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COMMUNITY AWARENESS AND PARTICIPATION IN DENGUE PREVENTION – A CROSS-SECTIONAL SURVEY

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ABSTRACT

Background: Dengue fever is a viral illness caused by infection with dengue virus. It is a vector borne disease and it has become major public health problem with high death rate. Objectives are to assess the knowledge and practice regarding preventive measures of dengue fever among women in selected urban community area, to find the association between knowledge level with selected socio demographic variables. Methods: Cross sectional survey was adopted for this study. Non-Probability purposive sampling was used and 60 subjects were chosen. Knowledge and practice questionnaire was utilized to collect data from the participants. Data was collected and analysed by using descriptive and inferential statistics. Result: This study revealed that most of the women had moderate knowledge on preventive measures of dengue fever. There is a significant association between knowledge and practice level with demographic variables like occupation, type of family etc. Conclusion: This study findings depicted that, people need proper awareness about dengue fever and its preventive measures.

Keywords: Preventive measures, dengue fever, knowledge, practice.

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INTRODUCTION

Currently, tropical and subtropical regions of the world suffer from Dengue Fever.[1] predominantly in urban and semiurban areas. About half of the world's population lives at risk of DF infection, among whom 50–100 million people get infections every year. Dengue is the most rapidly spreading mosquito-borne viral disease caused by dengue virus. Symptoms typically begin three to fourteen days after infection. It includes high fever, headache, vomiting, muscle and joint pain and skin rashes. Recovery generally takes two to seven days. A number of tests are available to confirm the diagnosis including detecting antibodies to the virus or its RNA. A vaccine for dengue fever has been approved and is commercially available in a number of countries. Important methods of prevention are by reducing mosquito habitat and limiting exposure to bites.

NEED FOR THE STUDY

Dengue fever (DF) is the most prevalent disease transmitted by mosquitoes and is endemic to more than 100 countries. Approximately, 100 million cases and 25,000 deaths from DF occur annually. In rural Cambodia, 96.7% of individuals were able to identify mosquitoes as the dengue vector, and 74% of participants believed that the dengue vector bites during the day. The incidence of dengue has grown dramatically around the world in recent decades, with cases reported to WHO increasing from 505 430 cases in 2000 to 5.2 million in 2019. A vast majority of cases are asymptomatic or mild and self-managed, and hence the actual numbers of dengue cases are under-reported. Many cases are also misdiagnosed as other febrile illnesses.

The highest number of dengue cases was recorded in 2023, affecting over 80 countries in all regions of WHO. Since the beginning of 2023 ongoing transmission, combined with an unexpected spike in dengue cases, resulted in a historic high of over 6.5 million cases and more than 7300 dengue-related deaths reported. Prevention and control of dengue depend on vector control. There is no specific treatment for dengue/severe dengue, and early detection and access to proper medical care greatly lower fatality rates of severe dengue.

A cross-sectional mixed-method study was conducted in six districts of central Nepal in September–October 2018 including both quantitative (660 household surveys) and qualitative data (12 focus group discussions and 27 in-depth interviews). The study revealed that both the awareness about DF and prevention measures were low. Among the surveyed participants, 40.6% had previously heard about DF with a significantly higher number in the lowland areas. The findings of both the qualitative and quantitative data indicate that people residing in the lowland areas had better knowledge on DF compared to people in highland areas. Among the socio-demographic variables, the area of residence, educational level, age, monthly income, SES and occupation were independent predictors of knowledge

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level, while the education level of the participants was an independent predictor of the attitude level.

A hospital based cross-sectional survey among general OPD patients using a pre-designed questionnaire. The study was approved by institutional ethical committee. KAP assessment was done by a scoring system. KAP of DF among study population was represented as proportions (%). Out of 223 individuals interviewed, 93% identified fever as a cardinal symptom of DF. The knowledge about other symptoms of DF was low among participants. Only 17.5% knew that DF is transmitted by Aedes mosquitoes. The correct timing of biting time was known by only 14%. Despite low knowledge, the participants had good attitude and most of them reported good preventive practices against dengue prevention and control.

STATEMENT OF THE PROBLEM

Study to assess the Knowledge and practice regarding preventive measures of dengue fever among women in selected urban community area.

OBJECTIVES

1. To assess the knowledge and practice regarding preventive measures of dengue fever among women in selected urban community area.
2. To associate the knowledge and practice regarding preventive measures of dengue fever with socio demographic variables.

HYPOTHESIS

1. H_1: There is a significant difference between knowledge and practice regarding preventive measures of dengue fever among women in selected urban community area.
2. H_2: There is a significant association between knowledge and practice regarding preventive measures with selected socio demographic variables.

ASSUMPTION

- Women of urban community may have inadequate knowledge about preventive measures of dengue fever.
- They may not follow the preventive measures of dengue fever.

DELIMITATIONS

1. The study is delimited to only the women of selected urban community area at Deoria.
2. A sample of 60 women selected.
3. The study is delimited to the information obtained through questionnaire developed by the investigator.

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SAMPLE SELECTION CRITERIA

Inclusion Criteria

1. Women who are willing to participate in the study.
2. Women who are can read/write and understanding Hindi language.

Exclusion Criteria

1. Women who cannot follow the instructions.
2. Women who are not available during the data collection time.

METHODOLOGY

The research approach used in study was quantitative approach. The investigator adopted a descriptive design. 60 women were selected from urban community in Deoria district. Samples were selected through non probability purposive sampling technique. Self-administered questionnaire was used to assess the Knowledge and practice on dengue fever and its preventive measures. Structured questionnaire was adopted to collect data and it has 30 multiple choice questions. Validity of the tool was established in consultation with guide and experts from the field of Community Health Nursing. After obtaining consent data was collected, education given and post test conducted. The collected data was organized and tabulated for analysis.

RESULTS

Table 1: Frequency and percentage distribution of knowledge and practice regarding preventive measures of dengue fever n=60

Sl.No	Level of knowledge and Practice	Frequency	Percentage
1	Inadequate	18	30
2	Moderate	34	57
3	Adequate	8	13

The above table 1 showed that 30% of women had inadequate knowledge about preventive measures of dengue fever and most of them that is 57% of women had moderate knowledge, only13% had adequate knowledge about dengue fever and its preventive measures.

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Table 2: Association between knowledge and practices of women regarding preventive measures of dengue fever with socio demographic variables

n=60

Sl.No	Demographic variables	Poor	Average	Good	Chi-Square Value
1.	**Age**				
	15 – 25 years	2	8	1	x2=7.48
	26 - 35 years	8	18	7	df=4
	36 – 35 years	8	8	0	NS
2.	**Religion**				
	Hindu	5	21	5	x2=13.28
	Muslim	7	8	1	df=6
	Christian	5	1	2	S
	Others	1	4	0	
3.	**Education**				
	No formal education	6	13	1	x2=7.03
	Primary school	3	10	5	df=6
	Secondary school	7	8	2	NS
	Graduate and above	2	3	0	
4.	**Occupation**				
	House wife	9	5	2	x2=13.08
	Daily wages worker	3	13	4	df=6
	Government job	3	6	0	S
	Private job	3	10	2	

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5.	**Family type**				
	Nuclear family	14	19	8	x2=6.89
	Joint family	4	15	0	df=2
					S
6.	**Family income / month**				
	Below Rs.10000	8	14	4	x2=0.55
	Rs.10000 – Rs.20000	5	12	2	df=6
	Above Rs.20000	5	8	2	NS

There is a significant association of knowledge and practice level of women with selected socio demographic variables like religion, occupation and family type as the chi-square value is higher than the table value at 0.05 level of significance. Hence, null hypothesis is rejected and alternative hypothesis accepted.

DISCUSSION

The findings of the study were discussed under the following sections:

Section 1: Distribution of socio demographic variables

Section 2: Distribution of knowledge and practices scores.

Section 3: Association between knowledge and practices or women on preventive measures of dengue fever with selected socio demographic variables.

Section 1: Distribution of socio demographic variables

Most of the participants 33 (55%) of the women were 26-35 years in age, 16 (27%) of them were in between the ages 36-45 years and 11 (18%) in the age of 15-25 years. 20 (33%) of the women were not educated, 18 (30%) studied up to primary school education, 28% completed secondary school education and 8% completed degree and above. Based on the occupation, 20 (33%) were daily wages workers, 16 (27%) were house wives, 15(25%) of them are in private job and the remaining 9 (15%) in Government job. Maximum of participants 41 (68%) from nuclear family and 19 (32%) from joint family.

Section 2: Distribution of knowledge and practices scores.

This study findings stated that, women had obtained highest score in the basic on dengue fever with

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mean 1.78, standard deviation 1.03 with mean percentage 59.44, signs and symptoms of dengue fever with mean 2.87 and standard deviation 1.46 with mean percentage, 57.33 causes of dengue fever mean 4.80. standard deviation 2.41 with mean percentage 53.33; Practice on preventive measures with mean 3.20 and standard deviation 1.70 and the mean percentage 50.95.

Most of the women (57%) were having moderate knowledge and practice, (30%) had inadequate knowledge and (13%) were only having adequate knowledge on preventive measures of dengue fever.

A similar cross-sectional survey of 192 parents attending child health clinics was conducted. More than half of the parents (54%) had moderate level of knowledge about signs, symptoms and modes of transmission of dengue.

Section 3: Association between knowledge and practices or women on preventive measures of dengue fever with selected socio demographic variables.

There is a significant association of knowledge and practice level of women towards preventive measures of dengue with socio demographic variables such as religion, occupation and family type. Therefore, it rejects the null hypothesis and accepts the alternate hypothesis.

This study results were consistent with a study done during 2014, Out of 589 participants interviewed, 77% had heard of dengue fever. Those who lives in the lowlands were five times more likely to possess good knowledge than highlanders (P<0.001). Among the socio demographic variables, there was a significant association between knowledge level and occupational status of the participants.

CONCLUSION

The study concluded that women of selected urban community area need proper education about preventive measures of dengue fever. It is the best low-cost methods to all preventive efforts.

RECOMMENDATIONS

In the view of the finding reported the following recommendation are made for further research:

- Similar study can be conducted with the large samples from various areas to validate and generalize the findings.
- The study can be conducted as a true experimental design with control group.
- Various other intervention modalities, which vary in content and method, can be used and its effects can be studied.

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