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A Descriptive Study was Undertaken to Assess the Knowledge About Dengue Fever among the Younger Adults in Rural area of Puducherry

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ABSTRACT

A Descriptive study was undertaken to assess the knowledge about Dengue fever among the younger adults in Rural area in Puducherry. Total of 140 samples were selected by using non-probability convenient sampling technique. The data was collected by Structured knowledge questionnaire regarding dengue fever. The collected data from the samples were compiled and analyzed by descriptive and inferential statistics. Demographic variables results shown majority 86(61.4%) samples were belonging to age group between 21 and 24,Majority 94(67.14%) of the samples were female, Highest 33 (23.57%) of them were completed their UG, Almost 81 (57.86%) of them were unmarried younger adults, Majority 125(89.29%) of them were Hindu among adults, Highest 68(48.57%) of the samples had villa houses, Highest 49(35%) of the samples were joint family, Highest 63 (45%) of them were 10000-20000,Majority each 49(35%) of them were experience had 0-2 and 3-5 years respectively. Level of knowledge results reveals that, majority 98 (70%) of them had moderate level, whereas 34 (24.29%) of them were inadequate level. Whereas, only 8(5.71%) of them had adequate level. There was statistically no significant association between level of knowledge among samples and their demographic variables ($p>0.05$). Younger adults in rural areas in this region have inadequate knowledge about Dengue fever and its prevention and lack of practices also contribute to high prevalence of Dengue fever.

Key Words: Dengue fever, Younger Adults, rural area.

Background

Dengue is the most important viral mosquito-borne disease (MBD), with establishing consequences on global health. Two mosquito species—Aedes aegypti, the primary vector of dengue virus transmission and Aedes albopictus is the less effective vector—transmit the virus. It is important to note that Aedes aegypti and Aedes albopictus are also responsible for the transmission of other diseases including Chikungunya and Zika virus and any countries where Aedes aegypti and Aedes albopictus are present are at risk for future Zika virus outbreaks (Jupille et al., 2016). Global wise socioeconomic, demographic, and environmental factors play a significant role in the patterns of transmission of vector-borne infections, leading to significant outbreaks of diseases like Dengue, Chikungunya, and Zika virus.

High fever, headache, rash, exhaustion, muscle and joint discomfort, headache, low platelet count, nausea, and vomiting are the symptoms of dengue fever [3]. There are four degrees of dengue fever hemorrhagic fever according to the World Health Organization. While grade lll and lV instances are more severe and include shock, grade l and ll reflect relatively mild cases without shock.

The health department claims that widespread aedes egypti mosquito breeding in residential and peri-domestic settings in water storage containers, such as cement water tanks, barrels, etc., is the primary cause of dengue fever. In addition to trash like tires, coconut shells, and plastic materials that catch rain, there are additional containers that are typically left unemptied for a lengthy period of time.

Dengue fever is endemic in every state in India [6]. One of India's most extensive and multidimensional public health initiatives is the National Vector Born Disease Control Program, which includes mosquito prevention and control [7]. The nation's integrated disease monitoring program aids in disease surveillance, dengue fever epidemic identification, and dengue fever investigation.

Three years in a row starting in 2015, the IDSP annual report states that 152, 177, and 164 outbreaks have been documented nationwide. Kerala, Tamil Nadu, Karnataka, Punjab, West Bengal, and Maharashtra showed a high incidence.

Hence, Dengue viruses are known to cause acute febrile illness with almost identical symptoms in the early phase of infection, although the clinical profiles differ as the infection progresses. Dengu belongs to the Flaviviridae family and CHIKV belongs to the genus Alphavirus of Togaviridae. Before the genome organization and replication strategy was discovered the two viruses were placed in arboviruses, group-A and group-B, by virtue of being arthropod-borne viruses and having single stranded positive-sense RNA genomes.

In the current scenario, the main method to control or prevent dengue to combat vector mosquitoes through integrated vector management, which is also the strategic vector control approach promoted by WHO. Community participation is the essential requisite of a well-executed and sustainable vector control programme. For this purpose, empowering and equipping individuals with required scientific information and skill and inculcating an attitude of social responsibility is needed. So assessing the knowledge level and preventive practices followed by the community is important for further action including awareness creation and behavior change.

Across the globe, vector control has been recognized as one of the most effective methods for controlling any vector-borne diseases (VBD). The public's involvement and proactive social mobilization are essential to the effectiveness of vector control techniques. Evaluating public knowledge on vector-borne diseases (VBDs), their mechanism of transmission, and preventive strategies is crucial. Studies on public awareness might be a helpful tool to support vector control responses and essential public health initiatives. With the use of this data, programs may establish a communication schedule that will encourage public participation and drive demand for essential services.

Dengue fever is primarily found in urban and semi-urban locations across tropical and subtropical regions of the world. In recent decades, dengue fever has become much more common worldwide. Currently, about half of the world's population is under danger. An estimated 390 million cases of dengue fever virus infection occur worldwide each year. According to a different study on dengue fever prevalence, 3.9 billion people are susceptible to contracting the virus. 70% of the real burden is in Asia, even though there is a risk of infection in 129 countries [1].

Over the past 20 years, the number of dengue fever cases reported to the WHO has more than 15 times increased, rising from 5,05,430 cases in 2000 to over 24,00,138 cases in 2010 and 33,12,040 cases in 2015. Between 2000 and 2015, the number of deaths rose from 960 to over 4,032. 2019 saw the highest number of dengue fever cases ever recorded worldwide. For the first time this year, dengue virus transmission was documented in Afghanistan, affecting all regions [1]. So far in 2020, 6,196 cases have been documented. Compared to the same time period in 2018 and 2019, this is still higher. According to WHO, there were 605 cases recorded for week 17, 2020, with no deaths, and 82.6% of those cases resulted in hospitalization worldwide [9].

Everybody is concerned about the serious health problems caused by mosquito-borne illnesses, and there may be a lack of general awareness about dengue. Therefore, it becomes important for them to evaluate the knowledge of upcoming healthcare experts. To aid with the breakthrough of mosquito-borne diseases in Pondicherry, a strong preventative and protective measure has to be put in place to increase understanding and awareness of this virus.

Aims

1.To find the knowledge regarding dengue fever among younger adults

2.To associate knowledge regarding dengue fever among younger adults with selected demographic variables.

Methods and materials

Quantitative Research Approach with **descriptive study design** was adopted for this study to realize the objectives of the study.The study was among younger adults in rural community area of Puducherry . The accessible population is younger adults people who had fulfilled inclusion criteria. **Non probability– convenient sampling** technique was used to select 140 younger adults. Formal written permission was obtained by the study participants. The sample size was 140. Data was collected from samples and two sessions per day (morning and afternoon). Knowledge assessment tool was used to identify the basic knowledge regarding dengue fever among younger adults. The data collection procedure time spent for each sample was 20 minutes the collected data was compiled for data analysis.

Results

Table 1: mean and standard deviation of knowledge regading dengue among younger adults.

level of knowledge	**knowledge score**			
	Max score	**Mean**	**SD**	**Mean%**
Overall	**18**	**8.5**	**2.35**	**47.22**

The above table results show that mean% was 47.22% which was the Mean±SD of 8.5±2.35 with max sore of 18. therefore, <50% of them had knowledge regarding dengue fever in this setting among younger adult people. It can be interpreted that, <50% of the people knowledge level was not adequate. It reveals that intervention might be improving their knowledge level regarding dengue fever in this study.

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Table 2: Association for level of knowledge and selected demographic data.

Demographic variables	**Inadequate**		**Moderate**		**Adequate**		**χ2-value**	**p-value**
	f	**%**	**f**	**%**	**f**	**%**		
1.Age in years:								
18-20 years	10	7.14	43	30.71	1	0.71	4.66	0.097
21-24 years	24	17.14	55	39.29	7	5	(df=2)	NS
2.Gender:								
Male	9	6.43	34	24.29	3	2.14	0.856	0.652
Female	25	17.86	64	45.71	5	3.57	(df=2)	NS
Transgender	0	0	0	0	0	0		
3.Education:								
Upto high School	6	4.29	16	11.43	1	0.71		
Upto higher secondary	7	5	19	13.57	3	2.14	11.52	0.174
UG	4	2.86	25	17.86	4	2.86	(df=8)	NS
PG	7	5	22	15.71	0	0		
Diploma	10	7.14	16	11.43	0	0		
4. Marital status:								
Married	14	10	42	30	3	2.14	0.104	0.949
Unmarried	20	14.29	56	40	5	3.57	(df=2)	NS
Widow(er)	0	0	0	0	0	0		
Divorce	0	0	0	0	0	0		
5.Religion:								
Hindu	29	20.71	89	63.57	7	5.0	0.833	0.659
Christian	5	3.57	9	6.43	1	0.71	(df=2)	NS
Muslim	0	0	0	0	0	0		
6.Type of house:								
Villa	19	13.57	46	32.86	3	2.14	7.05	0.133
Hut	13	9.29	48	34.29	3	2.14	(df=4)	NS
Flat or apartment	0	0	0	0	0	0		
Bungalow	0	0	0	0	0	0		
Farmhouse	2	1.43	4	2.86	2	1.43		
7.Type of family:								
Nuclear	11	7.86	29	20.71	5	3.57	6.006	0.199
Joint	15	10.71	33	23.57	1	0.71	(df=4)	NS
Extended	8	5.71	36	25.71	2	1.43		
8. Income:								
<10000	7	5	28	20	3	2.14	4.13	0.659
10000-20000	17	12.14	42	30	4	2.86	(df=6)	NS

20001-30000	9	6.43	19	13.57	1	0.71		
>30000	1	0.71	9	6.43	0	0		
9.Year of experience:								
0-2 years	12	8.57	32	22.86	5	3.57	4.19	0.650
3-5 years	13	9.29	34	24.29	2	1.43	(df=6)	NS
6-8 years	5	3.57	20	14.29	0	0		
>8 years	4	2.86	12	8.57	1	0.71		

***p<0.05 significant, ** p<0.01 & ***p<0.001 Highly significant.**

In the above table results depict that, there was statistically no significant association was found between the level of knowledge score among younger adults and selected demographic variables.

There was statistically no significant association between level of knowledge among samples and their demographic variables such as age (p=0.097), gender (p=0.652), educational status (p=0.174), Marital status (p=0.949), Religion (p=0.659), Type of house (p=0.133), Type of family (p=0.199), Income (p=0.659) and Year of experience (p=0.650). Hence, Accept null hypothesis (H_1) (p>0.05).

Discussion

Major Finding of the study

- Majority 86(61.4%) samples were belonging to age group between 21 and 24.
- Majority 94(67.14%) of the samples were female.
- Highest 33 (23.57%) of them were completed their UG.
- Almost 81 (57.86%) of them were unmarried younger adults.
- Majority 125(89.29%) of them were Hindu among adults.
- Highest 68(48.57%) of the samples had villa houses.
- Highest 49(35%) of the samples were joint family.
- Highest 63 (45%) of them were 10000-20000.
- Majority each 49(35%) of them were experience had 0-2 and 3-5 years respectively.

Level Of Knowledge Regarding Dengu Fever Of Younger Adults.

The above table infers that level of knowledge regarding dengue fever, the level of knowledge score reveals that, majority 98 (70%) of them had moderate level, whereas 34 (24.29%) of them were inadequate level. Whereas, only 8(5.71%) of them had adequate level.

The present study was similarly supported by Mrs.Madhu et al (2020) A demographic preform a questionnaire. To gather the statistics, information regarding dengue fever was utilized. utilizing a straightforward random sample strategy, 150 participants were chosen for the study utilizing an exploratory descriptive methodology. Findings: According to the study's findings, 61.3% of adults know too little about dengue fever, whereas 38.7% of individuals know moderately. Conclusion: The high frequency of dengue fever is also a result of adults in rural areas of this region not knowing enough about the disease and how to prevent it.

Association level of knowledge regarding dengu fever of younger adults.

There was statistically no significant association between level of knowledge among samples and their demographic variables such as age (p=0.097), gender (p=0.652), educational status (p=0.174), Marital status (p=0.949), Religion (p=0.659), Type of house (p=0.133), Type of family (p=0.199), Income (p=0.659) and Year of experience (p=0.650). Hence, Accept null hypothesis (H_1) (p>0.05).

The present study was not similarly supported by Mrs.Madhu et al (2020), Association between the level of knowledge scores of adults residing in selected rural area of haradanahalli on dengue fever with selected demographic variables. Variables such as occupation, family income and history of dengue fever were significant at 0.05 level.

Recommendations:

- The study may be replicated with randomization in selection of a larger sample.

- Study can be conducted by including more number of variables and at different geographic locations.
- A study can be conducted to find out the needs of the younger adults.
- A study can be conducted in various settings.
- A study can be Conducted memory impairment can affect the activities of daily living and occupational functions of the elderly.

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