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Original Research Article

A cross sectional study to assess perception regarding mosquito borne diseases in urban areas of Belagavi city

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ABSTRACT

Background: Mosquito borne diseases are one of the major health problems in India. Due to growing population, unplanned urbanization, lack of awareness about the diseases and increasing number of slums in urban areas, the incidence of mosquito borne diseases is increasing simultaneously. To assess knowledge about mosquito borne disease and to impart awareness regarding prevention of mosquito borne diseases in the community.
Methods: The present study was carried out in the urban field practice areas of department of Community Medicine, J. N. Medical College, Belagavi. Data was collected by systemic random sampling. Data was compiled, tabulated and analyzed using proportions.
Results: Out of 360 participants, 45.8 % were in the age group of 20-29; male participants constituted about 56.3% and 43.7% were female. 4.4 % people belong to class I and 41.4 % belongs to class IV socio-economic status. 19.3 % were illiterates and 28.6% lived in Kachha house. 78.33% study subjects knew about mosquitoes borne diseases, 31.3 % people had the knowledge that mosquitoes can cause malaria, dengue and chikungunya, 36.6% consider drainage and garbage as common breeding place. 57.8% people use mosquito coils to prevent mosquito bite. 61.4% had knowledge about disease through TV and newspapers.
Conclusions: Lack of awareness and knowledge about mosquito borne disease in low socio economic status and illiterates and also about breeding sites of mosquitoes.

Keywords: Mosquito borne disease, Knowledge, Malaria, Dengue

INTRODUCTION

Malaria is one of the major public health problems of the country. It is a protozoa disease infection with parasites of the genus plasmodium and transmitted to man by certain species of infected female anopheline mosquito. There were about 198 million cases of malaria in year 2013 and an estimated 584000 deaths.[1] According to official data of NVBDCP, about 95% population in the country resides in malaria endemic areas and 80% of malaria reported in the country is confined to areas consisting 20% of population residing in tribal, hilly, difficult and inaccessible areas.[2] For the control of mosquito transmitted diseases, Government of India started the national malaria control programme in 1952 and it has been renamed as national vector borne disease control programme in 2003. Studies conducted in tropical countries had found that human knowledge, attitude and practice of various methods of personal and household protection against mosquito bites vary in different communities.[3]

Many studies have conducted in several endemic areas, which revealed that methods of personal and household protection against mosquito bite varied in different areas. Awareness about the mosquito borne diseases and knowledge about prevention and self-protection against mosquito bite is one of important fundamental component in vector borne disease control programme.

The following a community based cross section study was conducted to assess the knowledge, awareness and practices to prevent mosquito borne diseases in urban areas of Belagavi city.

METHODS

The present questionnaire based cross sectional study was carried out in urban Health Centeres, Ramnagar, Ashok Nagar And Rukmini Nagar of Belagavi City, which comes under urban field practice area of department of community medicine, Jawaharalal Nehru medical college, Belagavi from June 2016 to July 2016 for a period of 2 months. Data was collected by total 360 people on outpatient department on the basis of systemic random sampling. The information gathered using semi structured questionnaire, which included questions related to knowledge about mosquito borne diseases, symptoms, sources of breeding, disposal of wastes, personal protection used, and about government plans. Permission from institution ethics committee and the informed consent was taken from the study subjects. Data was compiled, tabulated and analyzed using proportions.

RESULTS

Our study subjects constituted about 360, 45.8 % were in the age group of 20-29, and 11.2% were 60 and above age. Male participants constituted about 56.3% and 43.7% were female. 4.4 % people belong to class I and 41.4 % belongs to class IV socio-economic status. 19.3 % were illiterates and Graduates and Post Graduates constituted about 20.1% (Table 1).

28.6% lived in Kachha and 71.4% in Pakka house (Table 2). 78.33% study subjects knew about mosquitoes borne diseases (Table 3).

31.3 % people had the knowledge that mosquitoes can cause malaria, dengue and chikungunya, 15.8% had the knowledge that mosquito can cause malaria and dengue, where as 26.8% did not have any knowledge that mosquito can cause diseases (Graph 1). 48.4 % people answered headache, body ache, and fever as symptoms of mosquito borne disease, 18.4% nausea and vomiting, 13.8% fever, where as 19.4 % people were not aware of the symptoms (Table 4)**.**

36.6% consider drainage and garbage as common breeding place, 22.5% garbage and stagnant water, and 0.83% people consider stagnant water only as breeding place of mosquitoes (Table 5)**.**

57.8% people use mosquito coils, 20.3% mosquito nets and 8.61% people repellants to prevent mosquito bite (Table 6).

61.4% study subjects had knowledge about disease through TV and newspapers 11.3%, people from health personnel and 1.6% from relatives (Table 7).

Table 1: Socio-economic distribution of study participants (n=360).

Indicators	Number	Percentage
Age(in years)		
20-29	165	45.8
30-39	52	14.4
40-49	80	22.7
50-59	21	5.9
60 and above	42	11.2
Sex		
Male	203	56.3
Female	157	43.7
Socio-economic status		
Class I	16	4.4
Class II	64	17.8
Class III	122	33.6
Class IV	148	41.4
Class V	10	2.8
Education status		
Illiterate	70	19.3
Primary	117	32.3
High school	60	17.1
PUC	40	11.2
Graduate/postgraduate	73	20.1
Total	**360**	**100**

Table 2: Distribution of study of participants according to type of house.

Type of house	Number	Percentage
Kachha	103	28.6
Pakka	257	71.4

Table 3: Distribution of study of participants according to the knowledge about mosquito born disease.

Knowledge about mosquito borne diseases	Number	Percentage (%)
Yes	282	78.3
No	78	21.7
Total	360	100

Table 4: Distribution of study participants according to the knowledge about symptoms of diseases.

Awareness of symptoms	Number	Percentage (%)
Fever	50	13.8
Headache, body ache, fever	174	48.4
Nausea and vomiting	66	18.4
Don't know	70	19.4
Total	360	100

Table 5: Distribution of study participants according to responses about the breeding places (multiple responses).

Places	Number	Percentage
Drainage	25	6.9
Stagnant water	3	0.8
Garbage	23	6.4
Drainage + Garbage	132	36.6
Garbage + Stagnant water	82	22.7
Garbage + Drainage + Stagnant water	32	8.8

Table 6: Distribution of study participants according to the preventive measures.

Method to prevent mosquito bites	Number	Percentage (%)
Mosquito coils	208	57.8
Repellants	31	8.6
Nets	73	20.3
Mats or liquidators	48	13.3
Total	**360**	**100**

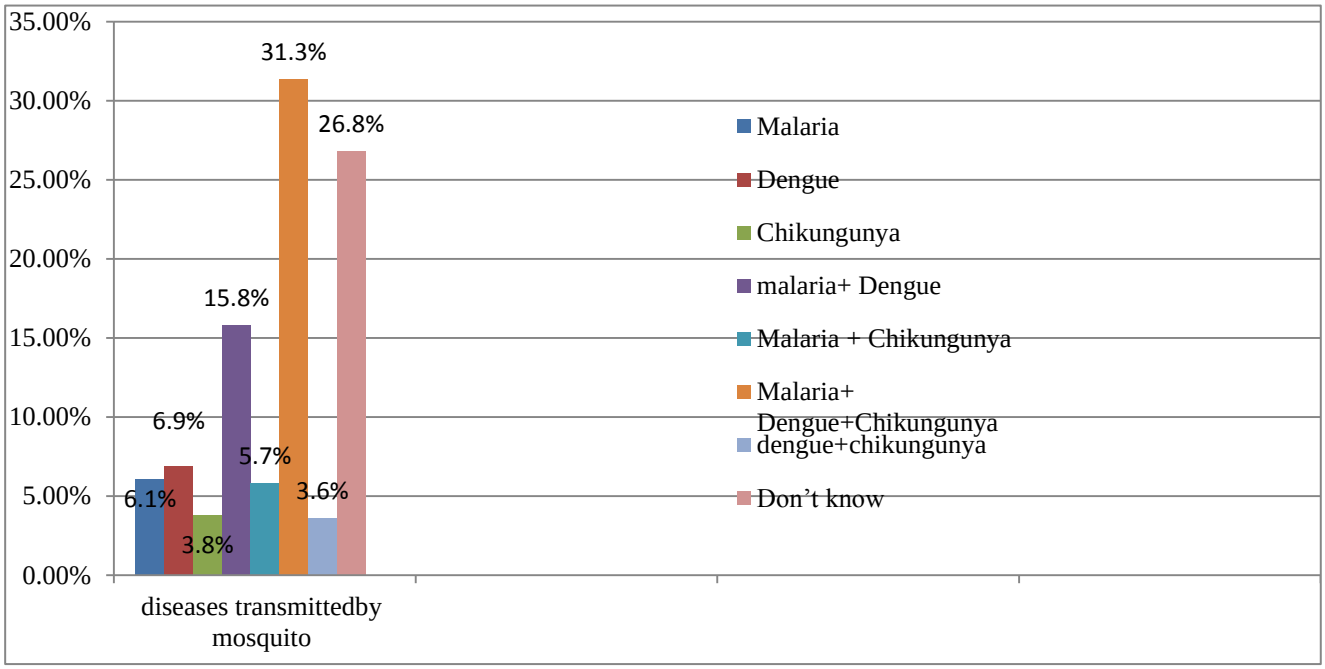

Figure 1: Distribution of study participants according to the knowledge about diseases spread by the mosquitoes.

Table 7: Distribution of study participants according to source of information regarding mosquito borne diseases and its prevention.

Source of information	Number	Percentage (%)
Health personnel	41	11.3
Hospitals	33	9.3
TV and news papers	221	61.4
Relatives	06	1.6
Health personnel's and hospitals	27	7.6
Health personnel's, TV, and hospitals	32	8.8
Total	**360**	**100**

DISCUSSION

In the study population, 78.33% study subjects knew about mosquitoes borne diseases. 31.3% people had the knowledge that mosquitoes can cause malaria, dengue and chikungunya, where as 26.8% did not have any knowledge that mosquito can cause disease. Study by Yerpude et al, have shown that, 70.09% of study population had knowledge that mosquito bite causes malaria but only 33.72% of the study population knew that dengue, chikungunya was transmitted by mosquito.[3] Study in Srilanka found that 71% of study participants were able to name at least one disease transmitted by mosquitoes.[4] Tyagi in their study from New Delhi observed that 100% of study participants were aware that mosquito bites transmit malaria.[5]

In our study, 36.6% consider drainage and garbage as common breeding place. 57.8% people use mosquito coils to prevent mosquito bite. Yerpude et al studies shown that have shown that 91.50% of the study participants had knowledge about breeding places of mosquito. 22.29% of study population still had myths that garbage was the breeding place for mosquito. 70.09% of study population had knowledge that mosquito bite is the cause for malaria but only 33.72% of the study population knew that dengue, chikungunya was transmitted by mosquito. Almost 90% of study participants were using one or other personal protective measures against mosquito bite, the commonest method used by the study participants was mosquito coil (52.2%) followed by use of mosquito net (33.1%).[3] Babu et al study from Orissa found that 99% of urban households; 84% of rural households were using at least one measure against mosquito bites.[6] Snehlatha et al, observed that 99% and 73% of urban and rural respondents respectively were found to use some personal protection against mosquito bites.[7] Panda et al in his study observed that about 55% of study participants were not using any protective measures.[8]

Our study shows that, 61.4% study subjects had knowledge about disease through TV and newspapers and only 11.3%, people from health personnel. Study by Yerpude et al observed that, 71.5% study subjects got information from television, other sources were newspaper 28.3% and IEC materials displayed in health centres 21.2%.[3]

CONCLUSION

The study revealed that there is lack of awareness and knowledge about mosquito borne disease in low socio economic status and also among illiterates. Though majority of the people know that mosquito spread diseases like dengue, malaria and chikungunya, but there was lack of knowledge regarding other lethal diseases like Japanese encephalitis and kala azar. There was lack in adequate knowledge about prevention of breeding of mosquitoes in and around the house. It was also seen that there was lack of awareness regarding government measures regarding mosquito born diseases. There is a dire need to expand the focus of knowledge to other mosquito borne diseases also.

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