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RESEARCH ARTICLE

Current Knowledge and Awareness of Dengue Fever among Students of Government College University Faisalabad

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ABSTRACT

Background: Dengue fever is a vector-borne infectious tropical disease caused by the dengue virus, the most common arthropod-borne infection in humans. According to WHO, the best strategy to avoid dengue endemic is to educate people about the disease and preventative measures? Despite the efforts to avoid the dengue virus, the newest national survey statistics show that dengue fever is still on the increase among the population. The major goal of this study was to examine university students' knowledge of dengue and preventative measures, as well as to determine the relationship between awareness of dengue and drivers of knowledge of dengue infection in Government College University Faisalabad students.

Aim: The aim of this review is to highlight Dengue fever (break-borne fever).

Materials and methods: This was a survey review article. This research work was conducted at Government College University, Faisalabad. And this research work was conducted in three months (Between February 2020 and April 2020). A cross-sectional study investigation was carried out. A total of 500 students were interviewed, with pre-tested questioners being used.

Results: A cross-sectional investigation was carried out. A total of 500 students were interviewed, with pre-tested questioners being used. The sampling was done in a convenient manner. In Government College University Faisalabad, several medical terminologies were put in plain English, and interviewers were trained for data collecting. The research was carried out at Government College University in Faisalabad. The course of study was also thought to have an influence on Dengue fever knowledge. SPSS was used to examine the findings of this investigation. The total score range was 25. The participants (26.4%) showed scores from a range of 10 or below 10 which means they had poor knowledge about dengue awareness. While the participants (45.4%) showed scores from a range of 11 to 18 which means they had fair knowledge about dengue awareness. The participants (28.2%) s showed scores ranging from 19 to 25 which means they had good knowledge about dengue fever awareness.

Conclusion: Of this study is that knowledge is poor between the study respondents while the majority of persons had clear understanding of fever, headache, joint pain as general signs and symptoms of dengue viral fever. However, a huge proportion exhibited vague opinions of other different signs and symptoms involving muscular pain and skin rashes. Only rare of them knew that dengue viral fever is caused by mosquito bites, and was conscious that the mosquito causing dengue breeds in artificially collected water.

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INTRODUCTION

Dengue infection is a mosquito-borne humid problem is due to a virus named the dengue virus. After five to fourteen days of infection, the signs and symptoms appear [1]. The sign and symptoms of dengue fever are joint pain with reddish skin, high fever, and severe headache. Normally patients recover within 4 to 9 days. In the small ratio of patients, the dengue fever converts into severe dengue virus infection which is commonly called DHF or dengue hemorrhagic fever [2]. Low levels of blood pressure, bleeding, and low count of blood platelets are the symptoms of severe DHF [3]. The cause of the spread of the dengue virus is due to different types of female mosquito Aedes mosquito which is generally an Aegypti. The dengue virus has commonly five types of infection. In the five types infection of them generally one type of virus gives lifetime resistance and protection to that type of virus infection, but only temporary protection to the other virus infection [4]. The increase in the danger of severe complications is due to the alternate type of subsequent infection. Different tests are done to confirm the result which includes antibodies recognition to the disease or its nucleic acid [5].

For the immunization process, a vaccine for dengue infection has been accepted and is generally accessible in different countries of the world. Starting in 2018, immunization is just suggested in people who have been recently tainted or, in populaces with a high pace of earlier disease by age nine [6]. Different strategies for counteraction incorporate lessening mosquito usual environments and restricting the bites. This is done by wearing an apparel dress that covers greater parts of the body and covering or disposing of the standing stagnant water. For the purpose of treatment of mild to moderate dengue infection, it includes giving liquid either intravenously or through mouth [1]. Blood transfusion is the only way of treatment for which is performed for more severe cases of dengue infection. A large number of people require medical clinic affirmation consistently [7]. Paracetamol (acetaminophen) is suggested rather than nonsteroidal drugs for relief of discomfort or for decreasing fever due to the danger of bleeding chances increases due to the large use of NSAIDs [8]. Dengue virus infection is known as a worldwide infection present in 120 countries since the Second World War. Mostly present in Asia and South American countries. Around a million individuals are contaminated every year and roughly 42,000 died in 2018 a notable high ratio of cases were reported

Dengue is considered s arboviral infection disease according to world health organization with 390 million estimated cases each year, the range of people living in at-risk areas are 40 percent [9], dengue patients develop a life-threatening condition which is called DHF due to which bleeding starts from the nose, ears, leakage of blood plasma. Low blood pressure also occurs in this disease which is known as dengue shock syndrome [10]. Supportive treatment via oral or intravenous rehydration is used in mild or moderate cases while in severe cases intravenous fluids and blood transfusion are used [11]. The work on vaccines and medications is under a procedure that will be helpful to minimize or eliminate the virus vector to control this infectious disease.

Dengue fever and DHF been have found during the last decades in China, Sri Lanka, Maldives, India, Pakistan, and Bangladesh. The frequency of dengue fever and DHF is increased in Pakistan. In these years' small outbreaks of dengue fever occurred in Pakistan. One of the cities Faisalabad suffered from dengue fever which was held in four different stages of dengue serotypes [12]. The annual per capita income of Pakistan in 2018-2019 was $1300. The dengue disease is a loss to the economy due to low income per capita [13]. The total number of patients of dengue in Punjab province was 17,772 of which 15,235 belong to Lahore city. The younger patients are at more risk than last year according to different studies. In different cities of Pakistan, few studies were conducted about the Dengue serotype. The role of community is very important for the control of the Dengue vector. The vaccine for dengue is not introduced yet so the vector population should be reduced hence dengue should be under control [14]. In many places, it is difficult to distinguish between community knowledge, awareness, and behaviors for improving dengue prevention measures [15]. It is important to know which preventive measures are most effective so that markets should maintain their supply. Community involvement is necessary to know about effective preventive control so that study should be based on evidence.

SITUATION IN PAKISTAN

The first case of dengue fever in Pakistan was documented in Karachi, Pakistan, in 1994. Dengue fever has since spread throughout Pakistan's metropolitan regions at a quicker rate because of differed contributing components including urbanization, overpopulation, and absence of appropriate water the executives and absence of successful dengue control programs. An unexpected ascent in instances of dengue fever was seen in Pakistan [16]. Indeed, despite efforts to prevent the spread of dengue infection, recent national overview data suggest that dengue fever is still on the rise among the population and that there is a significant fatality rate due to dengue fever in Pakistan [17]. It is clear that by providing individuals with knowledge about dengue and preventive actions, dengue contamination may be reduced. To manage the epidemic, people must be aware of the dangers of dengue fever. That is why, all around the world, including Pakistan, awareness campaigns are being launched to educate people about dengue fever. The primary goal of this study was to determine the level of awareness about dengue fever among Government College University Faisalabad students.

AIMS AND OBJECTIVES

The aims and purposes of this study were following:

- To explore the Current Knowledge and Awareness of Dengue Fever among students of Government College University Faisalabad.
- To evaluate the chances of self-protection a participation by educated community towards disease control.
- Reduction of economic burden implemented on country.

METHODOLOGY

Study area

This research work was conducted in Government College University, Faisalabad.

Duration

This research work was conducted in three months i.e. February 2020- April 2020.

Design

Cross-sectional study.

Data collection and research tool

A cross-sectional investigation was carried out. A total of 500 students were interviewed, with pre-tested questioners being used. The sampling was done in a convenient manner. In Government College University Faisalabad, several medical terminologies were put in plain English, and interviewers were trained for data collecting. The research was carried out at Government College University in Faisalabad between February and March. Questioners and a Proforma were created to collect information on a person's socio-demographic profile, such as monthly family income, age, sex, and residential area. The major goal was to see if there was any distinction between the high and poor socioeconomic categories. The course of study was also thought to have an influence on Dengue fever knowledge. Questions concerning malaria were also posed in order to uncover common misconceptions about dengue fever and malaria. Multiple replies were collected for mosquito bite time and treatment choices, as well as a method of dissemination, vector breeding locations, and mosquito bite time and treatment options.

RESULTS

A total of 500 students from Government College University Faisalabad (GCUF) participated in this study. The total number of respondents were 500. 250(50%) participants were females and also 250(50%) participants were males. 425(85%) were unmarried while 75(15%) participants were married .303(60.6%) participants were belonged to middle class and high middle class family while 123(24.6%) were lower class family and 74(14.8%) were belong to high class family. In the present study, out of 500 respondents 280(56%) were aged 19 to 25 years, 145(29%) were aged 26 to 29 years followed by 65(13%) respondents were aged 30 to 35 years and 10(2%) respondents were aged 36 to 40. The mean age (±S.D) of study respondents was 21 to 40 years.

Out of 500 participants128 (25.6%) were studying at medical sciences, 90(18%) participants were studying at basic sciences, 78 (15.6%) participants were studying at IT & business administration and 204(40.8%) participants were studying others different departments. In data analysis valid percentages were used. In response to marital status 63(12.6) students responded married remaining 437(87.4%) were unmarried. 326(65.2%) students were belonged to urban area and 174(34.8%) were from rural area. Data analysis on the section of knowledge, awareness and practices was performed on 500 respondents.

Malaria and Dengue were both carried by the same species of mosquito, according to 17 percent of respondents, whereas 66 percent correctly identified both diseases as being conveyed by separate vectors. Both vectors have distinct eating and breeding behaviors, necessitating different types of preventative measures. Only 17 percent of them were aware of the vector. Although misunderstandings about mosquito bites were established, mosquito bites were recognised to be a common cause of Dengue illness (Table 1).

24% participants said yes that dengue can cause critical condition while 45% replied no answer and 31% replied not known. 94.6% participants said yes that they have heard about dengue fever and only 5.4% replied no. Fever was known as most common symptom of Dengue (n = 335/500) participants which said yes while 13% replied no answer and 20% replied not known followed by headache symptom

Table 1: Knowledge regarding dengue disease.

Knowledge about Dengue Fever (Vector & Illness)	Yes%	No%	Do not Know %
Dengue spreads by mosquito bite	66	17	17
Malaria is also spread by mosquitoes as same dengue.	17	66	17
Do you know where the Aedes mosquito comes from	55	27	18
Do you know dengue can cause a critical condition	24	45	31
Ever heard about dengue fever	94.6	5.4	N/A
Have you experienced dengue fever before	11	81	8
Is there any members of your family had experienced dengue fever before	14	86	N/A
Can you identify the Aedes mosquito	10	77	13
Have you knowledge regarding the treatment of dengue fever	7	90	3

is yes said (n = 320/500) participants while 17% replied in No answer and 19% participant were not known, rashes symptom said yes (n = 75/500) participants while 77% participants replied in No answer and 8% were not known, bleeding symptom said yes (n = 65/500) participants while 55% participants replied in No and 32% were not known and vomiting symptom said yes (n = 120/500) participants while 45% replied in No answer and 32% were not known. 60% participants were known where dengue fever comes from table 2.

For Avoiding mosquito's production to empty standing water from flower plots and tires etc. 62% participants were agreed while 32% were disagreed and 6% were not known. For prevention of dengue bite 69% participants were agreed to wear full dresses while 25 % were disagreed and said it has no effect and 6% were not known. For prevention of dengue biting use of mosquito's sprays and repellents 66% participants were agreed while 25% were not agreed and 9% were not known. For avoiding mosquitoes production standing water should be avoided 95% participants were agreed and 5% were not agreed (Table 3).

For mosquitoes biting mostly timing is sunrise said yes 36.4% participant's while 57% replied in No and 6.6.% were not known. For mosquitoes biting mostly timing is sunset 56.3% participants said yes while 38.15 replied in No answer and 5.65 were not known (Table 4). Attitude towards dengue prevention was as follows in table 5.

RESULT SUMMARY

The total score range was 25. The participants (26.4%) showed score from range 10 or below 10 which means they had poor knowledge about dengue awareness. While the participants (45.4%) showed score from range 11 to 18 which means they had fair knowledge about dengue awareness. The participants (28.2%) s showed score range from 19 to 25 which means they had good knowledge about dengue fever awareness (Table 6).

Table 2: A common symptom of dengue fever.

Knowledge about Dengue Fever	Yes%	No%	Do not Know %
Do you have knowledge about the difference between the symptoms of malaria and dengue	9	83	8
Fever	67	13	20
Headache	64	17	19
Bleeding	13	55	32
Rash	15	77	8
Vomiting/Nausea	24	45	31

Table 3: Common breeding sites of dengue vector*.

Statement	Agree%	Disagreed%	Not know%
To empty standing water from flower pots and tires helps to prevent Aedes production	62	32	6
To wear long sleeves and long pants helps to prevent the bite from mosquitoes	69	25	6
Use mosquitoes repellent sprays help to protect being bitten from mosquitoes	66	25	9
Avoid standing water	95	5	N/A

Table 4: Frequent mosquito time biting.

	Yes%	No%	Not know%
Sunset	56.3	38.1	5.6
Sunrise	36.4	57	6.6

Table 5: Attitude towards dengue prevention.

Willingness to use personal prophylactic measures against mosquito bite	Yes (94%)	No (6%)
Willingness to prevent stagnation of water	Yes (98%)	No (2%)
Overall attitude	Positive (83%)	Negative (17%)
Overall knowledge	Adequate (43%)	Not adequate (57%)

Table 6: Respondents knowledge on dengue infection.

Score Range	Frequency	%age	Inference
10 & below 10	132	26.4	Poor
11-18	227	45.4	Fair
19-25	141	28.2	Good

DISCUSSION

Monthly family income had almost no significant relationship with knowledge. A substantial correlation between high socioeconomic status and knowledge has been reported. However, this change might be due to differing scoring standards. Similarly, the location of one's dwelling was unimportant. The study programme has a strong relationship to knowledge. Students majoring in medical sciences administration received the highest overall grade. Fever was identified as the most prevalent symptom of Dengue, which was comparable to the findings of Syed et al in Karachi (74.5%) and Chinnakali, et al. [18] in Dehli (84%). The survey found that despite having the information, people do not apply the measures of door and window net coverage, mosquito repellent oil application, and bed covering nets. These programmes may be expensive, and the government may place a high priority on enhancing the implementation of knowledge into practice through public mobilization. The study's most important finding was that there is no link between awareness of dengue illness and preventative ethics. It's not the same as knowing the path and following it. Various people were aware of preventative ethics, but they did not put them into practice. Dengue fever knowledge did not really transfer into increased preventative actions. Previous Pakistani research have found that this outcome is unreliable [19] but consistent with findings of study in Philippines [20], Jamaica, Brazil [21], Thailand

[22] and India [18]. Instead of regular outbreaks, people still lack information of the vector Aedes Ageypti's reproduction and feeding habits. Internet-based awareness-raising efforts should be prioritized. The transfer of knowledge into training must be prioritized.

CONCLUSION

Key conclusion of this study is that knowledge is poor between the study respondents while majority of persons had clear understanding of fever, headache, joint pain as general signs and symptoms of dengue viral fever. However a huge proportion exhibited vague opinion of other different signs and symptoms involves muscular pain and skin rashes. Only rare of them knew that dengue viral fever is caused by mosquito bite, and were conscious that the mosquito causing dengue breeds in artificially collected water.

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