani *et al.* (2003) in their study also reported that most (88.1%) of the people were willing to seek treatment within the first 24 hours of onset of fever, the result is more than 60% a figure stipulated in the Abuja declaration of the people who should seek prompt and effective treatment within the first 24 hours of onset of fever.

According to Khumbulani *et al.*, (2009) (78.1%) people understanding of other prevention measures to curb against malaria such as IRS, LLIN use a good number (43.4%) of them failed to act on any of these measures (Khumbulani *et al.*, 2009).

Deressa *et al.*,(2007) found out that ownership of long lasting insecticidal nets did not result to utilization of the same every night. WHO,(2008) reported low number of children under five years of age who assessed the recommended artemisinin based combination within the required 24hours after the onset of fever. This led the researcher to attempt to establish practices among household heads towards malaria control in Mosocho division.

MATERIALS AND METHODS

The study was carried out in Mosocho division of Kisii Central district, Kisii County. The study was carried out

from December 4th to 30th 2011. The area lies to the south of the equator borders Nyamira District to the west, Rachuonyo district to the north, Masaba district to the south East, and Gucha district to the south. The district covers a total area of 361.0 Km² and lies between latitude 0° 30' and 0° 58' south and longitudes 34° 42' and 35° Mosocho divisions covers an area of 105.0 Km² with a population of 132,131 people. Administratively Mosocho, has seven locations and fourteen sub locations, 17293 households with 196 villages (KNBS, 2009).

The area is served by six health facilities namely Iranda health centre, Matongo dispensary, Mosocho mission hospital, Nyabururu dispensary and Sieka dispensary. The division is the poorest of all Kisii Central due to lack of cash crops and industries that will provide employment to the ever increasing population (Uchendu and Anthoni, 2000). Kisii Central has a landscape made of several hills and valley ranging between 1250m and 2200 above sea level with several rivers and streams flowing in between, The soil is rich loamy volcanic that is very fertile.

Multi stage random sampling approach was employed; At first stage Mosocho division was randomly selected out of the three divisions of Kisii Central district (Keumbu, Kiogoro and Mosocho). At second stage, four locations Bogeka, Nyamachemange, Nyanguru and Nyatieko were randomly selected from a total of seven locations that make up the selected division. At third stage, two sub locations from each of the four locations were selected. From Bogeka location, Gesoni and Mogusi sub locations were selected. Matieko and Santa sub locations were selected from Nyamachemange location, Nyagisai and Rieteba sub locations from Nyanguru location and lastly Mwamanwa and Mwamosioma sub locations from Nyatieko location. Thus a total of eight sub locations were selected for the study. At fourth stage, simple random sampling was used to select forty eight households from each sub location making a total of three hundred eighty four households. Thus, the multi stage sampling technique was chosen because it makes the interview more focused.

Sample size was determined by use of Fisher *et al* formula (1998) as quoted in Mugenda and Mugenda (1999).

$$n = \frac{Z^2 P (1-P)}{d^2}$$

Where:

N=desired sample size where population is greater than 10,000.

Z= the standard normal deviate at the required confidence level.

P= the proportion in the target population estimated to have adequate knowledge, attitudes and practices towards malaria control, in this case 50% was used as recommended by Fisher where there is no estimate available of the proportion in the target population assumed to have characteristics of interest

$$q = 1-p = 0.5$$

d = the level of statistical significance = 0.05

$$n = \frac{(1.96)^2 (0.50) (0.5)}{(0.05)^2} = 384$$

$$(0.05)^2 = 384$$

Sample size = 384

To gain in-depth understanding of the subject under investigation, Key informants made of Sub County Malaria Control coordinator SCMCC, Two Public health officers' one at district level and the other at divisional level, Community health extension workers (CHEWs) and Community Health Workers in Mosocho division were interviewed using a semi structured interview guides

Data were collected using structured questionnaire modified from Malaria Indicator Survey. The questionnaire was translated to *Ekegusii* and pretested. Five research assistants who had a minimum qualification of certificate in Social sciences related field and fluent in local language were recruited. Had a one day orientation to the questionnaire and procedures for signing consent forms. The researcher checked for completeness of questionnaires daily. Incomplete questionnaires were returned to the research assistants for correction and revisiting the households.

Data from all questionnaires were coded entered, cleaned and stored in Ms-Excel. Statistical Package for social scientists (SPSS) Version 17.0 was used for data analysis. Proportions, frequency and means were used for descriptive data analysis. Qualitative data was transcribed and checked for emerging themes. Verbatim transcriptions in *Ekegusii* were made for all tape recorded FGDs and key informant. In-depth Interviews and finally used for analysis and for comparison of quantitative data gathered. Some quotes from the qualitative data that best answered the research questions were identified, translated to English and presented alongside quantitative data to give more insight on practices towards malaria control.

Approval was sought from School of Graduate studies of Masinde Muliro University of Science and Technology. Research permit was obtained from National Council of science and Technology. The District Medical officer of Health, District Education Officer and Provincial Administrators at the area of study were notified. Voluntary informed consent was sought from the respondents before participation in the study.

Responses obtained on questionnaire were scored and interpreted as follows;

Every correct response on practices towards malaria control got one score. Possible scores ranged from 0 to 12 scores. Household heads responses were classified into three levels Good practice greater than 70% of 12 scores, Moderate practice: from 40% to 70% of 12 scores. Poor score less than 40% of 12 scores.

RESULTS AND DISCUSSIONS

Demographic characteristics of respondents

This study involved a sample of 384 respondents who

Table 1: Frequency and percentage distribution of respondents by gender

Gender	Frequency	Percentage
Male	164	42.7
Female	220	57.3
Total	384	100%

Table 2: Frequency and percentage distribution of respondents on practices towards malaria control Practices towards malaria control

Practices towards malaria control	Correct answers		
	n	%	Chi-Square d.f = 1
Do all members of your household have mosquito nets?	355	92.4	$\chi^2=672.40^{**}$
Did all members of your household sleep under a Mosquito net last night?	272	70.8	$\chi^2= 168.10^{**}$
Is there any stagnant water around your house?	118	30.7	$\chi^2=136.90^{**}$
Do you visit a herbalist when suffering from malaria?	27	7.0	$\chi^2=749.96^{**}$
Do you ever clear dark corners of your house?	123	32.0	$\chi^2= 107.58^{**}$
Do you always seek treatment from health facility when suffering from malaria?	131	34.1	$\chi^2=112.96^{**}$
Do you normally complete malaria drugs when given in hospital?	183	47.7	$\chi^2=6.72^{**}$
Have you ever used mosquito repellent?	82	21.4	$\chi^2=313.60^{**}$
Do you ever use anti mosquito spray in your house?	119	31.0	$\chi^2=118.34^{**}$
When am sick with malaria, I just want it to heal on its own.	136	35.4	$\chi^2= 112.90^{**}$
I never go to hospital for malaria treatment.	118	30.7	$\chi^2=174.72^{**}$
Do some members of your house hold fail to use a mosquito net every night?	111	28.9	$\chi^2= 173.06^{**}$

** Highly significant variation in the responses

were household heads. This part presents frequency distribution of study variables describing background characteristics of respondents.

Gender

The study sought to find out the gender distribution of house hold heads who participated in the study. The respondent indicated their gender and is recorded in table 1.

A Chi Square test performed on the distribution of sex of the respondents at 5% level of significance gives $\chi^2_{1,0.05} = 126.12$; which is higher than the table value of 3.84. There is statistically significant difference ($P < 0.05$) difference in the distribution of sex among the respondents. The household heads consisted of 164 males (42.7%) from 20 to 54 (mean 33.12) and 220 females (57.3%), age between 20 and 54 (mean 32.54).

Respondents by age

A Chi Square test conducted on the respondents' distribution of age at 5% level of statistical significance gives; $\chi^2_{5,0.05} = 351.091$; which is far much higher than the tabulated value of 11.07. There is a statistically significant ($P < 0.05$) difference in the distribution of age among the respondents.

Figure 1 shows that majority of the respondents (28.4%) were in the age group 28-32 years, followed by age group 23-27 years (26.3%), then by 33-37 years (21.1%), 43 years and above (13.5%), 38-42 (9.1%). The smallest groups of respondents (1.6%) were in the age group 18-

22 years. The median age of the respondents was 32.0 and 31.0 for males and females respectively. The mean age of the respondents was 32.79 years ($SD \pm 7.44$) years and ranged from 20 to 54.

Marital status

The study established marital status of household heads respondents by asking them whether they were, single, married, divorced, widowed or separated. The responses were recorded in table 2.

A Chi Square test conducted on respondents' distribution of marital status at 5% level of significance gives $\chi^2_{4,0.05} = 2005.13$; which is far much greater than the tabulated value of 9.49. Therefore there is statistically significant ($P < 0.05$) variation in the distribution of marital status among the respondents.

Majority of the respondents were married (70.6%). Further, 15.6% of the respondents were widowed, 10.4 % were single, 2.3% were separated and 1.0% were divorced.

Respondents' education level

A Chi Square test conducted on the members' distribution of education level at 95% confidence level gives; $\chi^2_{4,0.05} = 436.62$; while the tabulated (expected)

value is 9.49. Thus, since the calculated value is more than the expected value, there is a statistically significant ($P < 0.05$) variation in the distribution of education among respondents.

36.9% of the respondents had completed secondary

Table 3: Respondents' reasons for failure to use mosquito nets every night

Reason for not using mosquito net	Frequency	Percentage %
Hanging problems	31	27.9
Irritation	24	21.6
Lack of mosquito nets	27	24.3
Too hot to sleep inside	29	26.2
Total	111	100.0

school education while 35.1% had completed primary school education.13.0% had no formal education while 6.8% had College/University education.8.3% had Other training.

Occupation of respondents

The household heads were asked to name the occupation they were engaged in. They were later categorized into house wife, farmer, businessman/woman, professionals and unemployed. Over half of the respondents (55.7%) were farmers, Business people (14.1%), Professionals in different fields (13.0%), Housewife (7.8%) and unemployed (9.4%).

Practices towards malaria control

Chi Square tests conducted on the responses indicated that there were highly statistically significant ($P < 0.01$) variations in the distribution of responses ($\chi^2_{2,0.05} = 22.39$). This indicated that there were wide variation of responses in the application of practices towards malaria control.

Table 3 shows that, despite high practice level, there still exist disparities between net ownership and usage. From the findings 92.4% of the respondents owned nets and 70.8% of the respondents slept under a net on the night of the study. This result is in agreement with Kinughi'hi et al. (2010) who found out in their study that 97.4% of the respondents having LLINs (Kinughi'hi et al., 2010). On the other hand Udonwa (2010) had 25% of the study respondents owned bed nets and only one third of the respondents slept under the impregnated bed nets the previous night of the day of the study (Udomwa et al,2010). Two participants (male and female) from both of the groups concurred that community members never completed taking drugs, that they stopped taking the drugs the moment they felt they were getting better. It was also noted that some community members borrow malaria drugs from neighbors which showed that some never completed the dosage given. *"Those drugs are too many at times you can even forget to take them"*(Male FGD participant, Mwamanwa). *"Malaria control is not an easy task. Despite education provided to community members on the effects of malaria not all of them are using mosquito nets distributed by the government in the month of May this year"*. (Male FGD participant, Rieteba) *"Mobilizing community members for malaria education session is not easy, most of the time it's a few women and children who turn up"*. Both Key informants and

FGDs participants agreed that the community had some practices that hindered malaria control, seeking medical care from other places other than hospital facilities. *"People do still use herbal medicine and for those who go to hospital, some go when they are overwhelmed by malaria or after failure of the alternative care sought"* *"Some people fail to use nets because they say it causes itchy feeling due to the strong chemicals they are made of that repels mosquito"* noted a male FGD participant, from Matieko. Utilization of mosquito repellent and anti mosquito spray was minimal as it was agreed by all FGDs participants.

The study revealed that some respondents had stagnant water around their homes (30.7%) This is a clear indication that in spite of most of the people having understood that draining of stagnant water would help reduce mosquito breeding places most people still failed to practice this aspect of malaria control. From this study, 7.0% of the respondents still visited herbalists for malaria treatment. The results are similar to Duttas results that noted 0.6% of the respondents visiting herbalists for the cure of malaria (Dutta, 2000).

With regards to health seeking behavior, a third of the respondents 34 % sought medical services from health facilities and 47.7% of the respondents did complete the dosage given to them. There exists a significant relationship between this study and Adedotum *et al* who noted in his study 55.6% and 38.9% of children and adults who sought health facility services respectively when they contracted malaria and 38.7% and 65.8% of children and adults who completed the dosage respectively (Adedotun *et al.*, 2010). Of the responses given 21.4% of the respondents agreed upon using mosquito repellants whilst 31.0% used anti mosquito repellants. This is however contrary to Dutta in his findings of 21.4% of the people using mosquito repellants and 0.8% of the people using anti- mosquito. In addition to this, 35.4% of the respondents stated that they did nothing when afflicted with malaria. Kywat-kyawt- Swe and Pearson. (2004) seems to have had rather contradicting findings in their study where they found 0.5% of respondents who failed to seek any form of medication.

The study also sought to establish reasons for respondents failing to use long lasting insecticide treated nets.

A Chi Square test conducted on the responses indicated that there were no significant ($P > 0.05$) variations in the

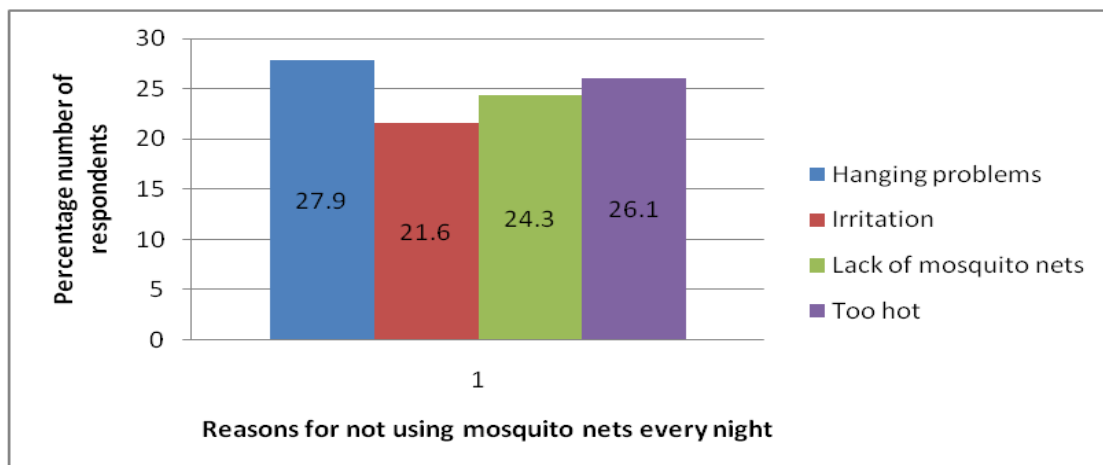


Figure 1: Bar chart showing percentage reasons by respondents for failing to use mosquito nets every night

Table 4: Frequency and percentage distribution of respondents practices towards malaria control

Level of practice	Frequency	Percentage%
Good	60	15.6
Moderate	256	66.7
Poor	68	17.7
Total	384	100.0

distribution of responses ($\chi^2_{3,0.05} = 0.87$). This indicated that there were no significant variations distribution of responses on the reasons for not using mosquito nets.

Of those who failed to use mosquito nets 29.9 % said that they had problems with hanging the nets, 21.6% had irritation or skin itches when they used the nets due to its chemical composition (figure 1). Only 24.3% mentioned that they lacked nets lastly 26.1% said that it was too hot to sleep inside mosquito nets. There exists a close relationship between this finding and those of Kyawt-Kyawt-Swe and Pearson.(2004) in which their findings found a net ownership of 99.4% and net usage of 97.1%. Range = 2-11 Mean = 6.97 SD= ± 1.62 $S^2=2.612$

A Chi Square test conducted on the respondents' distribution of scores indicated that there was a highly statistically significant ($P<0.01$) variation in the distribution of respondents' scores ($\chi^2_{1,2,0.05} = 1546.92$).

There was overall high level of practices towards malaria control .Two hundred and forty five respondents (63.8%) had above average practices towards malaria control. Table 4 shows that about two thirds (66.7) of the respondents had moderate practices. Only 17.7% sixty eight respondents had poor practices. Within range of 2-11, mean score of practices of 6.97 with a standard deviation of 1.62.

CONCLUSION AND RECOMMENDATIONS

The study revealed that there was a high Practices towards malaria control. Two hundred and forty five

respondents (63.8%) had above average practices towards malaria control. About two thirds (66.7%) of the respondents had moderate practices. Only sixty eight respondents (17.7%) had poor practices. Within range of 2-11, mean score of practices of 6.97 with a standard deviation of 1.62.

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