

Assessment Of Knowledge And Practices Regarding Dengue Fever Among Local Community Of Taxila

Sana Majeed RN RM Post RN BScN MA English MPH¹, Atika Akram RN RM Post RN BScN MPH², Habib Rehman RN Post RN BScN MScN³

¹ Nursing Lecturer at Institute of Nursing, Wah Medical College, Wah Cantt, Pakistan

² Nursing Lecturer at Institute of Nursing Wah Medical College, Wah Cantt, Pakistan

³ Senior Nursing Lecturer at Rawal College of Nursing, Rawalpindi, Pakistan

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Abstract- Objective: To assess the knowledge and practices regarding dengue fever among people living in Taxila.

Study Design: This was a descriptive quantitative study design based on self-design questionnaire.

Place and Study Duration: It was carried out from August 2019 to December 2019 involving people of Taxila.

Materials and Methods: Data was collected through self-structured questionnaire from 150 people living in Taxila. The collected data was analyzed through SPSS version 21, for proper analysis the data was presented in the form of percentage and frequencies for qualitative variables, mean and standard deviation was calculated for quantitative variables.

Results: The study results showed that almost all participants had good knowledge (70%) regarding dengue fever and 54% participants had adequate practices. They also knew about the signs and symptoms of the disease. The study results showed that media played an important role in providing awareness regarding the disease. The existing studies was done to explore the gap between knowledge and practices of the people regarding the disease.

Conclusion: Dengue is a mosquito-borne viral infection that is common in warm, tropical climates. Infection is caused by any one of four closely related dengue viruses and these can lead to a wide spectrum of symptoms, including some which are extremely mild (unnoticeable) to those that may require medical intervention and hospitalization.

Index Terms- Knowledge, Dengue fever, outbreak, health care professionals, practices.

I. INTRODUCTION

Dengue (DEN) virus is a viral infection related to the flavivirus genus and having four antigenically related but genetically their serotypes are different (DEN 1–4). The *Aedes aegypti* mosquito is the most domesticated and the main vector for dengue transmission to humans in endemic tropical and subtropical regions. According to the World Health Organization (WHO) guidelines fever, hemorrhagic tendency, thrombocytopenia, and capillary leakage are the four criteria that allow dengue hemorrhagic fever classification elevated vascular permeability may headway to vascular collapse and death (Kularatnum, G.A.M., Jasinge, E., et al.2019).

According to WHO, dengue was found as one of the 4th main life-threatening infections globally, among the 10 highest priority health issues. One of the other studies showed that there are 390 million dengue infections per year of which 96 million clinically with any severity of WHO disease classification. An estimated 500, 0000 with severe dengue (DHF/DSS) need hospitalization each year about 2.5% will die. In addition to this severe dengue is a leading cause of hospitalization and death of children in Southeast Asian countries (Yousaf, M.A., and Neil, I. 2018).

According to the Pan American Health Organization (PAOH), dengue fever increases in America since the start of the year 2019. According to the published report, over 2 million had exposed to dengue fever in Latin America and 723 deaths occurred by the end of 2019 due to dengue fever. The International health agency reported that four countries of America including Brazil, Colombia, Honduras, and Nicaragua have declared national epidemiological alerts due to mosquito-borne disease (Charles, J. 2019)

A cross-sectional study conducted in Ethiopia among 348 health care professionals regarding dengue fever. The study results showed that doctors and nurses had a moderate level of knowledge regarding dengue fever because of a lack of training towards them. Their attitude was neutral because they were working in different health care facilities and they did not attend a single case of dengue virus. Some even told that they even couldn't manage the patient of dengue fever without their cardinal symptoms. Health care professionals (HCPs) had a low level of knowledge regarding the prevention and management of dengue fever and their practices were very poor. The study results revealed that only 45% of HCPs were familiar with WHO 2010 guidelines regarding the prevention of dengue fever (Yousaf, M., and Ibrahim, A. 2018).

In a study conducted in Selangor, Malaysia in 2019, the study results showed that there is the highest number of dengue cases in Malaysia. 406 participants were selected living in 20 hotspots and 20 non-hotspot areas of Selangor. Dengue fever is the most prevalent disease in south east Asia because of extreme weather changes and population overgrowth. A hotspot area is the area where dengue occur more than 30 days and non-hotspot area is the area where dengue outbreak is noted not more than 30 days. People living in hotspot areas had average knowledge than non-hotspot areas. The results revealed that majority of the people had no idea about the prevention of the dengue fever. Health education about the disease is compulsory to provide better knowledge

regarding the prevention and risk factors of the disease (Akmar, G., Nurul., Shohaimi, S., et al. 2019).

A study conducted in India among parents of children suffering from dengue fever and admitted. Parents knew that mosquito was a vector of disease but they didn't know about the transmission and exact time of breeding. 79% of parents had a better attitude towards dengue fever because their level of education was good. The study results showed that media played an important role in giving awareness of dengue fever and the Government also took necessary steps regarding prevention of the disease (Harish, S., Srinivasa, S., et al. 2018).

Another cross-sectional study was conducted in the Vietnamese population, 330 patients were included in this study. People living there had to experience dengue outbreak in 2017. Study results showed that most of the people had basic knowledge about dengue fever but they had a lack of practices about prevention of the disease. Most of the participants identified symptoms of dengue fever and they also knew about the cause of dengue fever. Some people considered dengue fever a serious illness but some knew that there was no need for hospitalization. Study results also showed that people had knowledge regarding prevention but they had limited resources at home to implement and prevent disease. It also found that education had a great impact on knowledge regarding the disease and occupation also had an impact on attitude. Farmers and workers had poorer attitudes regarding prevention and practices of dengue fever (Nguyen, H.V., Than, P.Q.T., et. 2019).

In Pakistan, the dengue outbreak in the country appears to be crossing the previous record of 2011 when 27,000 people were affected by the mosquito-borne disease. However, this time death caused by dengue is expected to be minimal as compared to 2011 when 370 people lost their lives to the painful disease. During the current year, 42 deaths have been caused by dengue so far and health practitioners attribute the lower mortality rate to better availability of surveillance and curative measures (Junaidi, I. 019).

According to a government document available with Dawn, during the current year over 25,000 dengue cases have been confirmed across the country. As many as 6,537 cases have been

reported from Islamabad, 5,642 from Punjab, 4,403 from Sindh, 4,276 from Khyber Pakhtunkhwa and 2,750 from Balochistan. The remaining cases have been reported from other regions, including AJK and Tribal Districts. Almost two-thirds of the cases have been reported from the Pothohar region. Dengue has claimed the lives of 15 persons in Sindh, 13 in Islamabad, 10 in Punjab, three in Balochistan and one in AJK (Junaidi, I. 2019).

II. MATERIALS AND METHODS

This was a descriptive cross-sectional study design based on self-design questionnaire carried out from August 2019 to December 2019 involving people of Taxila. Non-probability convenient sampling was carried out. People aged between 18-50 years were included in the study and below 18 and above 50 years were not included in the study. Informed consent was signed and purpose of the study was explained to all participants. All participants become the part of this study on their willingness. Confidentiality was ensured to protect the ethical right of all participants.

III. RESULTS

Dengue (DEN) virus is a viral infection related to the flavivirus genus and having four antigenically related but genetically their serotypes are different (DEN 1–4). The *Aedes aegypti* mosquito is the most domesticated and the main vector for dengue transmission to humans in endemic tropical and subtropical regions. A descriptive cross-sectional study was conducted and convenient sampling technique was used. 150 respondents from local community of Taxila were included in the study. Good knowledge of signs and symptoms of dengue fever was crucial to recognizing the disease and seeking appropriate health care. Awareness about the disease in the local community was one of the main factors that determine the success of a control program. The knowledge of symptoms was essential to facilitate effective case management of dengue. It was necessary to identify breeding sites and initiating control approaches.

Socio demographic data of participants

Gender:	Number	Percentage
Male	108	72%
female	42	28%
Religion	Number	Percentage
Muslim	96	64%
Non-Muslim	54	36%
Age of the respondent:	Number	Percentage
15-29	54	36%
30-44	66	44%
45-59	21	14%
60-84	9	6%
Marital status:	Number	Percentage
❖ Married	105	70%
❖ Single	45	30%

Respondent's qualification:	Number	Percentage
❖ Illiterate	9	6%
❖ Primary	18	12%
❖ Secondary	45	30%
❖ Higher education	78	52%
Residence of respondent:	Number	Percentage
❖ Urban	105	70%
❖ Rural	45	30%
Employment:	Number	Percentage
❖ Yes	42	64%
❖ No	108	36%

SECTION I: KNOWLEDGE OF PEOPLE REGARDING DENGUE FEVER

Knowledge Assessment Scale

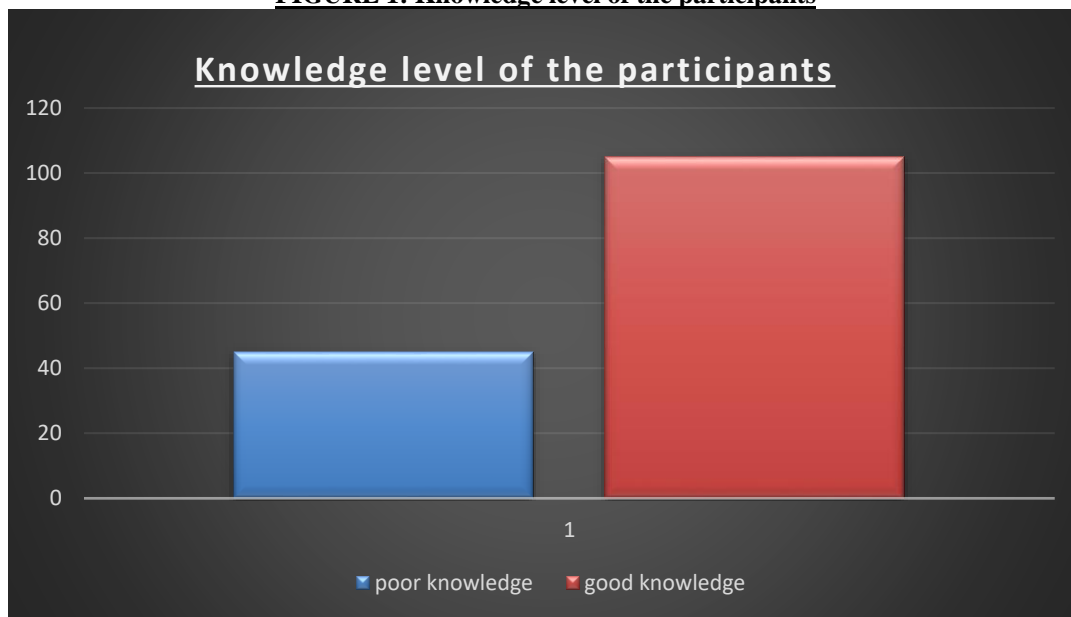
TABLE 1:
Level of The

Knowledge level	Interpretation
Good Knowledge	If the respondents give 60-80% correct answers from the structured questionnaire
Poor Knowledge	If the respondents give < 50% correct answers from the structured questionnaire.

Knowledge level	Frequency	Percent
poor knowledge	45	30.0
good knowledge	105	70.0
Total	150	100.0

Knowledge
Participants

FIGURE 1: Knowledge level of the participants



The study results showed that most of the (70%) participants had good knowledge regarding dengue fever. They knew about the disease and also knew that signs and symptoms of the dengue fever were joint pains, muscle pain, headache and

fever. The study results showed that media played an important role in providing awareness regarding the disease. People knew the time of breeding of the mosquito. They also knew about the life-threatening symptoms of the disease.

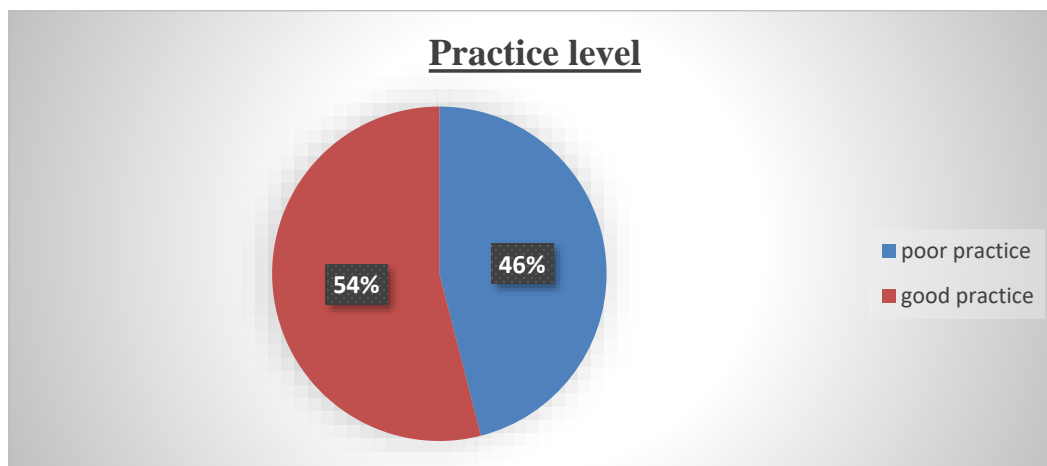
SECTION II: PRACTICES OF PEOPLE REGARDIN G DENGUE FEVER

TABLE 2:
of the

Practice level	Interpretation	
Good Practices	If the respondents give 60-80% correct answers from the structured questionnaire	
Poor Practices	If the respondents give < 50% correct answers from the structured questionnaire.	
Practice level	Frequency	Percent
poor practice	69	46.0
good practice	81	54.0
Total	150	100.0

Practice level participants

FIGURE 2: Practice level of the participants



The results showed that 54% respondents had done good practices to prevent from the disease but 46% people had poor practices regarding the disease. They had storage water container in their homes. The results showed that most of the people didn't use mosquito nets during day and night sleep for prevention. The results also showed that most of the people didn't wear long sleeves and long pants during monsoon and post-monsoon. The mean practice level is 1.54 and standard deviation is 0.503.

IV. DISCUSSION

The Aedes aegypti mosquito is the most domesticated and the main vector for dengue transmission to humans in endemic tropical and subtropical regions. A descriptive cross-sectional study was conducted and convenient sampling technique was used. 50 respondents from OPD of POF hospital were included in the study. Good knowledge of the sign and symptoms of dengue

fever is crucial to recognizing the disease and seeking appropriate health care.

According to WHO, dengue was found as one of the 4th main life-threatening infections globally, among the 10 highest priority health issues. One of the other studies showed that there are 390 million dengue infections per year of which 96 million clinically with any severity of WHO disease classification. An estimated 500, 0000 with severe dengue (DHF/DSS) need hospitalization each year about 2.5% will die. In addition to this severe dengue is a leading cause of hospitalization and death of children in Southeast Asian countries (Yousaf, M.A., and Neil, I. 2018).

In our study, results showed that most of the participants had good knowledge (70%) regarding dengue fever. They knew about the disease and also knew that signs and symptoms of the dengue fever were joint pains, muscle pain, headache and fever. The study results showed that media played an important role in providing awareness regarding the disease. People knew the time

of breeding of the mosquito. They also knew about the life-threatening symptoms of the disease.

A study conducted in India among parents of children suffering from dengue fever and admitted. Parents knew that mosquito was a vector of disease but they didn't know about the transmission and exact time of breeding. 79% of parents had a better attitude towards dengue fever because their level of education was good. The study results showed that media played an important role in giving awareness of dengue fever and the Government also took necessary steps regarding prevention of the disease (Harish, S., Srinivasa, S., et al. 2018).

In our 54% respondents had done good practices to prevent from the disease but 46% people had poor practices regarding the disease. They had storage water container in their homes. The results showed that most of the people didn't use mosquito nets during day and night sleep for prevention. The results also showed that most of the people didn't wear long sleeves and long pants during monsoon and post-monsoon. The mean practice level is 1.54 and standard deviation is 0.503.

The study may give a basic level of knowledge and practices regarding Dengue preventions. A further afford is required for awareness programs and teaching sessions to provide essential knowledge and improve the level of awareness. There is a gap between knowledge and practices of the people, they had good knowledge regarding the disease but their practices were not good to prevent from the disease.

V. CONCLUSION

The *Aedes aegypti* mosquito is the most domesticated and the main vector for dengue transmission to humans in endemic tropical and subtropical regions. According to WHO, dengue was found as one of the 4th main life-threatening infections globally, among the 10 highest priority health issues. Dengue fever is the most prevalent disease in south east Asia because of extreme weather changes and population overgrowth. Symptoms of dengue are high grade fever, headaches, joint and muscles pain, fatigue, rashes on skin, abdominal pain, nausea and vomiting. Prevention of the disease includes wear long sleeves and pants, use good mosquito repellents and remove water from coolers and other small containers once in a week.

VI. RECOMMENDATIONS

Every citizen must know about the signs and symptoms and the time of breeding of dengue mosquito. Proper survey team should be arranged to visit the houses for proper screened houses,

water storage, use of nets etc. The knowledge about dengue fever should be improved with regular classes, seminars and different practical activities before every coming season. Through all these preventive measures, we can reduce the risk of dengue infection. Additional concern should be given to tropical and sub-tropical areas. Further studies are essential in the evaluation of the situation of infection control in different areas of breeding of mosquito. More intensive and regular prevention programs should be displayed on media. Regular inspection and follow-up from the ministry of health guarantees good infection control practices. Dengue Clinical Case Management Course should be arranged for health care workers.

REFERENCES

- [1] Charles, J. (2019). Dengue fever outbreak hits Latin America and Caribbean region: Medical Xpress 2019
- [2] Ghani, N. A., Shohaimi, S. (2018). The comparison of Environmental conditions between Hotspot and Non-Hotspot Areas of Dengue Outbreak in Selangor, Malaysia. *International Journal of Science and Healthcare Research* Vol.3; Issue: 4.
- [3] Harish, S., Srinivasa, S., et al. (2018). Knowledge, attitude and practice regarding dengue infection among parents of children hospitalized for dengue fever: *Current Paediatric Research, India*. Vol-22: Issue 1.
- [4] Junaidi, I. (2019). Dengue outbreak set a new record in Pakistan. *DAWN* 2019
- [5] Kularatnum, G. A. M., Jasinge, E., et al. (2019). Evaluation of biochemical and hematological changes in dengue fever and dengue hemorrhagic fever in Sri Lankan children: a prospective follow up study. *BMC pediatr.* 19: 87.
- [6] Nguyen, H.V., Than, P.Q.T., et. (2019). Knowledge, Attitude and Practice about Dengue Fever among Patients Experiencing the 2017 Outbreak in Vietnam: *Int J Environ Res Public Health, Vietnam*.
- [7] World Health Organization. (2019). WHO scales up response to a worldwide surge in dengue
- [8] Yousaf, M., & Ibrahim, A. (2018). Knowledge, attitude and practice towards dengue fever prevention and associated factors among public health sector health-care professionals: *Risk Management and Healthcare Policy, Ethiopia*. Vol-2019:12.

AUTHORS

First Author – Sana Majeed RN RM Post RN BScN MA English MPH, Nursing Lecturer at Institute of Nursing, Wah Medical College, Wah Cantt, Pakistan

Second Author – Atika Akram RN RM Post RN BScN MPH, Nursing Lecturer at Institute of Nursing Wah Medical College, Wah Cantt, Pakistan

Third Author – Habib Rehman RN Post RN BScN MScN, Senior Nursing Lecturer at Rawal College of Nursing, Rawalpindi, Pakistan