

Knowledge and Prevalence of Malaria infection among students residing in Hostels of The Federal Polytechnic Ilaro.

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ABSTRACT

Malaria is a disease in which parasites of the genus *Plasmodium* are transmitted to human through the bite of female mosquito. The disease is known to be associated with fever, headache, chills, shivering, loss of appetite general body weakness and joint pains. In the study, samples size of 250 was obtained through stratified random sampling of the occupants of the five hostels within the campus. Volunteers were tested with RDT test Kit (CareStart™ HRP2(Pf)) with 13% of respondents(20/150) been positive of the infection. Respondents were asked questions on their general knowledge about malaria transmission, prevention and attitudes toward treatments. The 90% of the population sampled were able to link the cause of malaria with mosquito bite and dirty environment which aids the transmission of the infection. Knowledge about the use of new antimalarial drug was high with 95% of the respondents claimed to have used one or more of ACTs under different proprietary name. The use of ITN with evidence was poor (10%) while 75% claimed to own at least one but without evidence. The infections among the respondents that were not using ITN is significant correlated ($p < 0.05$). In conclusion, knowledge about the transmission of malaria is high among the students but with poor attitudinal changes to combat the scourge and poor clinic attendance despite the claimed by majority of the students that the school has functional Health center.

Keywords: Malaria,Knowledge,ITN,Students,Respondents.

INTRODUCTION.

Malaria remains an important public health concern in countries where transmission occurs regularly, and in areas where transmission has been largely controlled or eliminated (WHO/, 2005). Malaria is a complex disease that varies widely in epidemiology and clinical manifestation in different parts of the world. This variability is the result of factors such as the species of malaria parasites that occur in a given area and their susceptibility to commonly used or available antimalarial drugs. Also, the distribution and efficiency of mosquito vectors, climate and other environmental conditions contribute to distribution of malaria (Bioland 2001). . Malaria has also been one of the world's worst killer diseases throughout recorded human history. Despite attempt to eradicate it, it remains one of the worst diseases in terms of death annually.

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Malaria is a serious noticeable infectious illness characterized by periodic chills, fever, sweating and sptemomeguly. It has serious and often fatal complications which gave way to falciparum malaria. It is intermittent and remittent fever caused by a protozoa parasite that invades the red blood cells. Malaria is preventable and treatable disease of public health. Malaria is by far the most important insect transmitting disease (Curtis, 1991).

Malaria has become very common and is increasing in an uncontrolled way throughout Nigeria and world as whole, due to the bite of the female anopheles mosquito which carries the plasmodium in an attempt to eradicate this deadly disease, a massive response need to be mounted by the government to enlighten the public, about the prevalence and knowledge of malaria. Also provide remedy for treatment of it.

The aim of the study is to assess the prevalence and knowledge of malaria among the student staying in the hostel in Federal Polytechnic Ilaro Ogun State.

Methodology:

The study conducted in the Federal Polytechnic IlaroOgun State. The school, like any other institution in Nigeria is endemic for malaria. The target populations were students residing in the hostels. The study employed a cross-sectional description design. A minimum sample size of 150 was determined based on a 95% confidence level, 5% margin of error on a previous study finding that estimate that 50% of student would have knowledge on malaria. Ethical clearance was obtained from the Directorate of student affair, Federal Polytechnic Ilaro.The consent of students were also sought before enlisted for the study

The respondents' were also selected by random sampling through the three hostels that made of two females and one males hostels.

A frame was the created through this random sampling, using this frame, number of rooms, number of occupants in each room, number of floors and total number of occupants in each hostels were calculated. So in each room at least 2 students were selected by simple random sampling method (second stage). Data's were collected from the selected student With the aid of pre-test interviewers-administered, semi structured questionnaire. This questionnaire seeks information on respondent socio-demographic variables, knowledge of malaria prevention and treatment including home use of drugs and insecticides nets (ITNS). Data was analyzed using appropriate descriptive on and inferential statistics.

.DATA COLLECTION AND PROCEDURE

A sample size of one hundred and fifty was calculated using the table for a minimum sample size estimate for a populated survey with 95% confidence interval. One hundred and fifty students comprise of male and female participated in the interviewed.

DATA ANALYSIS

Completed questionnaires were first edited for clearing, completeness and uniformly in response to question. Codes were hen assigned to all responses to questing using a prepared coding guide

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RESULT

This chapter focuses attention on the appraisal of data collection for this research work. This would aid in making conclusion from the data collected as regards the topic under discussion.

The analysis and interpretation in the chapter is based on the questionnaires administered by the researchers. 150 questionnaires were produced and exactly 150 respondents were interviewed in the surveys.

Table 1: TEST RESULT OF THE RESPONDENTS'

Test	Respondents	Percentage
Positive	13	12.7%
Negative	131	87.3%
Total	150	100%

Table 1 shows that **87.3%** of respondents were tested negative while **12.7%** of respondents were positive using the RDT test.

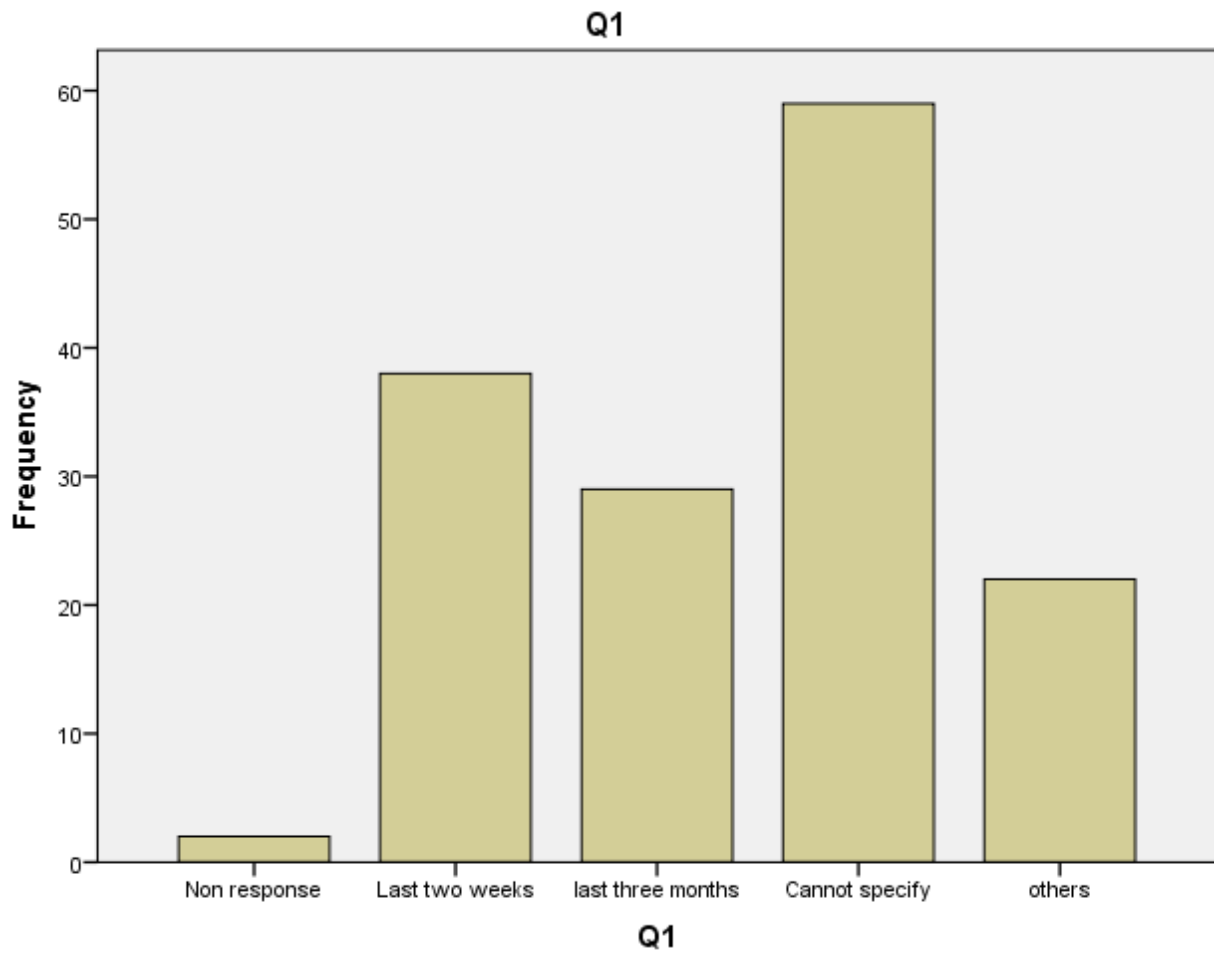


Fig 1: Respondents' malaria history

The respondents' malaria history was sought, majority of them could not specify the actual period they had malaria last while substantial number claimed to have had it last two weeks prior to the period of interview.

Table 2: Respondents' knowledge about the effectiveness of methods of malaria prevention

Preventive Measures	Frequency N=150*	%
Environmental sanitation	135	90.0
Use of drugs	130	86.3
Medicinal herbs	130	86.3
Window/door screening	123	82.5
Insecticide treated net	123	82.4
Insecticide/Sprays	120	79.4
ordinary net	106	70.3
Mosquito coil	71	47.6
Burning leaves of orange	41	27.0
Physical killing	40	26.3

* Multiple responses allowed

Table 2 shows respondents knowledge about effectiveness of methods of malaria prevention. Most respondents (135; 90.0%) felt that environmental sanitation is an effective method of preventing malaria.

Table 3: Action first taken to restore the child's health

Variables	Number	%
	n=150	
Home treatment with orthodox medicine	65	43.2
Home treatment with herbs/native medicine	56	37.3
Traditional home care: balms, pepper soup	29	19.5

Table 3 shows the responses to the illness by the students. Among them 65 (43.2%) treated malaria at home with orthodox drugs while 56 (37.3%) used native medicine or herbs. The remaining 26(19.55) gave traditional home care comprising application of balms, pepper soup and others.

Table 4: Types of Drugs administered by the respondents

Drugs used	Frequency n=80	%
PARACETAMOL	80	100
CHLOROQUINE	77	96.3
ACT	35	43.8
SP/FANSIDAR	19	23.8
QUININE	8	10.0
AMODAQUINE	7	8.8
ASPIRIN	5	5
OTHERS	22	27.5

* Multiple responses allowed

Table 4: shows the drugs administered by the respondents. Higher percentage take paracetamol while seventy seven (96.3%) also had chloroquine. Thirty five (43.8%) had ACT, Sulphadoxine –pyremathaine (19, 23.8%). Drugs like Quinine, Amodaquine and Aspirin were less frequently used. Other drugs as mentioned by the respondents' are not relevant to malarial treatment

Table 5: Use of ITN by the respondents'

n= 150*

ITN use	Yes	No	Test
Regular	53	46	
Once a while	63	50	$\chi^2 = 59.112$
Not at all	3	4	$P < 0.05$
Don't have	5	3	

*Multiple responses allowed

Table shows the use of ITN by the respondents.

DISCUSSION

Respondents knowledge of signs and symptoms of malaria and their perception of dirty surrounding and mosquito bites, and predisposing factors to malaria infection is encouraging.

This suggests an urgent need to strengthen educational programs on malaria that emphasize the causes and signs/symptoms of the infection. We believe that improved knowledge will empower the students residing in the hostel to take preventive measure against malaria.

The test was carried out using a Rapid Diagnostic Test kit (RDT) whereby the overall prevalence of malaria among the hostelite in the research area was 12.7%.

The prevalence of malaria infection found in the research was low. According to the finding in the research, the concepts of using of ITNs was considered as of the protective factor against the mosquito bite, hence reduce the prevalence of malaria among the hostelite . This was supported by the Elisha (2007) report, which stated that insecticide treated mosquito net (ITNs) used for

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protection against mosquito bites have proven to be a practical, highly effective and cost effective intervention against malaria.

Knowledge of symptoms of malaria can usually help in reducing malaria related morbidity and mortality through prompt institution of appropriate treatment (Tanner & Vlassoff 1998, Ajayi et al., 2008). The advantage of prompt treatment cannot be overemphasized as several studies have shown such treatment to be very effective in reducing the burden of malaria.

Several studies have assessed knowledge and practices concerning malaria, its transmission and control. A study conducted by Osero et al., (2006) reported that caregivers had problem defining malaria although a majority (91.8%) recognized mosquitoes as the vector of the disease. In addition, the study also reported that 30% of the respondents associated malaria with dirt, dirty compounds, dirty food/utensils, un-boiled water and uncooked food. This is in agreement with the findings of this study that showed that almost all the students interviewed (92.9%) identified mosquito bite as the cause of malaria though a few of the respondents had wrong perception of the cause of malaria.

The Roll Back Malaria programme recommends a policy of universal coverage with ITN. This policy was re-emphasized by the Abuja Roll Back Malaria meeting which has, as one of the measures for malaria control in Africa, a target to increase the proportion of people sleeping under insecticide treated nets (ITN) to 60% by the year 2005 (Africa Malaria Report, 2003). To achieve this, significant resources for malaria control were mobilized for several countries in the region (Oresanya et al. 2008). Notwithstanding; there has not been commensurate increase in the number or of usage ITN. In this study, although 66.7% of respondents were of opinion that insecticide treated net was a major tool in mosquito prevention, only 49% reported owning ITN and 29% reported they slept under ITN the night before data collection. This finding is similar to the observation by Cruz et al. (2006) but quite different from the experience of Simsek and Kurcer (2005). Incidentally, even in countries providing ITN access such as Zambia. Macintyre et al., (2011) reported gaps between ITN ownership, deployment and use. In addition, they observed that barriers outside cost that affected ITN deployment include perception of malaria risk and proximity to a clinic.

In conclusion, Misconceptions about malaria transmission and its cause still exist. Knowledge about preventive measure does not necessarily translate into improvement in practices. There is a need for targeted educational programs to increase the student awareness, attitude and practice regarding malaria and their participation for malaria control. There is need for a concerted health education intervention to improve the knowledge of student's dweller regarding malaria prevention especially with the use of Insecticide Treated Net. Continuous effort of providing necessary information by relevant health organization is needed to control and reduce incidence of malaria among students

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