

A Study on Knowledge, Attitude & Practice Regarding Mosquito Borne Diseases in an Urban Area of Bhavnagar

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Abstract:

Introduction: India being a populous country with many health issues wherein Mosquito Borne Diseases (MBDs) are also a health threatening condition including Gujarat. **Objective:** To study Knowledge, Attitude & Practice Regarding Mosquito Borne Diseases in an Urban Area of Bhavnagar, Gujarat. **Method:** A community based, cross sectional study was carried out during April-June 2014 in field practice area of Urban Health Training Centre (UHTC), facilitated by Community Medicine Department of Government Medical College & Sir Takhatsinhji Hospital, Bhavnagar, with sample size of 135. One adult respondent from each selected households were selected randomly & after taking verbal consent, the respondent was interviewed using a semi-structured questionnaire. **Results:** There was good knowledge of MBDs as majority (88.1%) respondents were aware about MBDs & 3/4th (76.3 %) were aware about preventive measures against MBDs. In the present study, 68.1% fever cases were found of which 88% consulted government doctor for treatment. Most of (94.8%) respondents were using personal protective measures. **Conclusions:** Knowledge regarding MBDs was good & majority of the study population were practicing preventive measures at individual level as well as at community level.

Key words: Knowledge Attitude Practice, MBDs, Urban area of Bhavnagar

Introduction:

Mosquito Borne Diseases (MBDs) are major health problem in India & growing urban problems because of unplanned urbanization, industrialization & excessive population growth coupled with rural to urban migration. Gujarat is also one of the endemic states of malaria & other mosquito borne diseases. Anopheles species bites transmit malaria; Aedes transmits dengue, chicken guinea, yellow fever etc. Culex and Anopheles both transmit lymphatic Filariasis. ^[1] Government of India is working for controlling transmission of vector borne diseases. Government has launched National Malaria Control Program in 1952 which was renamed as National Vector Borne Disease Control Program in 2003 which is one of the most comprehensive and multifaceted public health activity including prevention & control of mosquito borne diseases. ^[2]

Environmental control, mainly source reduction, is potentially the ideal method for

controlling mosquito breeding. It requires public motivation through health education & usually legislation & law enforcement to encourage community participation. Along with environmental control, personal protective measures such as mosquito nets, screening, repellents, anti-mosquito coils & vaporizers are also equally important to protect one against mosquito bites. For this, Government is also providing Long Lasting Insecticides Treated Bed Nets (LLITNs) for community. Hence Community participation is essential for the prevention & control of an outbreak of mosquito borne disease. ^[3,4] For developing a suitable & effective health education strategy, it is inevitable to understand the level of knowledge of the community, their attitude & practices regarding mosquito borne diseases. With this background, it was decided to carry out this study in the urban locality of Bhavnagar city.

Hence, present study was undertaken to assess Knowledge, Attitude & Practice Regarding Mosquito

Borne Diseases in an urban area of Bhavnagar, Gujarat.

Method :

A community based, cross sectional study was carried out in a field practice area of Urban Health Training Centre (UHTC), which is facilitated by Community Medicine Department of Government Medical College and Sir Takhtasinji Hospital, Bhavnagar, during April - June 2014. With assumption of 50% knowledge regarding MBDs & 10% absolute error & applying it with $4pq/L^2$, sample size comes as 100. Urban field practice area of UHTC is having 1350 total households, so every 10th household was selected by systematic random sampling, hence 135 household were selected. One adult respondent from each selected households were selected randomly & after taking verbal consent, the respondent was interviewed using a semi-structured questionnaire. The respondents from the selected households, if not willing to give information, were counseled & if still not ready to participate, immediate next household was selected for the study. The information was collected regarding awareness of mosquito borne diseases, the diseases spread by them, their breeding places, signs and symptoms of mosquito borne diseases, treatment seeking behaviour & prevention & control measures used by them.

Data Analysis : Data entry and data analysis was done in Microsoft Excel 2007.

Results :

Present study is based upon responses received from 135 respondents. Among respondents, maximum respondents (55.6%) were from 26-45 years; 54.8% were male & 45.2% females. Most of the participants (88.9%) were educated. Maximum respondents (31.1%) were engaged in labour work. Most (94.14%) of the respondents were from lower socioeconomic class. [Table 1]

Table 1: Sociodemographic characteristics (N=135)

Sociodemographic Characteristics	Frequency	%
Age (yrs)		
18-25	32	23.7
26-35	41	30.4
36-45	34	25.2
46-55	18	13.3
>55	10	07.4
Gender		
Male	74	54.8
Female	61	45.2
Education		
Illiterate	15	11.1
Primary	29	21.5
Secondary	28	20.7
Higher secondary	47	34.8
Graduation	12	08.9
Post graduation	04	03.0
Occupation		
Housewife	15	11.1
Labourer	42	31.1
Shop owner	19	14.1
Student	20	14.8
Other	03	02.2
Socio-economic class		
(Class I) Upper	00	0
(Class II) Upper middle	08	05.9
(Class III) Lower middle	27	20.0
(Class IV) Upper lower	61	45.2
(Class V) Lower	39	28.9

Almost 88.1% respondents were aware about MBDs. Regarding diseases transmitted by mosquito, 40.3% answered malaria & dengue, 33.6% interviewees mentioned malaria, 13.4% mentioned dengue & 12.6% mentioned Chikungunya. Major source of information was newspaper (73.9%). However, none of them knew that filariasis, dengue and Japanese encephalitis are related with mosquito. Most of the respondents (55.5%) answered that MBDs transmitted by mosquito bite during night

time. A question was asked regarding the breeding places of mosquitoes, more than half (58.8%) responded replied drains or polluted water, while 27.7% of people replied clean water collections while only some (13.5%) replied garbage or green plants. It was observed that 71.9% respondents had mosquito breeding places in the vicinity. [Table 2]

Table 2: Awareness about mosquito borne diseases

Aware of mosquito borne disease (N=135)	Frequency	%
Yes	119	88.1
No	16	11.9
Diseases transmitted by it (n = 119)		
Malaria	40	33.6
Dengue	16	13.4
Malaria & Dengue	48	40.3
Chikungunya	15	12.6
Sources of information (n=119)		
Newspaper	88	73.9
Radio	02	01.7
TV	29	24.4
Time of bite (n=119)		
Day	15	11.1
Night	75	55.5
Night & day	29	21.5
Breeding places of mosquito (n=119)		
Clean water collection	33	27.7
Drain & polluted water	70	58.8
Garbage/Green plant	16	13.5
Breeding place in vicinity (n=135)		
Yes	97	71.9
No	38	28.1

In the present study, majority (76.3 %) were aware about preventive measures against MBDs of which majority (68%) replied keeping surrounding clean & proper drainage will help in reducing mosquito breeding. Most of the respondents (88.9%) knew government measures. However respondents were not satisfied with the govt. measures as they mentioned they are not enough to reduce mosquito breeding. [Table 3]

Table 3: Awareness about preventive measures against mosquito borne diseases

Aware about preventive measures	Frequency	%
Yes	103	76.3
No	032	23.7
If yes what preventive measures? (n=103)		
Keeping surrounding clean & proper drainage	68	66.0
Spraying chemicals on water & keeping the surrounding clean	35	34.0
Aware about the government measures (n=135)		
Yes	120	88.9
No	015	11.1
If, yes , what measures (n=120)		
Chemical spraying & fogging	41	34.2
Cleaning of garbage & chemical spraying	41	34.2
Regular cleaning of drainage	38	31.6
Are Government measures enough? (n=120)		
Yes	34	28.3
No	86	71.7

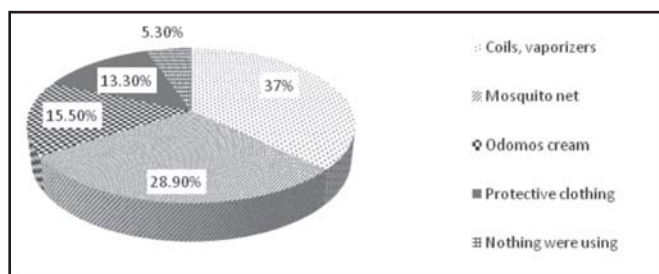
On inquiry about fever in last fifteen days in family, 68.1% fever cases were found. Majority of them (88.0%) consulted doctor & they preferred to visit government doctor for treatment. [Table 4]

Table 4: Attitude about mosquito borne diseases

Signs and symptoms of mosquito born disease in last 15 days(n=135)	Frequency	%
Fever alone	40	29.6
Fever with chills & rigors	52	38.5
No signs and symptoms	43	31.8
Taken treatment for above problem (n=92)		
Yes	81	88.0
No	11	12.0
If yes, from where (n=81)		
Govt. hospital	43	53.1
Private hospital	24	29.6
Home remedy	14	17.3

The people were questioned about personal protective measures being taken by them. In the present study almost all (94.7%) respondents were using personal protective measures. Only 5.3% respondents were not taking any preventive measures. Among users, most (52.5%) of the respondents were using repellents in various forms like mosquito coils, creams and vapours for prevention against mosquito bites. 28.9% people were using mosquito bed net & 13.3% mentioned use of protective cloths. [Graph 1]

Graph 1: Use of personal protective measures toward mosquito borne diseases



Discussion :

The present study showed better awareness amongst the population (88.1%) probably due to good IEC activities in the state. There was good knowledge about correct mosquito breeding places among 86.5% respondents which shows the impact of effective IEC by government. But still 13.5% of study subjects consider garbage as the breeding place for mosquito. In a study by Sharma SK et al^[5] in Madhya Pradesh found that majority of their study subjects did not have knowledge about mosquito breeding places. A study in Karnataka^[6] found 55% respondents having correct knowledge regarding breeding sites of mosquitoes which was low as compared to our study. Knowledge of preventive measures was also good among study population in this study.

In the present study, 40.3% respondents had knowledge that mosquito bite causes malaria & dengue, 33.6% interviewees mentioned malaria, 13.4% mentioned dengue & 12.6% mentioned Chikungunya. Surendren SN^[7] in their study in Srilanka found that 71% of study participants were able to name at least one disease transmitted by mosquitoes.

In the present study it was found that 94.7% of study participants were using one or other personal protective measures against mosquito bites. In the

present study, bed net was used by only 28.9% of study subjects but none of the study subjects were using insecticide treated bed net (ITN). The awareness about use of ITN was found poor in the study subjects. Yerpude PN et al^[8] in their study in urban slum of South India found that 90% of study participants were using one or other personal protective measures against mosquito bite & they were found to use multiple methods at the same time. In them, most commonly used method was the mosquito coil (52.20%) followed by using bed net (33.14%).

Conclusion :

Most of the people in the study were aware of "malaria & dengue is caused by mosquito bite". However they were not aware of other mosquito borne diseases. Majority were using preventive measures to protect themselves from mosquito bite but the use of insecticide treated bed nets was found very low. In this study, more than half of the people preferred government facility in case of sickness.

Recommendations :

Knowledge regarding malaria & dengue transmission was good while knowledge regarding other mosquito borne diseases was poor. The people should be made aware that mosquito bite causes other diseases also. Insecticide treated bed-net is a good weapon to fight against mosquito borne disease & strong social or commercial marketing of these products should be done.

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