

Dengue: The Non-stop

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Objective: To assess the Community Participation in Preventions & Control of Dengue Fever in Rawalpindi City Area.

Methodology: This descriptive retrospective study was conducted in Rawalpindi City Area. Data were collected on a questionnaire prepared both in English and Urdu from 350 conveniently selected local residents.

Results: Majority of the participants didn't had any formal education, doing private job and around one third were house wives. More than half of the respondents were not aware that mosquito laid eggs in water. Majority said mosquito bites at night. Around half of the participants were of opinion of use of mosquito nets for personal

protection. Only a small percentage was aware that bite can occur outside home at work place and schools. 211 knew that it can bite outside home. 251 knew how to protect their home from mosquitoes. 19 of them support the prevention program financially. 59 participated in dengue prevention and control program. 296 said that the control and prevention is responsibility of government.

Conclusion: Majority of the participant were lacking base line knowledge about dengue fever and community participation in control and prevention dengue was very low. (Rawal Med J 201;42:147-149)

Keywords: Dengue, Aedesaegypti, awareness.

INTRODUCTION

Dengue fever is arboviral diseases, spread by the mosquitoes (*Aedesaegypti* and *Aedes albopictus*).¹ In past thirty years, there has been re-emergence of dengue virus, with an expanded geographic distribution and recurrent epidemic activity.¹⁻² In Pakistan, Yemen and Saudi Arabia, dengue is considered an emerging disease.³ Due to the increased range and reproduction of mosquitoes with climate change, it is predicted that by 2080, if current trends continue, about 6 billion people will be at risk of contracting dengue disease.⁴ Dengue's emerging threat emphasizes the importance of finding new and effective methods of limiting the transmission of disease. The Rawalpindi city had second highest number of Dengue fever cases after Lahore in the recent past. This study was conducted to assess the Community Participation in Preventions & Control of Dengue Fever in Rawalpindi City Area.

METHODOLOGY

This cross sectional survey was carried out in urban UC (Pirwadhai) of Rawalpindi City and included 350 subjects selected by using Convenience Sampling. Informed written consent was obtained from each subject. A self-constructed mixed questionnaire (In English and Urdu) was used to record responses of participants. Study was completed in Three months from 1st May to 30th June 2015.

RESULTS

Majority of the participants didn't have any formal education, doing private job and around one third were house wives. Half of the participants were aware about the vector of dengue virus (58%). Only a small percentage of participants knew the breeding ground for mosquito (37.4%). A few knew about unique feature of timing of bite (4.5%) (Table 1).

Table 1. Knowledge about Dengue.

Vector of Dengue Virus	Frequency	Percentage
Mosquito	203	58
House fly	123	35.1
Bees	14	4
Tick	10	2.8
Places where mosquito lay eggs		
Water	131	37.4
Garbage	90	25.7
Mud	129	36.8
Timing of bite of dengue mosquito		
Night	186	53.1
Day	16	4.5
Both day & night	148	42.2
Total	350	100

Table 2. Practice about prevention from Dengue fever.

General Preventive Measures	Frequency	Percentage
Removing water	111	31.7
Cleaning garbage	120	34.2
Removing mud	119	34
Cleaning home	183	52.2
Closing windows	167	47.7
Methods of Personal Protection		
Oil	48	13.7
Mosquito net	101	28.8
Spray	178	50.8
Smoke	23	6.5
Community preventive Methods		
Financial support	28	8
Donating nets	73	20.8
Donating insecticide	25	7.1
No support	224	64
Prevention Program		
Dengue walk	63	18
Watching dengue news	189	54
Reading news paper	98	28
Suggestions to control dengue fever		
Free net distribution	69	19.7
Spray inside homes	178	50.8
Spray outside homes	103	29.4
Total	350	100

Drainage of water to prevent mosquito from breeding was known to 1/3 of the participants (31.7%). Spray was considered to be best method of personal protection (50.8%). Community

participant was low (64%). Media was considered to be best method to spread information about dengue fever (54%). Only a fraction suggest free distribution of nets would help control dengue fever (19.7) (Table 2).

DISCUSSION

This study showed that most of the participants did not have formal education, and there was association found between educational status of the community and knowledge about the dengue. There was no gender discrimination. Knowledge scores of respondents were consistent with the findings from a previous study made in Pakistan,⁵ which showed that 38.5% of participants had enough information of dengue. However, the previous study used to some extent different knowledge variables.

This study was carried out in the neighbourhood while another study focused on patients attending tertiary care hospitals of Karachi and found they had superior knowledge, gained during interaction with healthcare professionals or fellow patients.⁶ Our study showed that most of the participant considered mosquito to be causative agent of dengue and around one third of the participant know the importance of protecting their houses and house hold. A Brazilian study reported better socioeconomic and superior knowledge then other neighbourhoods.⁷

Most of the respondents knew mosquito as main spreading factor, but still many misconceptions were noted. Large number of respondents thought that Anopheles mosquito and *Aedes Aegypti* are similar. This lack of knowledge was also reported in other studies from South Asia.⁸⁻¹⁰ Using mosquito sprays and coils were favoured preventive method, reported in other studies.¹¹⁻¹³ The next commonly used method was draining stagnate water. Early drainage of water during rainy seasons reported considerable reduction in dengue cases in Thailand.¹² Application of screens to windows and doors was commonly used.¹⁴ The above finding showed that adequate preventive methods were used, meant at limiting disease spread.

Majority considered controlling dengue is sole liability of the administration. In Puerto Rico, for controlling larval habitats, management used

fumigation.¹⁵ Awareness and practice of biological controls was uncommon. A few studies have shown promising data about use of biological control methods.^{17,18}

An important factor in failing to control dengue was gap between awareness and actual participation in control efforts. This was shown in a Thai study displaying use of incorrect control efforts.¹⁶ Excessive urbanization is top most factor, making Pakistan fertile breeding area for dengue.¹⁷ Poverty is directly proportional to spread of the disease and inversely to the health services. The following are the drawbacks in our study; likelihood of interviewer prejudice, expediency sampling, and computation of arbitrary knowledge scores for dengue fever.

CONCLUSION

We found that majority of the participant were lacking base line knowledge about dengue fever. Community participation in control and prevention dengue was very low. More information should be provided regarding of dengue. Building up social network may help.

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