Special Communication

PERCEPTION AND MANAGEMENT OF MALARIA IN SECONDARY SCHOOLS IN A NIGERIAN CITY

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ABSTRACT

Objective: This survey was carried out to assess the perception and management of malaria in secondary schools in South-West Nigeria.

Methodology: A total of 600 teachers and senior secondary school students were sampled using a structured questionnaire in 20 secondary schools randomly selected.

Results: Ninety five percent of the respondents have had malaria infection before. Seventy percent had it at least once in a year. Although 89% mentioned mosquitoes as the causative agent of the disease others said it is caused by the hot sun, bad weather, cold weather and the rain. Forty five percent use chloroquine for treatment, 29% use panadol/paracetamol while 14% use traditional herbs. Forty seven percent practice self medication although 74% had no idea of the full course of malaria treatment. Only 21% use bed nets.

Conclusion: The continued input of information through the schools regarding Malaria is likely to achieve more impact both on the students, teachers and in the community as a whole.

KEYWORDS: Malaria perception and management, Students, Teachers, Nigeria.

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INTRODUCTION

Malaria is a major public health problem, endemic in over hundred countries in the world. The World Health Organization estimates there are >300 million clinical cases every year with over a million deaths. Over 90% of the burden occurs in Africa.[1] Malaria is highly endemic in most parts of Nigeria.[2]

In West Africa, the community awareness on the causes of malaria is generally very poor. For instance, the male and female suns and groundnut consumption were believed to cause malaria in the Benin Republic,[3] while some causes in Ghana were believed to be excessive drinking and heat, fatigue, flies and unsafe water.[4] In south eastern Nigeria, excessive heat was thought to be responsible for malaria.[5] Among the causes of malaria in south - western Nigeria, were over–work, sunlight, excessive sex and noise as well as witchcraft.[6]

These poor malaria perception trends which occurred mainly in rural settings stimulated the present study to asses the perception and management of malaria in teachers and students of secondary schools in Ibadan city, south-west Nigeria.

METHODOLOGY

The study area, Ibadan city, south-west Nigeria, is the largest city in West Africa. The

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city is located approximately on longitude $3^0 5^1$ East of the Greenwich meridian and latitude $7^0 23^1$ North of the equator at a distance of some 145 kilometers north east of Lagos.

The study was done in 20 randomly selected private and public secondary schools. Private schools are found in upper class, high- brow areas of the city while public schools are found in low-income, low class areas of the city which offers a comparative approach. Ten schools were selected from each area.

In each school, 10 teachers and 20 senior secondary school students were interviewed. Pretested and standardized questionnairres were administered to the students and their teachers to investigate their perception of malaria and their knowledge and practices of malaria treatment and prevention.

RESULTS

Out of the 600 teachers and students sampled in 20 secondary schools, there were 456 students and 144 teachers. The students were between the age ranges of 12-20 years while the teachers were between the age ranges of 23-52 years. Almost 95% of the respondents had had malaria infection before. Seventy percent had it at least once in a year while 29% had it several times in a year. Majority (86%) think malaria is a serious health problem and 85% believe it can kill. A few respondents (8%) knew at least one person in their school who had died of malaria in the last three months. Table-I shows that majority (89%) mentioned mosquitoes as the causative agent of the disease while 12% think it is caused by hot sun among other beliefs.

High body temperature was the symptom of malaria mostly mentioned by respondents. The age groups 0-10 and 11-20 were stated as the most susceptible to malaria. For the treatment of malaria some (45%) of the respondents use chloroquine while 14% use traditional herbs. Fifty percent (50%) visit private clinics, 47% practice self-medication at one time or the other and 24% visit government clinics.

When malaria drugs are taken, majority (71%) of the respondents claimed to complete their malaria drug dosage however majority (74%) had no idea of the full dosage of malaria drugs for treatment. Out of the few (26%) that claimed to have an idea of the full dose of antimalarials for malaria treatment, only 8% stated the correct full dosage for treatment.

Table-I: Responses to some selected survey questions

What causes malaria?	
	Frequency(%)
Mosquitoes	538(89)
Cold Weather	34(5)
Bad Weather	42(7)
Hot Sun	76(12.7)
Rain	14(2.3)
Dk	18(3.0)
What are symptoms of malaria?	
	Frequency(%)
Headache	372(62)
Cold	236(39.3)
High body temperature	460(76.7)
Headache, cold, high body temperature	180(30)
Dizziness, body weakness, tiredness	252(42)
Which is the most susceptible age group to malaria?	
	Frequency(%)
0-10	265(44)
11-20	296(49)
21-30	116(19)
31-30	64(10)
41-50	62(10)
51-60	52(8.6)
61-70	74(12)
All ages	36(6)
Dk	12(2)
How do you treat malaria?	
	Frequency(%)
Chloroquine	270(45)
Fansidar	108(18)
Camoquine	56(9.3)
Panadol/Paracetamol	176(29)
Traditional herbs (Agbo)	84(14)
What preventive methods do you practice?	
	Frequency(%)
Mosquito coil	198(33)
Insecticides	332(55)
Bed net	128(21)
Burning of leaves/bark of trees	20(3.3)

Table-II: Comparison of knowledge by schools

		Public schools		*Private schools*	
		Frequency	*%*	*Frequency*	*%*
Best way to treat malaria	Self medication	192	64	26	8.6
	Visit government clinic	71	23	99	33
	Visit private clinic	37	12	175	58
Most susceptible age group	All ages	115	38	80	26
	Adult (21-70)	90	30	70	23
	Young (0-20)	95	30	70	23
Knowledge of correct full course treatment		113	37	225	78

A number of respondents (55%) use insecticides for prevention and 3% burn leaves or bark of trees to ward off mosquitoes (Table-I). More respondents from private schools had a good knowledge of malaria treatment and the correct full course of treatment (Table-II).

DISCUSSION

This study indicated that most students and teachers were well informed of the nature and symptoms of malaria with the majority of malaria cases especially in private schools visiting the clinics. However students self treat themselves, consequently it is important that they learn how to recognize malaria and how to respond appropriately to it. Self-treatment is often inappropriate with treatment being sought to relieve the symptoms of the disease. This is seen in the 29% that self treat with panadol/paracetamol. This is in accordance with the study[7] where analgesics and antipyretics were commonly used to self treat malaria, either in combination with antimalarials or alone by children or their caretakers.

Intake of sub-therapeutic doses of malaria tablets was prevalent, with those infected ceasing to take antimalarial tablets once they felt better. It was also gathered that there is delay in seeking medical attention while hoping to cure malaria. Most respondents here claimed to complete the dosage of antimalarials although this claim was negated when 74% had no idea of the correct dosage. It is also interesting to find that out of the 26% that claimed to have an idea of the correct dosage only 8% was correct. This means out of 600 secondary school students and teachers only 8% knew the correct antimalarial dosage. This differs from other works[8,9] where most children knew the correct dosage. According to another study,[7] these findings of ignorance in school settings emphasize a need for clear, simple messages about the appropriate drug and dosage. This present situation analysis or quick study has shown the need to develop appropriate health education messages or school based health education about malaria. More emphasis needs to be placed upon promoting healthy practices of developing the necessary life skills related to malaria recognition, management and prevention.

Previous studies of participatory health education studies in Kenya have shown that school-based health education messages can be translated into practice, in terms of malaria prevention. For example, a health education project among primary level school children in Kisumu, Kenya showed that although no significant changes were observed in the knowledge on malaria, there was an effort to avoid being bitten by mosquitoes and an increased awareness and positive change of attitude towards malaria.[10]

Another study[11] provides a valuable example of how malaria control education can be introduced into schools. In their study, interactive learning methods were employed in 16

schools that included a 30 minutes play, small group work to discuss the play and a poster competition. It was shown from the study that messages related to insecticide treated bed nets were not well transferred to parents at home and it was concluded that although school children may not be able to influence their parents, they themselves will become the parents of the next generation at-risk children. The study however did not consider the promotion of the wider issues of malaria control through recognizing the symptoms of malaria and appropriate treatment.

Mismanagement and misconceptions about malaria which exits in many rural illiterate settings as seen in other works[3-6] also exist in high schools as seen in this study. It is therefore suggested that the school curriculum should be made to include studies on parasitic diseases like malaria and since students and teachers can be important agents for change, health education through schools can help promote community wide understanding of malaria. This can also create a demand for health services (both private and public) to provide universal access to affordable and appropriate treatment thus enhancing the use of clinics by student in the public schools which most of the time have less privileged students. If knowledge about malaria is poor in schools in urban areas, there is every likelihood that knowledge about the infection will be poorer in rural areas.

REFERENCES

1. WHO. The World Health Report 1999: Making a difference. Geneva. World Health Organization 1999;9-63.
2. Federal Ministry of Health (FMOH). Focus on malaria-New guidelines. Nigeria Bulletin of Epidemiology 1991;1(3):24.
3. Kombila M. Focus on recent discoveries concerning the epidemiology of malaria in the African region. Malaria and Infectious diseases I Africa 1994;1:10-13.
4. Okyere WA. Socio-economic factor in malaria control. World Health Forum 1994;15:265-8.
5. Brieger WR, Nwankwo E, Ezike VI, Sexton JD, Breman JG, Parkes KA, et al. Social and behavioural baselines for guiding implementation of an efficient trial of insecticide-treated bed-nets for malaria control at Nsukka, Nigeria. Intern J Community Health Educ 1997;16:47-61.
6. Nebe OJ, Adeoye GO, Agomo PU, Mosanya ME. Malaria in a coastal area of Lagos State, Nigeria: a survey of perceptions and practices among the mothers/care givers of children under five years old. Nigeria J Parasitology 2000;23:69-80.
7. Brooker S, Guyatt H, Omumbo J, Shretta R, Ouma J, Snow B 2000. Situation analysis of malaria in school-aged children in Africa: Disease burden and opportunities for control. Brief prepared for the International School Health Initiative and the Roll Back Malaria Team of the World Bank, November 1999.
8. McCombie SC. Treatment seeking for malaria: a review of recent research. Social Science and Medicine 1996;43:933-45.
9. Nyamongo IK. Home case management of malaria: an ethnographic study of lay people's classification of drugs in Suneka Division, Kenya. Tropical Medicine and International Health 1999;4:736-43.
10. Ogutu RO, AJ O, Ekissa IO, Mulaya GN, Githure JI. The effect of participatory school health programme on the control of malaria. East African Medical J 1992;69:298-302.
11. Marsh VM, Mutemi W, Some ES, Haaland A, Snow RW. Evaluating the community education programme of an insecticide treated bet net trial on the Kenyan Coast. Health Policy and Planning 1996;11:280-91.