A COMPARATIVE STUDY TO ASSESS THE KNOWLEDGE ON DENGUE FEVER AMONG RURAL AND URBAN POPULATION IN MANGALORE WITH A VIEW TO DEVELOP SELF INFORMATION MODULE

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ABSTRACT

Health is the precious possession of all human beings as it is an asset for an individual and community as well. The purpose of the study is to assess and compare the knowledge of people about dengue fever in selected rural area and urban area of Mangalore. A quantitative, non-experimental research approach was used for the present study. Research design used was Comparative survey design. 300 samples were collected by using simple random sampling method. The samples were 75 males and 75 females from urban and 75 males and 75 females from rural area. The study was conducted in Kalkatta area, under Natekal PHC, as rural area and in Kadri under urban area. In the present study population consisted of the males and females between 20-60 years of age. The present study depict that 64 (43%) of rural people and 42(28%) of urban people have poor knowledge, 85(56%) of rural and 90(60%) of urban people were having average knowledge and 1(1%) of rural and 18 (12%) of urban people had good knowledge about dengue fever and there is association between level of knowledge and selected demographic variable like age and religion.

KEY WORDS: Assess, Dengue Fever, Knowledge, Urban, Rural, Module.

INTRODUCTION

The first recognized Dengue epidemics occurred in Asia, Africa, and North America in the 1780s; since 1980 Epidemic dengue has become more common. By the late 1990s, dengue was the most important mosquito-borne disease affecting humans after malaria, with around 40 million cases of dengue fever and several hundred thousand cases of dengue hemorrhagic fever each year. It is also known as break bone fever, since it can be extremely painful. Dengue is just as prevalent in the urban districts of its range as in rural areas. Dengue is transmitted to humans by the Aedes (Stegomyia) aegypti or more rarely the Aedes albopictus mosquito. The mosquitoes that spread dengue usually bite at dusk and dawn but may bite at any time during the day, especially indoors, in shady areas, or when the weather is cloudy.
In fact at the end of 19th century when public health nursing emerged as a nursing specialty, communicable diseases were the leading cause of death and illness. Deaths due to infectious disease account for 15 to 25% of all deaths in developing countries including India. Communicable disease not only causes life but they also cause great suffering and disabilities. Dengue fever is one of the most emerging communicable diseases of the tropical and sub-tropical regions, affecting urban and peri-urban areas. It is estimated that each year 50 million infections occur, with at least 5,00,000 cases of dengue hemorrhagic fever and at least 12000 deaths, mainly among children, although fatalities could be twice as high. The increase of dengue fever is due to uncontrolled population growth and urbanization without appropriate water management.

India is one of the seven identified countries by reporting incidence of Dengue Fever/Dengue Haemorrhagic Fever outbreaks and may soon transform into a major niche for dengue infection in the near future. The first confirmed report of dengue infection in India dates back to 1940s, and since then more and more new states have been reporting the disease which mostly strikes in epidemic proportions often inflicting heavy morbidity and mortality, in both urban and rural environments.

OBJECTIVES OF THE STUDY

1. To assess the knowledge of people about dengue fever in selected rural area of Mangalore.
2. To assess the knowledge of people about dengue fever in selected urban area of Mangalore.
3. To compare the knowledge of people about dengue fever in a selected rural and urban area of Mangalore.
4. To identify the association between the knowledge of people and selected demographic variables.

MATERIALS AND METHODS

Research approach

A quantitative, non-experimental research approach was used for the present study.

Research design

The investigator selected Comparative survey design to assess the knowledge of people regarding the dengue fever.

Setting of the study

The study was conducted in Kalkatta area, under Natekal PHC, as rural area and in Kadri Area under urban area.
Population
A population consists of entire set of individuals having some common characteristics, sometimes referred to as universe.
In the present study population consisted of the males and females between 20-60 years of age.

Sample
A sample is a subset or portion of the population that has been selected to represent the population of interest.
The sample comprised of 300 people. The samples consisted of two groups 75 men and 75 women in rural areas and 75 men and 75 women in urban area.

Sampling technique
Sample size was 300 (150 males and 150 females) who fulfill all the required characteristics of population. Simple random sampling technique was used for the present study. Consent was obtained from the mothers. The samples were selected according to the inclusion and exclusion criteria. Data was collected from 20-1-13 to 23-3-2013. A door to door survey was conducted and 300 samples were selected.

Sampling criteria
Inclusion criteria
a. Men and women between the age group of 20-60 years.
b. Women and men who are willing to participate in the study
c. Who can speak and understand Kannada.
d. Who were present at the time of data collection.

Exclusion criteria
a. Women and men who are not willing to participate
b. Women and men who are unable to speak and understand kannada.

Data collection instrument
The instruments used were
TOOL I: The demographic perfoma
TOOL II: Structured knowledge questionnaire to assess the knowledge regarding dengue fever and its control measures.
Description of tool

The final tool consisted of 2 sections.

Section-1: Demographic proforma

Demographic proforma consisted of items for obtaining information about the selected background factors such as age, sex, education, religion, occupation, previous knowledge about dengue fever and source of information.

Section-2: Structured knowledge questionnaire

The structured knowledge questionnaire included objective type items covering knowledge about dengue fever and its control measures. The items were of multiple choice types.

Data collection process

The data was collected from 20-1-13 to 23-3-2013. The purpose of the study was explained to the people and informed consent was obtained. Confidentiality was assured to the all subjects to get their co-operation. A total of 300 subjects were taken for the study. The data was collected through home visit.

The data was collected from 6-8 people in a day and it was done between 9am to 12.30pm. The people were very co-operative and data collected was processed every day. The missed out data was identified immediately and rectified next day. The investigator administered tool to 300 people who were selected by simple random sampling technique after introducing and explaining the purpose of the study. At the end of the data collection respondents were thanked for the participation and co-operation.

RESULTS

According to the objectives, the data collected from the subjects were organized and analyzed using descriptive and inferential statistics and are presented under the following headings. The data has been organized and presented in five sections.

Section 1: description of sample characteristics

Description of sample characteristic consisted of items such as age, sex, education, religion, previous knowledge of dengue fever, source of information, and occupation.
Table 1: Frequency and percentage distribution of subjects according to baseline characteristics

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Demographic characteristics</th>
<th>Rural Frequency</th>
<th>Rural Percentage</th>
<th>Urban Frequency</th>
<th>Urban Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>AGE (in years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>i) 20-30</td>
<td>88</td>
<td>59</td>
<td>47</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>ii) 31-40</td>
<td>24</td>
<td>16</td>
<td>42</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>iii) 41-50</td>
<td>11</td>
<td>7</td>
<td>35</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>iv) 51-60</td>
<td>27</td>
<td>18</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>2.</td>
<td>SEX</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Male</td>
<td>75</td>
<td>50</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>b) Female</td>
<td>75</td>
<td>50</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td>3.</td>
<td>RELIGION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Hindu</td>
<td>33</td>
<td>22</td>
<td>31</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>b) Muslim</td>
<td>117</td>
<td>78</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>c) Christian</td>
<td>-</td>
<td>-</td>
<td>56</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>d) Others</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>EDUCATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) No formal education</td>
<td>14</td>
<td>9</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>b) Primary</td>
<td>38</td>
<td>25</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>c) High school</td>
<td>81</td>
<td>54</td>
<td>52</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>d) Graduate</td>
<td>17</td>
<td>12</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>e) Any other</td>
<td>-</td>
<td>-</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>4.</td>
<td>Previous knowledge about dengue fever</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Yes</td>
<td>79</td>
<td>53</td>
<td>101</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>b) No</td>
<td>71</td>
<td>47</td>
<td>49</td>
<td>33</td>
</tr>
<tr>
<td>5.</td>
<td>If yes source of information</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Family</td>
<td>11</td>
<td>14</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>b) Friends</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>c) Newspaper/ magazine/ TV</td>
<td>59</td>
<td>75</td>
<td>81</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>d) Any other</td>
<td>6</td>
<td>8</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6.</td>
<td>Occupation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) Housewives/ At home</td>
<td>55</td>
<td>37</td>
<td>50</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>b) Private work</td>
<td>65</td>
<td>43</td>
<td>53</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>c) Govt. employees</td>
<td>23</td>
<td>15</td>
<td>38</td>
<td>25</td>
</tr>
<tr>
<td></td>
<td>d) any other</td>
<td>7</td>
<td>5</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

**AGE**

The present study revealed that out of 150 samples in rural area 88(59%) of them were in the age group of 20-30 years, 24(16%) of them were in the age group of 31-40 years, 11(7%) of them were in the age group of 41-50 years, 27(18%) of them were in the age group of 51-60 years.
years. And out of 150 samples in urban area 47(31%) of them were in the age group of 20-30 years, 42(28%) of them were in the age group of 31-40 years, 35(23%) of them were in the age group of 41-50 years, 26(18%) of them were in the age group of 51-60 years.

SEX:
Percentage distribution of sex in rural and urban area both are equal, i.e 75 (50%) were in male and 75 (50%) were in female both in urban and rural area.

RELIGION:
Distribution of samples according to the religion showed that among rural area 33(22%) were Hindu, 117(78%) were Muslims. Among urban area 31(21%) were Hindu, 60 (40%) were Muslims, 56(37%) were Christians and 3(2%) were belongs to other religion.

EDUCATION:
Percentage distribution of rural and urban people according to the education showed that in the rural area 14(9%) were illiterate, 38(25%) were primary education, 81(54%) were gone up to high school, 17(12%) were graduates. And in urban area 8(5%) were illiterate, 27(18%) were educated up to primary, 52(35%) were high school, 60(40%) were graduates and 3(2%) were in other course.

PREVIOUS KNOWLEDGE OF DENGUE FEVER:
out of 300 samples, in rural area 79(53%) and 101(67%) were aware about dengue fever and 71(47%) in rural area and 49(33%) in urban area were not aware of dengue fever.

SOURCE OF INFORMATION:
percentage distribution of samples according to the source of information showed that majority 59(75%) in rural and 81(80%) in urban area got information from paper, TV, 11(14%) in rural and 15(15%) in urban area got information from family, 2 (3%) in rural and 1(1%) in urban area got information from friends and 6 (8%) in rural area and 4 (4%) in urban area got information from other source.
OCCUPATION:
The present study revealed that out of 150 samples in rural area 55(37%) of them were housewives, 65(43%) of them were had private work, 23(15%) of them were Govt. employee, 7(5%) of them were with other occupation. And out of 150 samples in urban area 50(34%) of them were house wives, 53(35%) of them were had private work, 38(25%) of them were Govt. employee, 9(6%) of them were with other occupation.

Section 2: The knowledge of people about dengue fever in selected rural area of Mangalore.

Table 2: The knowledge of People About Dengue Fever In Selected Rural Area Of Mangalore.

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor (0-6)</td>
<td>64</td>
<td>43</td>
</tr>
<tr>
<td>Average (7-13)</td>
<td>85</td>
<td>56</td>
</tr>
<tr>
<td>Good (14-20)</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

The above table depict that 64(43%) of rural people have poor knowledge, 85(56%) were having average knowledge and 1(1%) had good knowledge about dengue fever.

Section 3: The knowledge of people about dengue fever in selected urban area of Mangalore.

Table 3: knowledge of People about Dengue Fever in Selected urban Area of Mangalore.

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor (0-6)</td>
<td>42</td>
<td>28</td>
</tr>
<tr>
<td>Average (7-13)</td>
<td>90</td>
<td>60</td>
</tr>
<tr>
<td>Good (14-20)</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>

The above table depict that 42(28%) of urban people have poor knowledge, 90(60%) were having average knowledge and 18(12%) had good knowledge about dengue fever.

Section 4: To compare the knowledge of people about dengue fever in a selected rural and urban area of Mangalore.

Table 4: compare the knowledge of people about dengue fever in a selected rural and urban area of Mangalore.

<table>
<thead>
<tr>
<th>Level of knowledge</th>
<th>RURAL</th>
<th></th>
<th>URBAN</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Poor (0-6)</td>
<td>64</td>
<td>43</td>
<td>42</td>
<td>28</td>
</tr>
<tr>
<td>Average (7-13)</td>
<td>85</td>
<td>56</td>
<td>90</td>
<td>60</td>
</tr>
<tr>
<td>Good (14-20)</td>
<td>1</td>
<td>1</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>100</td>
<td>150</td>
<td>100</td>
</tr>
</tbody>
</table>
The above table depict that 64(43%) of rural people and 42(28%) of urban people have poor knowledge, 85(56%) of rural and 90(60%) of urban people were having average knowledge and 1(1%) of rural and 18 (12%) of urban people had good knowledge about dengue fever.

Section 5: The association between knowledge of the people and selected demographic variable

Present study revealed that there is association between level of knowledge and selected demographic variable like age and religion.

DISCUSSION

The majority of in rural people 88(59%) and 47(31%) of urban people were in the age group of 20-30 years. The study conducted in Malaysia to assess factors affecting knowledge, attitudes, and practices regarding dengue fever. Result showed that Mean age of respondents was 34.4 (± 5.7) years, and the age ranged from 18 to 65 years. Source of information showed that majority 59(75%) in rural and 81(80%) in urban area people got information from paper, TV and media. When compared with the study conducted in Malaysia to assess factors affecting knowledge, attitudes, and practices regarding dengue fever. Result showed that Television was the common source of information about dengue fever (97.0%).

With regards to occupation majority 65(43%) of rural people and 53(35%) of urban people carry their occupation as private work. The present study depict that 42(28%) of urban people have poor knowledge, 90(60%) were having average knowledge and 18(12%) had good knowledge about dengue fever.

The present study depict that 64(43%) of rural people and 42(28%) of urban people have poor knowledge, 85(56%) of rural and 90(60%) of urban people were having average knowledge and 1(1%) of rural and 18 (12%) of urban people had good knowledge about dengue fever.

Present study revealed that there is association between level of knowledge and selected demographic variable like age and religion. And there is no association between level of knowledge and selected demographic variable like sex, education, occupation, and source of information.
CONCLUSION

Health is the precious possession of all human beings as it is an asset for an individual and community as well. Like health, disease is a dynamic process and it is just the opposite of health. One of the important reasons for higher death rate in developing countries is death due to infectious diseases.

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