

# Knowledge attitude and practice of paramedical staff about prevention of Dengue virus Infection

AAMIR RAMZAN<sup>1</sup>, KHALID YOUSUF MEMON<sup>2</sup>, SAMBREEN ZAMEER<sup>3</sup>, KHALIL AHMED MEMON<sup>4</sup>, AYESHA SULTANA<sup>5</sup>, SYEDA HINA ABBAS<sup>6</sup>

<sup>1,2,4</sup>Pathology Department, Liaquat University of Medical and Health Sciences Jamshoro

<sup>3,6</sup>Pathology Department, Dow Medical College, Dow University of Health Sciences

<sup>5</sup>Pathology Department, Bilawal Medical College For Boys

Corresponding author: Aamir Ramzan, Email: [aamir\\_ramzan2002@yahoo.com](mailto:aamir_ramzan2002@yahoo.com), Contact No:03337007552

## ABSTRACT

**Introduction:** Dengue fever, a mosquito-borne disease is a major public health issue in Pakistan. It is considered to be a significant threat for the mankind in both developing and developed countries. The best way to prevent dengue endemic is to provide knowledge about dengue and preventive measures to people. This study aimed to assess knowledge, attitude and practice regarding dengue fever and effectiveness of health education programme

**Materials and Methods:** This was a descriptive cross sectional study. The sample was selected by using random sampling technique. For the present study, sample of 200 paramedical staff of Bilawal medical college was taken to survey the research objectives through pre-designed interview schedule

**Results:** Most of the respondents had good knowledge (74.5%), good attitudes (80.5%) regarding dengue fever. However, practices to prevent dengue were (90%).

**Conclusion:** It is evident that students & paramedics were aware about dengue fever However, they were not much concerned about significance of dengue control and its beneficial effect to community. It is evident from their lack of practices for community .More practical health education programmes along with continued medical education programs should be arranges for paramedics as they are crucial to control of diseases and an integral part of health care system.

**Keywords:** Dengue fever, Awareness

## INTRODUCTION

Dengue is a well-known health problem throughout the world, prevalent globally and a threat to public health.<sup>1</sup> Dengue fever is caused by an RNA virus which belong to family *Flaviviridae* having known serological types using female *Aedes Aegypti* mosquito as a vector.<sup>2</sup>Clinical manifestations may vary from person to person depending on the severity of infection and symptoms can range from asymptomatic to febrile illness to severe haemorrhagic complications due to thrombocytopenia mandating platelet transfusions in frequent instances.<sup>3</sup> Dengue undoubtedly is a major health concern and a socioeconomic burden due to limitation of testing methods and increasing cost of treatment. Various regions of the world witnessing a rise in incidence of dengue. Constant existence of disease and the evidences of dengue antibodies in serologic survey demonstrates that infection is endemic globally.<sup>4</sup> Globally reported cases of dengue fever are 50–100 million, with 250 000–500 000 of DHF, and 25 000 deaths each year.<sup>5</sup>Since 1994 Pakistan has been declared dengue endemic zone and since 2006 disease burden has markedly increased affecting thousands of people every year causing loss of life.<sup>6</sup>As the vaccine for prevention of dengue is presently unobtainable, dengue vector control is the key measure to control the spread of disease, which can only be achieved by community awareness and measures to hinder the spread of virus.<sup>7</sup> Unplanned city growth ,unhygienic conditions, poor sanitation, lack of awareness ,insensitive attitude of community towards mosquito bite prevention all these factors jointly play an important role in facilitating the breeding of vector, hence causing the increased cases of the dengue fever. The best way to prevent dengue endemic is to provide knowledge

about dengue and preventive measures to people.

**Objective:** the aim of this study is to assess the Knowledge attitude and practice of medical students and paramedical staff about prevention of Dengue virus Infection

## MATERIAL AND METHODS

A Descriptive cross sectional was conducted on a sample of 200 paramedical staff of Liaquat University Of Health Sciences ,Jamshoro chosen on the basis of convenience sampling to survey the research objectives through pre-designed interview schedule. The duration of the study was 6 months. Questionnaires were distributed in person was used to assess the Knowledge of dengue fever and the use of preventive measures after obtaining an informed consent from the participants.

Data for the study was collected through a questionnaire. Participants were approached by the authors for this study on campus of LUMHS, Jamshoro. Aims and objectives were briefly explained to all participants and all their queries regarding the study and questionnaire were handled by the authors. We divided the questionnaire into portions; knowledge, attitudes and practices. The questions focused on the individual's level of knowledge and its source. It further judged their attitude towards dengue prevention.

## RESULTS

We interviewed 200 respondents, no data is missing. Among these 72(36%) were male and 128(64%) were female. All were considered literate as they are either the students of medical college or the paramedical staff

working there. Out of 200 respondents all 200(100) identified mosquito as a vector of virus ,stagnant water as the main source of mosquito breeding and to stop mosquito breeding as a way to combat dengue; however knowledge about the duration of life cycle of mosquito was limited and only 89(44.5%) responded this question correctly. Knowledge about age groups affected by dengue was also poor and most people rejected the statement that it can affect all age groups 157(78.5%).168(84%) correctly identified high grade fever, chills, joint pains, headache as the most common presenting symptom of dengue fever.158(79%)were aware that dengue epidemic start in hot weather and 104(52%) responded positively that dengue transmission can occur through direct blood contact.182(91% ) had information that dengue vector mosquito bites early morning.35% were aware of Abate that it can be useful for killing the larvae of mosquito.96% knowing the drug of choice as Panadol although 78% were aware that there is unavailability of vaccine for dengue .So most of the respondents had good knowledge about dengue (74.5%) . Regarding attitude, 89% of respondents were afraid of dengue fever and consider it as serious illness, 92% consider prevention as the significant way to control the spread of disease. 90% considered themselves at risk of catching dengue 75% think there is no need to get seek medical attention as there is no treatment available 97%think that public has the most important role in preventing dengue overall attitude about dengue was80.5%.As far as measures of protection are concerned 98% (96%) of respondents were using multiple measures of protection. covering water jars, water tanks, regularly inspecting fridge trays using mosquito coils / net or repellent however only 65% were careful about inspecting mosquito larvae indoor and outdoor. 70% were practicing water draining from flower pots, only 32% were examining any discarded material .only5% participated in community activities for mosquito prevention. Overall practice about Dengue was prevention 90%.

## DISCUSSION

The study was conducted as an assessment of knowledge attitude and practices observed by informed people about prevention of dengue. Our study exhibited reasonable understanding about dengue and most of the people even if they are not aware of the minor details about infection are practicing measures to control the spread of infection. Most people have sufficient knowledge about the virus and its vector but knowledge about its life cycle and other minor details were inadequate. Limited knowledge about its signs and symptoms observed as most people couldn't accept the fact that this can affect all age groups .Fair knowledge was seen about bleeding complications and life threatening signs of dengue as most of the people were scared of dengue and considered themselves and their family at risk of catching disease any time in life.so our study suggested a reasonable level of information about dengue, attitude was also good but inspite of having some limitations in knowledge the practices they are observing are fine and appreciable. The reason might be the profession they are involved into and they are not just ordinary community people but engaged in health profession .This is in concordance with another study which shows similar results

for level of knowledge (60%) but practice of protective measures was high (90%) also in that study.<sup>8</sup> one reason of this can be the protective measures people already taking against malaria as Pakistan is malaria endemic country. Our results are contrary to a survey which was conducted in Rawalpindi in which knowledge among participant was adequate 91% awareness about dengue prevention was also adequate 88% but practices were inadequate and the knowledge of information was mass media and electronic media.<sup>9</sup>The level of information was high in our study as compared to two studies which reported 38.5% knowledge about dengue, this again can be due to sample selection as the mentioned studies were conducted on community settings and the other one was on patients encountered in tertiary care hospital so definitely we can expect a higher knowledge from health care worker as compared to patients and community people.<sup>10, 11</sup> Despite of being health care worker most respondents were focused on self-protection by using nets and mosquito repellents but not focused on eradicating the larvae and taking community measures. This displays that still there is need of using electronic media, social media and other modalities to increase the awareness and motivate people about community service and stopping the spread of deadly disease. Also there is rising need of arranging CME and lectures for health care workers to increase their motivation and participation in community prevention programs

## CONCLUSION

It is evident that students & paramedics were aware about dengue fever However, they were not much concerned about significance of dengue control and its beneficial effect to community. It is evident from their lack of practices for community. More practical health education programmes along with continued medical education programs should be arranges for paramedics as they are crucial to control of diseases and an integral part of health care system.

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