

Awareness of Dengue Fever among the Urban Youth in Colombo and its Suburbs, Sri Lanka in November 2014

A.A.A. Nazeer and T. D. de Silva

Abstract - The study was conducted to assess the knowledge regarding dengue infection that the laymen should have specifically in facing the consequences that comes after acquiring the infection. Dengue fever is a serious disease condition going on in Sri Lanka which is transmitted by carrier mosquitos

Aedes aegypti and *Aedes albopictus*. According to the epidemiology unit of health ministry Sri Lanka, 57.82% out of 23,355 cases reported in the year 2014 by July are from the western province. In this research dengue awareness among young people in Colombo and its suburbs, especially after acquiring the infection is assessed, in November 2014.

The objective of this study was to assess the dengue awareness and knowledge that the laymen should have especially in facing the events that comes after acquiring the infection, among the youth in Colombo and its suburbs.

A descriptive study was done on 150 individuals residing in Colombo and its suburbs within the age range of 16-25 years using a simple online questionnaire, which was provided to the participants via a popular online social network. The collected data was analyzed using descriptive and analytical statistics.

Though 90% of the participants knew common signs and symptoms of fever, only 48% knew the specific symptoms of dengue fever. 66% knew that the same set of drugs given for general body aches cannot be given in dengue fever. The only satisfactory result obtained was that 86% knew blood tests are done to detect dengue. Though only 16% of the participants had sufficient knowledge on contra indicated food, 66% knew the reasons for the contra indication, showing the overall knowledge in contraindicated food is poor. Only 32% had a clear idea on the popular indigenous practice of papaya leaf extracts as a treatment, that is there is only a possibility of curing dengue. 86% knew that some official should be informed when there is an infection going on in an area, other than hospitalization, while only 52% knew where and whom to inform.

The study revealed that the urban youth in Sri Lanka lacks sufficient awareness and knowledge that they should have in facing the events that comes after acquiring the infection.

Keywords- *Dengue awareness, post infection practices, Sri Lanka, urban youth*

I. INTRODUCTION

Dengue fever is a disease caused by a RNA arbovirus which is transmitted by vector mosquitoes. It is an acute illness of sudden onset following the symptoms of headache, fever, exhaustion, severe muscle and joint pain, swollen lymph nodes and rashes. This virus can affect anyone but particularly it affects people with compromised immune system. It is possible to get this infection multiple times as it is caused by one of the five stereotypes of the virus. However the body produces immunity for the life time for the particular infected stereotype so that this stereotype will not infect the body again (Cunha, 2013).

The mosquito *Aedes aegypti* is the primary vector for dengue virus. The virus is transmitted to the humans when an infected female mosquito bites the human. This mosquito lives in urban habitats and breeds mostly in man-made containers where pure water is collected. *Aedes albopictus* is the secondary vector in Asia which has also spread to Europe and North America by the international trade of used tires and other goods. Its spread is due to its tolerance to low temperatures and ability to shelter in microhabitats (WHO 2014). These mosquitoes breed in places where pure water get collected and they feed on human early in the morning and in evening before the dusk. The threat of dengue has grown intensely, all over the world in the recent decades. Over 2.5 billion people, that is over 40% of the world's population, are at the risk of acquiring dengue. WHO currently estimates around 100 million dengue infections worldwide every year. Before 1970, only nine countries had experienced severe dengue epidemics. The disease is now endemic in more than 100 countries in Africa, the Americas, the Eastern Mediterranean, South-east Asia and the Western Pacific. The American, South-east Asia and the Western Pacific regions are the most seriously affected. Today this has become a leading cause of hospitalization and death among children in these regions (WHO 2014).

According to the data released by the Epidemiology unit of health ministry of Sri Lanka, 25,679 cases of

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dengue has been reported in 2012 by the end of June. Out of which 75 people including the majority of children lost their lives. 23,355 cases were reported in the year of 2014 by the end of July. Approximately 57.82% of the cases were reported from the Western Province which shows that, the threat is high in urban areas. The number of cases reported is getting reduced gradually because of the dengue control measures taken by the government and authorities. But the number of people getting infected and dying is still in high numbers which is significant and a current major health issue in the country.

When it comes to dengue awareness, currently the government, NGOs and media are taking huge efforts to educate the people on dengue. Different programs and campaigns conducted by these organizations have reached the people giving them knowledge, attitude and practice regarding dengue. The people are well aware and have a good knowledge on the disease, how it causes, where the carrier mosquitoes breed and practices to destroy the breeding places. But they lack the sufficient knowledge on managing somebody infected with dengue. In the view of health care professionals and hospital, this is a major problem where the condition are made worsen when the patients reach the hospitals. In addition this lack of knowledge and practices causes a rapid spread of dengue in that particular area or neighborhood. And also some activities and mistreatments done to the patients, because of the lack in knowledge, may end up in severe complications.

II. JUSTIFICATION

Lack of proper knowledge and practices on dengue lead for the worsening of the conditions of the patients after acquiring the infection. Currently most of the patients are brought in to the hospitals too late or the prevailing condition are made worsen. In addition to lack of knowledge, some misconducts carried out by the relatives makes it difficult for the health care workers to manage the conditions. So the people must be well aware of what should be done and what should not be done to a person infected with dengue (even suspected dengue) which will ease the treatments and prevents further complications. In addition the preventive practices should be carried out by the people living around to prevent the further spread of the infection. So it is very important to concern on awareness and knowledge the laymen should have to face the events that comes after acquiring the infection.

III. OBJECTIVES

The general objective of this proposed study is to assess the knowledge, attitude and practices regarding dengue specially after acquiring the infection. The Specific objectives of the study are as follows.

- To assess the knowledge in identification of dengue
- To assess knowledge and practices of contra indications
- To assess the knowledge and practices of hospitalization and treatments
- To assess the precautions practiced to prevent the spread of infection
- To assess the knowledge and use of popular indigenous practices

IV. METHODOLOGY

A descriptive cross-sectional study was carried out on the urban youth residing in and around Colombo through a popular online social media network in November 2014. Convenient sampling method was used to assess the knowledge and awareness of the selected population on the study area. The health ministry statistics says that more than 50% of the reported dengue cases are reported from the western province. So a sample of 150 individuals of the urban youth age ranging from 16-25 years was chosen from the youth residing in Colombo and its suburbs.

To this sample the individuals who are working in the medical field and students who are doing their studies in medical sector are excluded. Because they are for sure well aware of dengue fever and its consequences.

Data was collected through a simple online questionnaire provided to the sample via a popular social media network. The questionnaire included 12 simple multiple choice questions on the study area. The questions covered the specific areas of awareness regarding dengue fever that the study was aimed to assess.

Ethical clearance was taken from the Institutional Ethical Review Committee at the International Institute of Health Sciences, Sri Lanka. Data was collected causing minimum disturbance to the participants. The collected data were analyzed using descriptive and analytical statistics using a standard software.

V. RESULTS

The obtained data were analyzed and presented under five main figures that covers the specific objectives of this study. The overall results emphasizes that the urban youth in Colombo lacks sufficient knowledge and awareness regarding dengue that they should have to face the events that comes after acquiring the infection.

90% of the sample knew symptoms of viral flue. This figure is up to a satisfactory level. But, out of the sample only 72 people, that is 48%, knew the specific symptoms of dengue fever like general weakness of the body, red patches of the skin, retro orbital pain, vomiting, diarrhea etc. This shows that only 48% of this sample would identify dengue fever by their specific symptoms.

66% of the sample, that is 99 participants, had sufficient knowledge on contra indicated but commonly used drugs for a fever and body aches. This includes the drugs like Aspirin, Ibrufen that are given to relieve some symptoms of fever. They knew that if these are given that will worsen the condition and makes it difficult for treatments. Though the majority are aware in this area, it is not up to the satisfactory level.

66% knew some food items shouldn't be given to dengue patients and the reason behind it. But only 16% out of the sample, that is just 24 individuals, could choose the contra indicated foods out of the list given in the questionnaire.

This is a very low figure that shows, the overall knowledge on contraindicated food for dengue is very poor among the urban youth.

86% of the sample knew that blood tests are commonly done to detect dengue. This is the only figure up to the satisfactory level.

In most of the countries in south Asia, there is an indigenous practice of using papaya leaf extracts as a cure for dengue fever. For this there is no scientific proof, although many of the patients use this even without the physicians permission thinking that it would cure. This used to give positive effects in increasing the platelet counts along with having a possibility to make the condition even worse. In assessing the awareness regarding this issue, the study found out that 22% strongly believed that this will cure dengue, 32% believed there is a possibility to cure while 46% had no idea in using papaya leaf extracts.

Figure 1: Different views held by the participant on the common indigenous practice of using papaya leaf extracts as a cure for dengue.

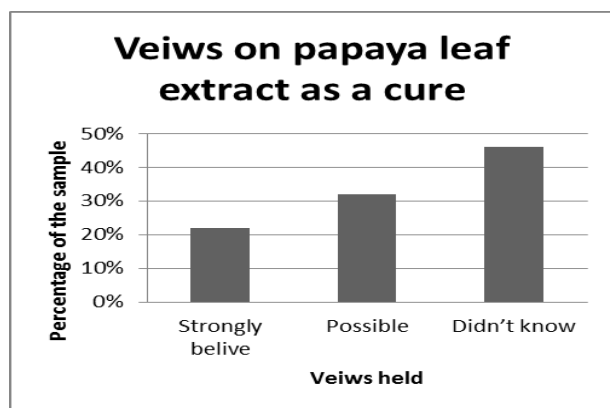
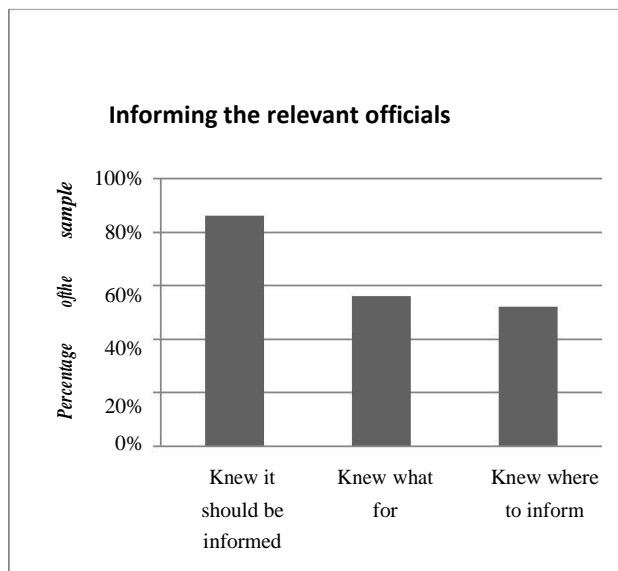


Figure 2: Knowledge and awareness regarding informing the relevant officials to prevent further spread of the dengue infection in an area.



The above graph shows the levels of awareness the urban youth had in informing relevant officials to prevent further spread other than hospitalizing the infected patient. Ideally, in Sri Lanka if there is a known dengue case in an area the MOH (medical officer for health) assigned for each division should be informed so that the authorities will take steps to destroy the mosquito breeding places and educate the local crowd. 86% knew it should be informed to someone, 56% knew what for while only 52% knew where to inform. So if you take it as a whole the urban youth is not well aware what to do in order to prevent further spread of dengue fever.

VI. DISCUSSION

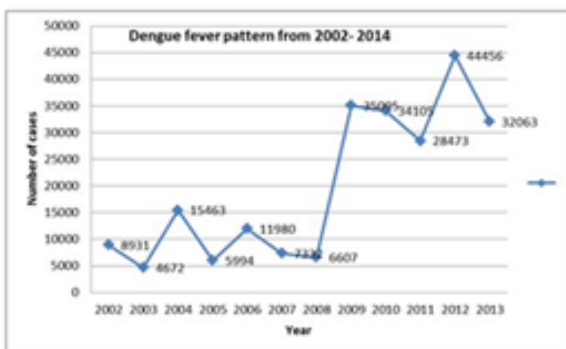
Dengue awareness studies are really important to be done in Sri Lanka as the number of cases reported annually are very high. According to the epidemiology unit of health ministry, Sri Lanka in 2014 over 43000 dengue cases were reported in total. Though dengue is a hot topic in the country at the moment, the peoples knowledge and awareness are less in certain areas which is one of the major challenge in keeping dengue under control.

The study shows that the urban youth in Sri Lanka lacks knowledge and awareness in certain areas regarding dengue that they should be competent to successfully follow up after acquiring the infection. Lack of knowledge in dengue identification by their specific symptoms are one of the significant issue. Only 48% were aware of specific symptoms. So only 48% would suspect one as dengue and follow up with suitable and early treatments for the cure. In addition only 16% could choose the contra indicated food. This reflects that the rest 84% would offer contra indicated foods to the

victims without knowing, which might make the condition and treatments even harder. 86% knew blood tests can be done to detect dengue which is up to the satisfaction. A significant percentage of the respondents, that is 48%, didn't know where they should inform to prevent further spread of dengue. So that nearly half of the sample wouldn't inform the relevant officials to prevent further spread of dengue.

As dengue is a huge health issue in the country at the moment, the government, many NGOs and the media are taking massive efforts to educate the people about dengue. The researches done shows that the awareness programs being conducted are efficient and effective. Those studies were done basically targeting the peoples knowledge, attitudes and practices regarding the spread and prevention of dengue. In other words how the mosquitos breed, where do they breed, how to destroy the breeding places etc. So this study shows that the awareness programs done are efficient and effective only in educating the spread and prevention of dengue. The areas covered by this study are not well delivered to the people in an effective way. That is the knowledge that they should have in facing the consequences that comes after acquiring the infection.

Figure 3: Dengue cases reported island wide from 2002-2014. Source: www.health.gov.lk.



The above graph shows the number of dengue cases reported yearly from 2002 to 2013. The graph shows a fluctuation in the number of cases reported year by year. This is because once the prevalence of dengue is high people get interested and by the awareness programs they get their selves educated and they practice measures to prevent the spread. Eventually the number goes down. But with the time when the number goes down the people tend to pause the preventive measures. As a result the epidemic condition raises its head again. So the awareness programs and studies to evaluate their effectiveness should be carried out throughout to keep the dengue threat under control.

VII. CONCLUSION

In conclusion the knowledge and awareness regarding dengue that the laymen should have, especially in facing the consequences that comes after acquiring the

infection, is very poor among the urban youth. The main reason for this is that the awareness programs being conducted, stress more on spread and prevention of dengue than following up to treatments and cure.

VIII. RECOMMENDATIONS

The results emphasizes that the events that comes after acquiring the infection should be well addressed and delivered to the public in the awareness programs. In addition the awareness programs should be conducted continuously to keep the people aware of the threat at any time. Studies should be carried out frequently to evaluate the effectiveness of the public dengue awareness programs. The government should promote schools and institutions to hold workshops and awareness programs on prevention and management. In addition conduction of an educational session in each PHI (public health inspector) visits to the houses specially in low socio-economic neighborhoods is greatly recommended.

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AUTHORS' PROFILE



A.A.A. Nazeer is currently a 2nd year nursing student at the International Institute of Health Sciences, Sri Lanka, following the program bachelors of nursing (B.Sc.) which is affiliated with the Deakin university, Australia. His interested research areas include public health, health promotion and communicable diseases.



Thilakamuni Dunishiya De Silva is the Head of Biological Sciences International Institute of Health Sciences Walisara, Sri Lanka. The author has a Bachelor degree in Biological Sciences from University of Kelaniya, Sri Lanka in 2010. She continued postgraduate education where she obtained a Masters in Applied Organic Chemistry from University of Colombo, Sri Lanka in 2014. Her research experience extends in the fields of chemistry and microbiology where I worked in Research and Development Department at Glaxo Smith Klines Pharmaceuticals, Rathmalana, Sri Lanka. Her research interests are in the field of pharmaceutical chemistry, drug design and synthesis, natural products chemistry and medicinal chemistry. At present, she has experience in local and foreign conferences in both oral and poster presentations and also have several publications in the above mentioned areas.