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## ***Original Research: Awareness & Perception Regarding Malaria in Devarayasamudra Primary Health Centre Area***

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### **Abstract**

**Objective:** To study the awareness and perception of the population about malaria.

**Methods:** A cross-sectional study was undertaken in the catchment area of PHC Devarayasamudra of Kolar District; 482 households were selected by systematic sampling method from nine randomly selected villages. Predesigned and pretested proforma was used to collect information; Data was analyzed by using SPSS11 software.

**Results:** 81.7% of the respondents had heard about malaria and 64% of were aware of the mode of transmission. 48% had the proper knowledge of the mosquito breeding. Majority of the respondents was aware of the fact that fever with chills was the most common symptom (82.8%) of malaria. Only 11% respondents were aware of the larvicidal fish. 38.8% of the households surveyed were using mosquito nets. 14.33% did not practice any personal protective measures at all, despite widespread prevalence of disease. About 73% of the studied houses were sprayed with DDT during the past 3-6 months. A problem peculiar to Kolar District is that many people are silk farmers and they do not like DDT spraying in their houses and nearby farms since it is harmful to silk worms.

**Conclusion:** Awareness about malaria is provided mainly by the PHC Medical Officer and private doctors. Despite good knowledge of malaria, adoption of the mosquito control methods was poor. The families did not have a proper responsible attitude to use of any preventive measures.

**Key words:** PHC, DDT, larvicidal fish, Mosquito nets, Knowledge Attitude Practice (KAP)

## **Introduction**

Malaria, one of the planet's deadliest diseases, is the leading cause of sickness and death in the developing world. According to the WHO, 300 to 500 million clinical malaria cases per year occur in the world resulting in 1.5 to 2.7 million deaths. Malaria has been a problem in India for many centuries. The annual incidence of malaria was estimated at around 75 million cases in 1953 with about 8 lakhs deaths. To combat this menace the National Malaria Control Programme (NMCP) was launched in April 1953. Within 5 years, the incidence dropped to 2 million leading to launch of the more ambitious National Malaria Eradication Programme (NMEP) in 1958. The malaria incidence dropped dramatically to 1 Lakh cases in 1965, but since then the programme has suffered repeated setbacks. Malaria has now staged a dramatic come back in India after its near eradication.

Kolar district has always been an endemic area for malaria. Prior to 1993, Kolar used to record an annual average of 2500 to 3000 malaria cases. From 1999 onwards the cases have been progressively increasing. According to district health department of Kolar, 4566 cases (39% falciparum) were observed in 2004.

Most mosquito control strategies require public support of one kind or the other, and the extent of the people's cooperation and community participation can determine the success or failure of the entire campaign. There is little information on the Knowledge, Attitude, & Practice (KAP) components of the community in relation to the mosquitoes and their control in India. Therefore, we thought it would be a worthwhile endeavour to conduct a cross-sectional study in Devarayasamudra PHC area to find out the awareness and perceptions of the population regarding malaria.



## **Materials and Methods**

The cross-sectional study was conducted in Devarayasamudra PHC area, which is the field practice area of the Department of Community Medicine, Sri Devaraj Urs Medical College, Kolar. Devarayasamudra PHC is known for endemicity of malaria because of the terrain and climate. Nine villages were randomly selected from the list of villages falling within the catchment of the PHC.

The total number of households in these nine villages was around 2000; 25% of the households were included in the sample. Systematic sampling method was employed and 482 households were selected with a sampling interval of five.

A team of junior residents posted in the department of community medicine was trained. Predesigned and pretested proforma was used to collect information. In the selected households an adult member in the family, who was present at the time of visit, was interviewed for collection of information. The data was analyzed by using the Statistical Software package, SPSS 11.

## **Results**

A total of 482 subjects (40.45% males and 59.54% females) were interviewed. Most of the subjects were illiterate (68.67%) and only 31.32% were literate.

Of the 482 subjects, 394 (81.7%) were aware about the disease – malaria, while 88 (18.3%) were fully unaware of it. The most common source of knowledge about malaria was from health personnel (85.68%), while mass media (TV, Radio, News papers) played a negligible role as a source of information (1.24%) (Table 1).

**Table No 1. Knowledge about malaria ( n =482)**

	No	%
<b>Source of Knowledge about malaria</b>		
Health personnel (Doctors, ANM etc)	413	85.68
Mass Media	6	1.24
Hearsay	92	19.08
Don't know	88	18.25
<b>Knowledge about transmission of malaria</b>		
Mosquito	309	64.10
Flies	73	15.14
Food/Water	06	1.24
Don't know	88	18.25
<b>Knowledge about symptoms of malaria</b>		
Fever with chills	399	82.78
Headache	312	64.73
bodyache	236	48.96
Others	74	15.35
<b>Knowledge about breeding places of Mosquitoes</b>		
Stagnant water	232	48.12
Bushes and shrubs	324	67.21
Others	62	12.86
Don't know	81	16.80

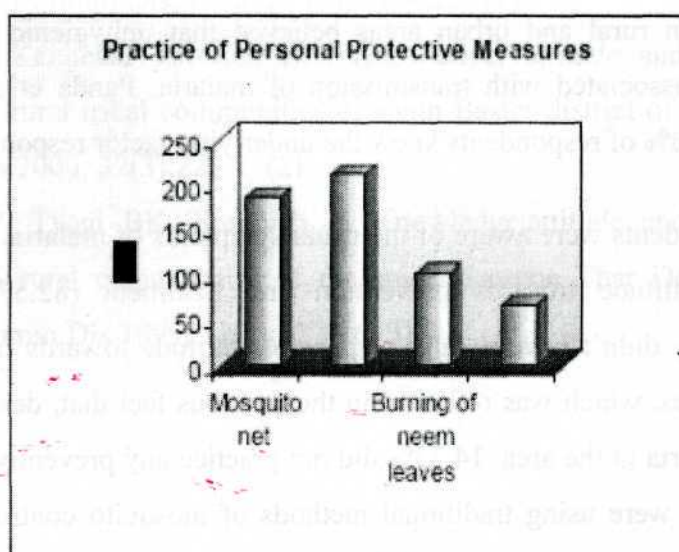
Regarding knowledge about transmission of malaria, 64% of the respondents indicted mosquitoes in spread of disease. The classical symptom of malaria – fever with chills – was known to the majority of respondents (82.8%) (Table 1).

48.12% respondents had the proper knowledge of mosquito breeding. (Table 1). Only 8 (1.65%) respondents were aware of the antimalaria month being celebrated by health staff; the vast majority had no knowledge. Only 11% respondents had heard of the Larvicidal fish (Table 2).

**Table No 2. Awareness regarding the Control Measures practiced in Malaria (n =482)**

Control Measures	No	%
Insecticide Spray	351	72.92
Environmental methods	133	27.59
Use of Larvicidal fish	53	10.99
Use of Larvicides	06	1.24
Don't know	15	3.11

92% of the visited houses were sprayed with insecticide within the past 6 months; 38.85% of the households were using mosquito nets. A sizeable 14.33% did not practice any method despite a wide prevalence of disease (Fig 1).





82.57% of the respondents were of the opinion that malaria is preventable, while 17.42% were not sure whether malaria could be prevented. Mosquito control as a means of prevention was known to 67.84% of the respondents (Table 3).

## Discussion

In our study 81.7% of the respondents were aware of malaria. This high level of awareness about malaria could be attributed to the endemicity of malaria in the study area. It was revealed that mass media like TV, radio, and newspapers played an insignificant role as a source of information. The most common source of knowledge about malaria was health workers (85.68%).

**Table No 3: Attitude towards prevention of Malaria**

Attitude	No	%
Positive	398	82.57
Mosquito Control	327	67.84
Personal protection	187	38.79
Can't say	59	12.24
No Response	25	5.18

Some 64% of respondents in our study knew that malaria was transmitted by mosquitoes and 48.12% of them could name their breeding places. In a similar study by Kaul et al<sup>1</sup>, respondents in rural and urban areas believed that unhygienic environment and mosquitoes were associated with transmission of malaria. Panda et al<sup>2</sup> found in their study that only 20.6% of respondents knew the underlying factor responsible for malaria.

Most of the respondents were aware of the usual symptoms of malaria. Majority of them had a positive attitude towards prevention and treatment (82.57% and 81.74%, respectively). They didn't have a fully responsible attitude towards use of any sort of preventive measures, which was reflected in the ominous fact that, despite a widespread prevalence of malaria in the area, 14.33% did not practice any preventive measures at all. Many respondents were using traditional methods of mosquito control like burning of

neem leaves. Panda et al<sup>2</sup> reported that 92.4% of study population had not taken any measures to prevent contracting malaria. In the study by Yadav et al<sup>3</sup>, 60% of healthy subjects lacked the urge to initiate any anti-mosquito or anti-malaria measures to protect themselves.

A problem peculiar to Kolar district is that many people are silk farmers and they do not like insecticide spraying in their houses which explains 72.92% coverage of residual spray. In the study by Panda et al<sup>2</sup>, 99.7% of respondents agreed to let their houses to be sprayed with DDT and 99.1% believed that spraying was necessary.

## **Conclusion**

Despite good awareness about malaria, adoption of the mosquito control methods was poor in the area. Villagers did not have the correct responsible attitude toward use of any of preventive measures for malaria. Better health education and health campaigns on vector borne diseases need to be organized to create awareness and popularize biological and environmental control measures. It is important to make people understand the necessity and advantage of integrated vector control and implement the collective measures. There is a need of continuous educative programme and encouragement of the people to actively participate in vector control programmes.

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## Further Reading

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