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Original Research Article

A study to assess the knowledge and practice of women regarding dengue in rural area of Meerut, Uttar Pradesh, India

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ABSTRACT

Background: Dengue affects 390 million people yearly. 70% global disease burden is from Asia. Every fourth person infected with dengue get sick and about one in 20 people infected with dengue develop severe dengue. Aim of this study was to assess the knowledge and practice of women regarding dengue in rural area of Meerut, U.P.
Methods: A descriptive survey was done to conduct this study. Multistage random sampling was used to select study area and participants. Data has been collected from 50 participants. Self-developed knowledge questionnaire and checklist was prepared to measure knowledge and practices of people regarding knowledge and practices.
Result: Most of the participants were between age group 18-23 years and were homemakers. All participants had previous knowledge about Dengue and source of information was TV/radio/newspaper for most of the participants. In this study 74% of participants has moderately adequate knowledge level, 16% had adequate and 10% had inadequate knowledge level. In regard to practices, 72% participant have satisfactorily practices, 20% had moderately satisfactorily practices and of 8 % participant non satisfactorily practices regarding prevention and management of dengue.
Conclusion: Majority of participants had adequate knowledge and satisfactorily practices but still it is needed to organize awareness campaign to disseminate knowledge regarding dengue to community people of all age groups to improve their practices in this regard.

Keyword: Knowledge, Practice, Women, Dengue, Rural area

INTRODUCTION

According to the World Health Organization (WHO), dengue is one of the most common types of arboviral infection disease. It affects 390 million people yearly while one study found 3.9 billion people are at risk of dengue infection. 70% global disease burden is from Asia.[1,2] Every fourth person infected with dengue get sick and about one in 20 people infected with dengue develop severe dengue.[3] Aedes aegypti female mosquito transmits the dengue infection to humans. It is prevalent in tropical and subtropical regions around the world, including parts of Asia, the Pacific, the Americas, Africa, and the Caribbean. Dengue infection can manifest in various forms, ranging from mild to severe. The extrinsic incubation period is about 8-12 days when the ambient temperature is between 25-28°C after a mosquito bite. It is manifested through symptoms high fever, severe headache, pain behind the eyes, joint and muscle pain, nausea and vomiting, swollen glands, rashes. Severe dengue, also known as dengue hemorrhagic fever (DHF) or dengue shock syndrome (DSS), can lead to serious complications and is potentially fatal.[3,4]There are various factors which affects the growth of vector which transmit dengue to human such as deterioration in waste management system, uncontrolled growth of population, urbanization and failure to control the vector growth.[5]

Improper water storage practices due to scarcity of water is also a major contributing factor for growth of dengue vector.[6] Lack of awareness, illiteracy, social inequalities and poverty further leads to poor dengue management.[7] Dengue can be fatal to life it is very important to be aware about the transmission and prevention of the disease. Measures to prevent the dengue depends on the community people participation. Considering this we conducted a study to assess the knowledge and practice of women of age group 18-35 years regarding dengue in selected village of Meerut.

METHODS

A descriptive survey was done to conduct this study. Multistage random sampling was used. Firstly, village was selected based on randomization in Meerut city of Uttar Pradesh and after selection of village 64 participants has been selected randomly. Out of 64, 14 refused to participate in the study. Data has been collected from 50 participants. Participants who were willing to participate were females and between the age 18-35 years, available during the period of data collection were selected. Participants who do not understand English and Hindi language, suffering from physical and mental illness were excluded.

Measuring tools

Tool A: Self developed structured socio- demographic Tool

It contains total 10 items, which includes age between 18-35 years, educational status, marital status, occupation, monthly family income, type of family, type of houses, previous knowledge about dengue fever and history of dengue fever in last two year.

Tool B: Self developed knowledge questionnaire regarding dengue

The knowledge questionnaire developed in English and language for assessing the knowledge regarding dengue. Content validity of the knowledge questionnaire was obtained by 5 experts and the reliability of the tool was measured by split half method. The Pearson correlation coefficient was 0.84. It contains total 35 questions in which knowledge related question (2), causes related (2), symptoms related (5), diagnosis related (2), transmission related (6), breeding sites related (3), preventive practice related (6), home management related (6), treatment related (3).

Each correct answer was scored as 1 and incorrect as 0. Minimum score was 0 and maximum score was 35. Bloom's criteria were used for the interpretation of knowledge questionnaire. Score above 80% was considered adequate knowledge, 60-80% as moderate knowledge and <60% as inadequate knowledge.

Tool C: Self developed observation checklist to assess practice regarding dengue prevention and management

The knowledge questionnaire developed in English language for assessing the practices regarding dengue prevention and management. Content validity of the practice questionnaire was obtained by 5 experts and the reliability of the tool was measured by test-retest method. The Pearson correlation coefficient was 0.78. It contains total 15 items and 4 sub items, which include observation of practice related to environmental hygiene, observation of practice related to storage of water, observation of practice related to presence of possible breeding sites, observation of practice related to use of protective measures against mosquito bites. Bloom's criteria were used for the interpretation of practice questionnaire. Score above 80% was considered satisfactorily practices, 60-80% as moderately satisfactorily and <60% as non-satisfactorily practices.

Procedure

Ethical Permission was obtained from LLRM Medical college Meerut to conduct this study. Permission has been obtained from Pradhan of the gram panchayat of the selected village of Meerut. Village leader and participants were assured that their personal identity will not be exposed. Before collecting the data, the investigator has informed about the importance of this study and ascertained the willingness of the participants. The data collection was be done for a period of one month. The samples were informed by the investigator about the nature and purpose of the study and they were asked to withdraw from study anytime without having any kind of fear. Written informed consent was taken and code numbers were allocated to each participant. Firstly, village was selected based on randomization in Meerut city of Uttar Pradesh and after selection of village 64 participants has been selected randomly. Out of 64, 14 refused to participate in the study. Data has been collected from 50 participants. Informed consent was obtained from each person.

The investigator established good rapport with person through an informative talk about the purpose of the study was explained to the persons of the study to ensure their cooperation. All the subject were very much co-operative and investigator expressed her gratitude for their co-operation. Researcher filled demographic sheet and then structured knowledge questionnaire to assess the knowledge and practice checklist to assess practices of participants regarding dengue prevention and management.

Data analysis

Data were analysed using SPSS version 20, and Stata 11.1. Appropriate descriptive and inferential statistics was used for data analysis. For statistical significance p value of <0.05 was considered. Chi square test was used to find

association between knowledge level and practice level and sociodemographic variables.

RESULT

Table no.1 shows that majority 40% of participants were in between age group 18-23 years, maximum 36% participants had primary school qualification, majority of participants 88% were homemaker, 90% participants were married, 40% participants were had family income between 5000-10,000 Rs per month, 68% participants were belonging to nuclear family, or maximum 86% participants have pukka house. All participants had previously heard about dengue fever. 48% got knowledge about Dengue fever other than TV, radio and newspaper. Majority 64% participants were had no history of dengue fever in last 2 years in their family.

Table 3 shows that majority 72% participant have satisfactorily practices, 20% had moderately satisfactorily practices and of 8% participant Non satisfactorily regarding prevention and management of dengue.

Table 1: Frequency and percentage distribution of socio demographic characteristic of study participants (n=50).

S. no.	Characteristics		Frequency	Percentage
1.	Age (years)	18-23	20	40
		24-29	16	32
		30-35	14	28
2.	Educational status	Illiterate	11	22
		Primary school	18	36
		Secondary school	17	34
		Graduate	4	8
3.	Marital status	Unmarried	3	6
		Married	45	90
		Widow	2	4
4.	Occupation	Working	6	12
		Homemaker	44	88
5.	Monthly income of the family	<5000	18	36
		5000-10000	20	40
		10000-15000	6	12
		>15000	6	12
6	Type of family	Nuclear	34	68
		Joint	16	32
7	Type of house	Pucca	43	86
		Semi pucca	3	6
		Kuccha	4	8
8	Previously heard about dengue	Yes	50	100
9	If yes, how did come to know	TV	7	14
		Radio	16	32
		News paper	3	6
		Others	24	48
10	History of dengue fever in last 2 years	Yes	18	36
		No	32	64

Table 2: Frequency, percentage, mean and standard deviation distribution of knowledge related to dengue fever (n=50).

Knowledge level/Score	Frequency	Percentage
Inadequate	5	10
Moderately adequate	37	74
Adequate	8	16
Mean±SD	25.26±3.211	

Table 3: Frequency, percentage mean and standard deviation distribution of Practice related to prevention of dengue fever (n=50).

Category	Frequency	Percentage
Non satisfactorily	4	8
Moderately satisfactorily	10	20
Satisfactorily practices	36	72
Mean±SD	12.56±2.375	

The mean score of practice regarding of prevention of dengue fever is 12.56 and standard deviation is 2.375. No statistically significant association has been found between knowledge level and practices with selected demographic variables of participants.

DISCUSSION

In our study majority 40% of participants were in between age group 18-23 years which comprises youth. All participants had previously heard about Dengue. 52% participants have got knowledge about dengue from T.V, radio and newspaper. Hossain et al found 93.8% participants heard about dengue and source of information was TV/radio.[8] In our study 64% participants were had no history of dengue fever in last 2 years in their family. In our study majority of 74% of participants has moderately adequate knowledge level, 16% had adequate and 10% had inadequate knowledge level. Hossain et.al most of the participants heard about dengue but many of them do not have still the basic knowledge on dengue.[8] In one study it was found that only 2.3% participants achieved higher knowledge score.[9] In other study 64% participants had moderate level of knowledge regarding dengue fever.[10] Rakhmani et al found that majority of the participants had good knowledge about the cause of dengue and dengue prevention activities.[11] Reason of good knowledge among community people could be due to good exposure to social media, TV, radio and newspaper.

In our study majority 72% participant have satisfactorily practices, 20% had moderately satisfactorily practices and of 8 % participant non satisfactorily practices regarding prevention and management of dengue. Arora et al found that participants were aware about dengue fever but in regard to their practices, they were putting their surrounding environment at risk of breeding of dengue causative agent and also had poor water storage practices.[12] In one study 73% of participants had limited practice towards dengue prevention. 59% participants practice removing of the stagnant water to prevent dengue.[10]

The limitations were that research design used for this study was weak. It was a cross-sectional study. Though we use multi stage random sampling technique but we should select multiple villages and sample size for this study was small which further lacks generalizability of the findings. Community people need to be aware and actively followed the measures to the prevention of dengue. It is also the responsibility of health care sectors to organize awareness programs regarding prevention of dengue and improving their practices in this regard.

CONCLUSION

Most of the participants were between age group 18-23 years and were homemakers. All participants had previous knowledge about Dengue and source of information was TV/radio/newspaper for most of the participants. In this study 74% of participants has moderately adequate knowledge level, 16% had adequate and 10% had inadequate knowledge level. In regard to practices, 72% participant have satisfactorily practices, 20% had moderately satisfactorily practices and of 8 % participant non satisfactorily practices regarding prevention and management of dengue. Majority of participants had adequate knowledge and satisfactorily practices but still it is needed to organize awareness campaign to disseminate knowledge regarding dengue to community people of all age groups to improve their practices in this regard.

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