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Research Article

## Assessment of Kap Model on Malaria in Villagers

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### ABSTRACT:

**Background:** Correct assessment of knowledge, attitude and practices can assist reformulation of malaria control strategy and form basis of appropriate health education messages. This study was conducted with the objective to assess knowledge, attitude and practices regarding malaria in Villagers

**Methodology:** A questionnaire study involving 400 Villagers was conducted. A structured Questionnaire consist questions of knowledge regarding transmission of disease, symptom of disease, breeding of mosquitoes and control programs, attitude towards seeking treatment and practices, keeping the surroundings clean and use of personal protective measures were assessed.

**Results:** Only 50% believed that malaria is fatal disease, only 33% had closed water drainage system in their houses and 62.50% practiced of throwing garbage in open or in front of their house. Seep-age of water was present in 42.37% houses. 15% households did not use any type of personal protective measure.

**Conclusions:** The study showed high knowledge regarding malaria but the attitude and practices on various aspects of malaria was not proper. There is need to focus on Behaviour Change Communication Strategy and improve the Quality of Life of people living in this rural area.

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**KEYWORDS:** Malaria, knowledge, attitude, practice.

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### INTRODUCTION

Even after centuries, since the aetiology and life-cycle of malaria were elucidated, the disease continues to present a daunting public health challenge. It is still endemic in over 100 countries worldwide. The burden of malaria in the South East Asia (SEA) Region is still high. It is second to Sub-Saharan Africa. In SEA Region, three countries accounted for 94% of confirmed cases; India (66%), Myanmar (18%) and Indonesia (10%).<sup>1</sup> In India, about 1.31 million malaria cases and 753 deaths were reported in the year 2011. In India, about 95% population resides in malaria endemic areas.<sup>2</sup>

Socioeconomic status and housing condition plays an important role in the epidemiology of the disease. The ill-ventilated and ill lighted house provide ideal indoor resting places for mosquitoes. The conditions more common in rural areas. Open drainage system and unsafe disposal of waste provide favourable condition for breeding of mosquitoes.<sup>3</sup> Over to this ignorance, lack of proper knowledge, misbeliefs and improper treatment of the disease also affect and hinder effective implementation of malaria control strategies<sup>4</sup>

This study was conducted with the objective to evaluate knowledge, attitude and practices of the Villagers

### MATERIAL AND METHOD

A structured and validated questionnaire was filled by volunteers after interview to 400 villagers. Questionnaire consisted of the questions regarding knowledge regarding modes of transmission, causes, signs and symptoms, type of mosquitoes, breeding places of mosquitoes, diseases transmitted by mosquitoes, seasonality and fatality of the disease, their practices like sleeping habits, cleaning of environment, use personal protective measures; and attitude towards illness (health seeking behaviour).

**Statistical Analysis:** Collected data were reported as percentage (%) and were analyzed by Chi-Square Test and Fisher's Exact test. P values <0.05 were considered statistically significant.

### RESULTS

Results were tabulated in Table-I.

**Table: I- Knowledge, Attitude and Practices related to Malaria (N=400)**

Parameters		Respondent (%)
<b>Knowledge Domain</b>		
Mode of transmission	Mosquito bite	344 (87.8)
	House fly/ Other insect bite	27 (7.3)
	Infected food	4 (0.4)
	Don't know	18 (2.4)
Symptoms	Fever	24 (4.4)
	Fever with Chills	170 (46.7)
	Fever with chills, headache, vomit	193 (45.5)
	Don't know	13 (3.2)
Name of Mosquito	Anopheles	41 (10.25)
	Culex	23 (5.75)
	Aedes	16 (4)
	Don't know	320 (80)
Fatality of Disease	Fatal- Yes	198 (49.5)
	Fatal- No	202 (50.5)
<b>Practice Domain</b>		
Sleeping Place	Indoor	378 (94.5)
	Outdoor	22 (5.5)
Throwing of Garbage	In open	249 (62.5)
	Safe disposal	151 (37.75)
Drainage System	Open	267 (66.75)
	Closed	133 (33.25)
Preventive Measures	Mosquito Nets	31 (7.75)
	Mosquito Repellants (Coils, Goodnight)	179 (44.75)
	Smoke with Neem leaves	129 (32.25)
	None	61 (15.25)
<b>Attitude Domain</b>		
Treatment in illness	From Doctor	369 (92.25)
	From Quacks/Local herbal treatment/ Self	31 (7.75)

A total 400 respondents were interviewed. Most of the respondents were males 246 (61.5%). About 373 (93.20%) belonged to class-IV and V socio-economic status according to Modified B.G.Prasad Classification.

All the respondents had heard about malaria disease and 344 (87.80%) of households knew that the mosquito transmit the disease but still around 38 (10%) said that malaria was transmitted by house-fly and coughing/sneezing of infected person while 18 (2.40%) respondents were completely unaware of any modes of transmission of the disease.

Most respondents 363 (92.2%) told correct symptoms of malaria and 339 (93.75%) respondents also knew that stagnant water and water indrainage are the major breeding places of mosquitoes but only half of the households believed that malaria is fatal disease. High proportion of respondents i.e.320 (80%) had no knowledge of different species of mosquitoes that caused malaria.

Maximum respondents 378 (94.50%) preferred indoor sleeping. But this habit also varied according to season. Most of the respondents knew the ill effects of water collection in and around the house and practiced regular cleaning but in 267 (66.75%) houses water drainage system was open and waste

water drained in front of the house. Around 61(15.25%) of respondents did not use any type of protective measure where as use of bed nets was only 7.5%. Cow dung smoke with neem leaves practice was observed in 129 (32.25%) households.

Among the respondents 81% prefer to take treatment from qualified medical practitioners while 10% prefer to visit quacks and local help for treatment. Around 9% prefer self care in case of illness.

## DISCUSSION

The key to malaria control lies in understanding local malaria with a primary understanding of knowledge, attitude and practices at community level prior to the implementation of the malaria control strategy.

In this study we found that about 80% respondents were unaware of different species of mosquitoes. A noticeable proportion of households (13%) had incorrect information regarding modes of transmission of malaria and only 50% believed that this disease is fatal. So, this showed that the IEC activities were not reaching the whole community. There must be some barriers in streaming and disseminating the correct knowledge in the community which need to be addressed. Similar observations were made by Singh RK et al<sup>2</sup> and S. Kannathasana et al<sup>5</sup> in their studies.

In this study open drainage system was found in 66% of houses and 62% households threw garbage indiscriminately in open space or in front of house. These practices of households were making the peridomestic environment in the community more favourable for breeding of mosquitoes. Mohite JB et al<sup>6</sup> and Soomro F R et al<sup>7</sup> had mentioned that defaulted sewerage system and improper dumping of garbage were conducive for mosquito breeding and responsible for more number of malaria cases in their studied area. In the present study, 15% of households were not using any type personal protective measure making them victim for mosquito bite. Soan V et al<sup>8</sup> and Anita Acharya et al<sup>9</sup> found 15.50% and 30% respondents not using any type of preventive measure respectively.

In the study we found that around 20% household take treatment from quacks or take self treatment when they fall sick. This showed that there still exists some misbelieves in the community which had directed them toward squacks and forbid them from utilizing the health care facilities for proper treatment. Hlongwana KW et al<sup>10</sup> and Yadav SP et al<sup>11</sup> found similar respond in about 18% and 22% respondents respectively.

## CONCLUSION

Our study indicate good knowledge and awareness but wrong attitude and improper practices on various aspects of malaria and its control which may be one of the important factors responsible for the persistence of malaria in this areas. Only having knowledge is not sufficient, it will ultimately be transformed in to action. We need to focuss on Behaviour Change Communication Strategy and improve the Literacy

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## DECLERATIONS

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Conflict of Interest – None

Ethical Approval- Study protocol was approved by