Global Journal of Management, Social Sciences and Humanities 247
Vol 3 (2) April-June, 2017 Page # 247-257.
ISSN 2520-7113 (Print) 2520-7121 (Online)
www.gjmsweb.com editor@gjmsweb.com

KNOWLEDGE APTITUDE AND PERSPECTIVE STUDY REGARDING AWARENESS OF DENGUE FEVER AMONG 4TH YEAR STUDENTS OF NISHTAR MEDICAL COLLEGE, MULTAN-PAKISTAN

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ABSTRACT

Introduction: *Dengue is a viral disease that has caused significant morbidity and mortality in various regions of the world, especially in the tropical and sub-tropical regions. People have little knowledge about the dangerous effects of this disease.*

Objective of study: *The objective of the study is to ascertain the knowledge, attitude and practices of 4th year medical students at Nishtar Medical College Multan in relation to awareness of Dengue fever.*

Methodology*: This is a cross-sectional study in which data was collected through a close ended questionnaire distributed among 4th years MBBS students.*

Findings: *Data was collected from 146 respondents. All respondents (100%) claimed to know about the dengue fever but only 67 (47.95%) of them knew about the causative agent of the disease. Only 57 (39%) of the respondents were well aware of the treatment strategies against the infection. A total of 106 (73.28%) of respondents claimed to know about preventive measures while 139 (95%) knew the preventive measures through electronic and print media.*

Conclusion: *The proportion of medical students having adequate knowledge about Dengue infection is not very encouraging*.

Keywords: Dengue fever, Dengue infection, awareness, knowledge.

Type of paper: Original Research study.
Paper received: 18.12.2016

Paper accepted: 21.01.2017
Paper published: 01.04.2017

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1.INTRODUCTION

Dengue is the dangerous and infectious viral disease which is mosquito-borne and spread all over the world. This disease is responsible for dengue virus, a flaviririus in the family of flaviviridae (single-strand,non-segmented RNA viruses). There are four types of antigenically distinct dengue virus: DEN-1, DEN-2, SEN-3 and DEN-4. The dengue virus is transmitted through bites of female *Aedes aegypti* and *Aedes Albopictus* mosquito. Lifelong immunity is conferred against serotype but there is no evidence of cross immunity. Thus, a human being may infect multiple infections of dengue virus due the course of his life [1,2].

Dengue develops in two forms, i.e., DF and the more dangerous dengue hemorrhagic fever (DHF). This include infection that develop multidimensional clinical manifestations, asymptomatic infection, mild flu-like symptoms and hemorrhagic fever. Sometimes it causes severe deterioration of patients, developing hypothermia and circulatory shock (dengue shock syndrome) [3]. It is estimated that about 24,000 deaths are occurred every year and 50-100 million episodes of dengue fever and 0.5 million cases of dengue hemorrhagic fever (DHF) are reported annually [4]. Dengue diseases was erupted twice in Pakistan on wide scale, first in 1994 and second in July and August of 2010 [5]. Contaminated and polluted water was the place where insects (female Aedes aegypti mosquito) lived and grown. The studies conducted by World Health Organization and Centers for Disease Control and Prevention suggested that this disease could not be eliminated or fully controlled. These institutions emphasized that people must be educated through media campaign to play their effective role in removing vector breeding sites (6). Supportive therapy requires for dengue fever. At the moment, there is no vaccine to provide protection against dengue attack, more

emphasize is given on preventive measures. Integrated approach is needed update the knowledge, attitude and practices of the people. This collective approach is more effective to control this dangerous disease.

1.1. Objective of study

The objectives of study are given below: -

1.To assess the knowledge of the students about the causes and effects of Dengue fever.

2. To study the attitude of the students towards Dengue fever.

3. To study the practices of medical students about Dengue fever.

2. RESEARCH METHODOLOGY

This cross-sectional study was conducted at Nishtar Medical College, amongst 4th year MBBS students using a non – probability convenient sampling technique. The total duration of this study was 6 months from July 2016 to January 2017. Primary data was used in this research study. For this purpose, a closed ended self – administered questionnaire was given to the participants relative to the topic for study with a sample size of 146 students.

All the data obtained was entered and analyzed using computer based software SPSS version 20. All the descriptive statistics were tabulated in the form of the frequencies and percentages. Students were asked about the vector of dengue fever and the causative agent, those who knew that it was transmitted by a mosquito and the causative agent was a virus were considered as having complete knowledge.

Dengue fever is contracted by the bite of mosquito at the time of dawn and dusk. those students who knew about both the timings of contact were considered as having complete knowledge and those who knew only about one was considered as having incomplete knowledge and those who knew either came under the category of having no knowledge.

Students who knew that the mode of transmission was a mosquito and the species was *Aedes Aegyptei* were considered as having complete knowledge of the mode of transmission. Those students who knew about the mosquito but did not know about the species was considered as having incomplete knowledge. And those who knew neither were considered as having no knowledge. Students who were aware of all the 6 symptoms of dengue fever were considered as having complete knowledge which includes fever, myalgia, rash, retro

orbital pain, headache and gastrointestinal discomfort. Those who knew any two of them were considered as having incomplete knowledge. those who knew none were considered as having no knowledge.

The treatment for dengue fever is supportive (fluids and rest) and paracetamol. Students who knew about both were considered as having complete knowledge. Those who only knew about paracetamol were considered as having incomplete knowledge. those who didn't know anything about it or those who considered aspirin as a treatment option were included in the category of having no knowledge.

Various measures can be adopted to prevent the spread of dengue fever. Those who knew that it could be prevented by stagnation of clean water in plants and pots, artificial containers, discarded tyres and saucers and also knew about prevention by mosquito repellents and sleeping nets were considered as having complete knowledge. Those students who only knew about prevention through stagnation of water but were not aware of the fact that it was through clean water were considered as having incomplete knowledge. Sometime misperception and misconception of the causes lead to error of judgement in diagnosis and treatment of disease properly [7]. It is an imperative need that senior medical specialists and trainee medical professionals share their knowledge in order to enhance diagnosis skill of diseases. Sometimes lack of sharing knowledge between senior and junior medical professionals delays the quick diagnosis of diseases and their proper treatment [8].

3.DATA ANALYSIS

The data was collected from 146 students. Among them, 32 were male and 114 were female students. The demographic data has been given in Table 1.

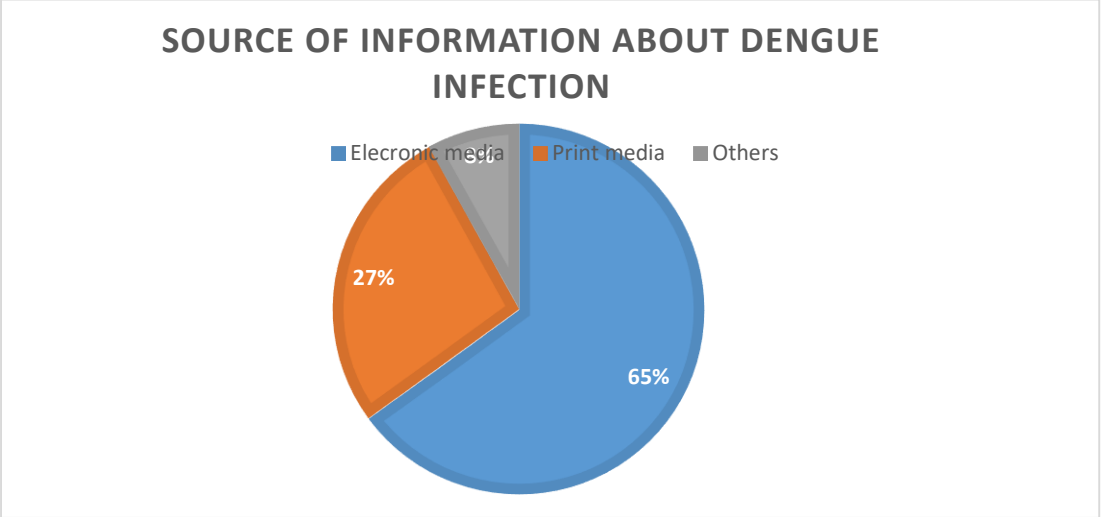
Table 1 Demographic statistics

Gender	Frequency	Percentage
Male	32	22%
Female	114	88%

All of the participants claimed to know about the dengue fever (100%). The source of information was declared to be electronic media by 92 participants (65%), print media by38

participants (27%) while the remaining participants (8%) had other sources of information (friends, street, social media). This has been shown in Figure 1.

Figure 1. Frequency of source of information of dengue infection among students



The students knew about dengue fever and quite a many also had the knowledge of the vector of the disease. 130 out of 146 respondents had affirmative answer. The results are shown in Table 2.

Table 2 Percentage of students having the knowledge of vector of Dengue virus

Response	Frequency	Percentage
Complete knowledge	130	89%
No knowledge	16	11%

The knowledge about the vector was satisfactory but the knowledge about the causative agent showed a lack of adequate knowledge. Only 70 respondents (48%) answered correctly while the rest of the students were unaware in this regard.

Table 3. Ratio of students having knowledge about causative agent of Dengue infection

Response	Frequency	Percentage
Complete knowledge	70	48%
No knowledge	76	52%

The dengue knowledge among the medical students was not satisfactory as only 43 of the respondents (29%) claimed to have full knowledge of the susceptible time of contacting the disease. The results are shown in Table 4.

Table 4. Ratio of students having knowledge of contact time of Dengue infection

Response	Frequency	Percentage
Complete knowledge	43	30%
Incomplete knowledge	96	66%
No knowledge	7	4%

The response about the symptoms of disease was also not up to the standard as most of the students (65%) had incomplete knowledge about the symptoms that accompany the dengue infection which by no way is satisfactory for medical students.

Table 5. Ratio of students having knowledge about symptoms of dengue fever.

Response	Frequency	Percentage
Complete knowledge	47	32%
Incomplete knowledge	95	65%
No knowledge	5	3%

Most of the students had the idea of mode of transmission of the disease but like the symptoms, knowledge was incomplete in most regards with about 80% of the respondents categorized as having a lack of sufficient information.

Table 6. Ratio of students having knowledge about mode of transmission of disease

Response	Frequency	Percentage
Complete knowledge	26	18%
Incomplete knowledge	117	80%
No knowledge	3	2%

As the research was being carried out on medical students, they were expected to have an adequate knowledge about the treatment strategies and the preventive measures of the disease. Most of the students had the basic idea to treat the Dengue fever but an alarming figure of 7% had no idea about treating the infection and even a few students suggested Aspirin as the possible treatment which is regarded as contraindicated in Dengue treatment.

Table 6. Ratio of students having knowledge about treatment of Dengue fever

Response	Frequency	Percentage
Complete knowledge	79	54%
Incomplete knowledge	57	39%
No knowledge	10	7%

On the other hand, most of the students (73%) had complete knowledge about the preventive measures of the disease courtesy to the announcements on electronic and print media. The results are highlighted in Table 7.

Table 7. Ratio of students having knowledge about prevention of Dengue fever

Response	Frequency	Percentage
Complete knowledge	107	73%
Incomplete knowledge	37	25%
No knowledge	3	2%

4.FINDINGS AND RESULTS

Our results show that about 90 percent students learned about dengue as a communicable disease, causing by a mosquito vector while the rest of 10 percent was not fully aware that malaria is caused by *Aedes Aegypti* for *Anopheles* mosquito in Pakistan. It is

generally assumed that malaria is caused by mosquitoes but very knowledge is available about dengue fever and its effects among general public [9]. Even the students participated in this research study had no complete knowledge about this disease. Majority of the respondents considered dengue as contagious but there was lack of consensus among them about the transmission of this disease from person-to-person [10]. Our results were consistent with other studies conducted in South Asian region [9,10]. The effects of this disease are noted in three forms: dengue fever, dengue hemorrhagic fever and dengue shock syndrome. Anyhow, fever is a common phenomenon in all cases [11]. Our findings reveal that the students have sufficient knowledge about symptoms and among them the major symptom is fever. It shows sufficient awareness about the symptoms. But knowledge and awareness about treatment was not sufficient. Common preventive measures include mosquito sprays, mosquito nets, application of certain lotions on exposed parts of body and destroying natural habitat of Aedes aegypti mosquito [12, 13,14]. The respondents revealed that they learned about negative effects of dengue disease through electronic media, which means, that electronic media is an effective mode of generating awareness among the common people to take preventive measure to control this disease.

5.CONCLUSION

From the above discussion, we can conclude that the students participated in this research study had sufficient knowledge about dengue disease and its symptoms but they lacked information about its treatment. Most of the respondents knew how to prevent mosquitoes from spreading and saving them from their attack but they did not know to treat dengue-infected patience. Only 39 percent respondents have sufficient knowledge about the causes of dengue disease. Similarly, knowledge about transmission of disease from one person to another was also insufficient.

6. RECOMMENDATIONS

On the basis of above results we make the following recommendations: -

►Students should acquire basic knowledge about Dengue fever, its transmission and symptoms associated with the disease from their seniors and specialists.

►A detailed description of Dengue infection should be included in the course to help the students in a better understanding of the disease.

►Media should be used more frequently to aware the people about the possible attack of the disease and its prevention.

►Seminars should be conducted in medical colleges to acquire students with the basic knowledge in treating the disease.

►Workshops should be conducted enabling the students and the doctors to tackle the problem during epidemics.

►Municipal corporations should conduct insecticide sprays on stagnant water bodies during the susceptible season to prevent the disease from acquiring an epidemic form.

►Plants should not be kept indoor during the monsoon season.

►Adequate instruments should be provided in the hospitals to help doctors during the epidemic.

7.LIMITATIONS OF STUDY

Our study has the following limitations:

The study was conducted only among 4th year students of M.B.B.S, so the results of this research may not be generalized. The non-serious behavior of some respondents might also affect original results. The entire class of 4th years students of MBBS was not included in the research; this might have restricted the scope of results. There is possibility that some might not have understood the questionnaire fully so their response might not be correct.

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