

Practices and knowledge regarding dengue infection among the rural community of Haryana

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ABSTRACT

Background: The dengue infection has become a major global public health problem and 40% of the world's population living in an area at risk for dengue and causing nearly 400 million infections every year. There is no specific treatment for dengue, but if there is proper case management then case fatality rates can be below 1%. **Aim and Objectives:** To study the knowledge and practice about dengue fever in a rural community of Haryana. **Methodology:** The study recruited 400 adults (15-60 years) and all subjects were selected randomly from survey registers of eight anganwadi centres and data was collected by visiting house to house. **Results:** The association between demographic variables and knowledge about dengue fever and found out that only caste wise and socio-economic wise were found to be statistically significant rest associations were found to be statistically non-significant. **Conclusion and Recommendations:** There is a need of hour to make rural people aware of symptoms of DF and different preventive methods through mass media like television, newspapers, internet, social media etc or audio visual aids or through primary care physician

Keywords: Aedes, dengue, fever, health education, mosquito net

Background

Dengue infection is the vector-borne viral disease, found in tropical and sub-tropical regions of the world. The day-biting *Aedes aegypti* and *Aedes albopictus* mosquito are responsible for transmitting the infection and caused by a virus known as flavivirus. The dengue infection has become a major global public health problem, especially in developing countries and no specific treatment exists for it. However, if there is proper case management, then case fatality rates (CFR) can go below 1%. In its absence, the CFR can be as high as 20% in patients with severe dengue. Dengue is endemic in all states and union territories (UTs) of India and many epidemics have been reported since 1991. Till July 2017, over 18,700 cases

of dengue have been reported from all the state and union territories in India, the maximum number of cases have been reported in Kerala with 9,104 cases, followed by Tamil Nadu with 4,174 cases.^[1] The only option available to curb this infection is control and preventive measures. That is why this study was planned to evaluate the community practice and knowledge about dengue fever (DF) in the rural area of Haryana.

Methodology

The study was carried out in a block Dighal district in Jhajjar, Haryana, which is the field practice area of SPM Department, PGIMS Rohtak, Haryana. The study was a community-based one with cross-sectional design and carried out from July 2017 to September 2017. Considering 50% prevalence of knowledge about DF, the sample came out to be 400 subjects

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of age 15-60 years. 50 subjects selected randomly from 8 anganwadis.

The inclusion criteria were: 1. Resident of the village for more than 6 months; 2. Those willing to participate in the study. The selected subjects were contacted at their house by investigator himself and Informed verbal consent was taken. Data were collected in their vernacular language on pre-designed semi-structured questionnaire. The data were analyzed using the SPSS Version 20.

Observations

The present study selected 400 subjects, and found that 220 (55%) were male and 45% were female. Regarding knowledge about spread of DF, three-fourth (72.5%) and 31.2% subjects said that it is spread through mosquito bite and house flies, respectively. In the study, 93.8% of subjects said that fever is the most common symptom. 67% and 56.2% of the subjects said that nausea and headache, respectively, are the common symptoms of DF. The study also found that majority, that is, 65% and 62% of the subjects thought that by using mosquito net and mosquito spray, respectively, DF could be prevented. Regarding practices, it was found that only 54.6% subject's house was clean and nearly half of the subjects (52%) were wearing full sleeves shirt. One third of the subjects were using mosquito coil/liquid vaporized and mosquito nets.

The present study also demonstrated that there was no significant association between sex and age with knowledge about dengue disease, while association between caste-wise ($P = 0.021$) and socio-economic wise ($P = 0.038$) with knowledge about dengue disease were found to be statistically significant. Also, the associations between education and occupation with knowledge about dengue disease were found to be statistically non-significant [Table 1].

Discussion

The study recruited 400 subjects out of which 55% were males. The majority (45%) of subjects belonged to 30-45 years of age. Similar observations quoted by Mahapatra S *et al.*^[2] 1/3rd subjects were housewives and 27.6% were land owner farmers. Harish S *et al.* quoted similar findings.^[2]

Regarding knowledge about spread of DF, three-fourth of the subjects said that dengue is spread by bite of mosquito, while 31.2% subjects said that it is spread through house flies. Surprisingly, a minority i.e. 18.7% and 15% thought that it spreads through drinking dirty water and eating unhygienic food, respectively. The study noted that the knowledge is lacking regarding dengue infection. This could be because of the fact that our healthcare functionaries are not imparting the health education in these areas regarding dengue infection. 93.8% of the subjects said that fever is most common symptom. Harish S *et al.*,^[3] Dhimal M *et al.*^[4] reported similar common symptom. Majority of participants

Table 1: Association between socio-demographic characteristics of subjects and knowledge of dengue fever (n=400)

Socio-demographic Characteristics	Knowledge		Chi-Square test
	Yes	No	
Sex			$\chi^2=32.1$ $P=0.210$
Male	205	10	
Female	170	15	
Education			$\chi^2=34.09$ $P=0.56$
Illiterate	02	07	
Primary	20	06	
Middle	128	12	
Matric	164	01	
Higher secondary and above	59	01	
Caste			$\chi^2=23.51$ $P=0.021$
General caste	184	01	
Other Backward caste	124	06	
Schedule caste	67	18	
Socioeconomic Class			$\chi^2=14.21$ $P=0.038$
Class I	37	01	
Class II	68	02	
Class III	108	02	
Class IV	119	09	
Class V	43	11	

didn't know correctly the symptoms of DF apart from fever and headache, as quoted by the study done in Dhimal M *et al.*^[4] Correct knowledge regarding symptoms of dengue fever is essential that helps in seeking early treatment which prevents morbidity and mortality.

Regarding knowledge, 65% and 62% of the subjects thought that mosquito nets and mosquito sprays, respectively, are the methods to prevent DF. However, 58.7% and 57.5% of the subjects said that using mosquito spray and wearing full-sleeve shirts could prevent the spread of DF. Malhotra G *et al.*^[5] and Valatine B *et al.*^[6] also agreed with our findings. One-third of the subjects were using mosquito coil/liquid vaporized and mosquito nets in their houses. The associations between caste-wise and socio-economic wise with knowledge were found to be statistically significant. Kohli C *et al.* consistent with our findings.^[7]

Conclusion and Recommendations

The preventive measures are the only means of controlling the DF, so it is the need of hour to make rural people aware of symptoms of DF and different preventive methods through mass media like television, newspaper, internets, social media, audio-visual aids and IPC by primary care physician. So, primary care physician should impart health education about the DF to the rural community regularly, through health camps or via interpersonal communication based on health awareness programs.

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Conflicts of interest

There are no conflicts of interest.

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