

A study to assess the effectiveness of Information Education communication module on knowledge on prevention and management of dengue fever among adults residing in adopted villages of AVMC&H, Puducherry.

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Abstract: Dengue fever is the common and rapidly spreading mosquito born disease in the tropical and subtropical areas. It is a viral infection spread by Female Aedes mosquitoes. In most people the infection is mild and passes in about a week without causing any lasting problems. But in rare cases it can be very serious and potentially life threatening. A pretest and post test research design and total of 120 adults were selected by convenient sampling technique. The data was collected by using structured knowledge questionnaire. The study results revealed that pretest among adults, 72(60%) had inadequate knowledge, 39(32.5%) had moderately adequate and 9(7.5%) had adequate knowledge on prevention and management of dengue fever and in the post test after the intervention, 116(96.67%) had adequate knowledge and 4(3.33%) had moderately adequate knowledge. The study concluded that STP on knowledge on prevention and management of dengue fever administered among adults was found to be effective in improving the level of knowledge among them in the post test.

Key words: Dengue fever, adults, knowledge, Puducherry.

1. INTRODUCTION:

Dengue, Malaria, filaria are the most common diseases spread by mosquito vector. Dengue is a mosquito born flavivirus infection which is since identified in 19th century. Since there is no effective vaccination to prevent this deadly disease. Knowledge of early recognition and appropriate management of the disease and practice of vector control are mandatory to control the disease. ⁽¹⁾

Symptoms of the dengue fever was sudden onset that usually follows the benign course such as headache, fever, exhaustion, muscle pain and joint pain with swollen and rash other signs of dengue fever includes bleeding gums, severe pain behind eyes and red palms, and sores, vomiting, severe myalgia, retro-orbital pain and arthralgia. ^(2,3)

Dengue has been ranked as one of the top ten threats to global health by the world health organization (WHO) in 2019 Bradley et al.,(2019) According to WHO, 3.9 billion people are at risk of contracting an infection, accounting for 40% - 50% of the world's population. ⁽⁴⁾

Dengue disease is present in 128 countries around the world, with Asia accounting for 70% of the global burden. According to the WHO, the number of dengue cases reported by the WHO increased from 0.5 million in 2000 to

>3.34million in 2016, owing to a global epidemic. Although the number of cases worldwide dropped in 2017, they increased dramatically in 2019, with 4.3 million cases reported worldwide. In 2019, the world's highest number of dengue cases were recorded in Brazil, Philippines, Vietnam, Mexico, Nicaragua, Malaysia and India in descending order.⁽⁵⁾

Dengue prevention and control is a global initiative developed and implemented by the who for the years 2012 to 2020, with the aim of reducing dengue mortality and morbidity by the year 2020 while estimating the true disease burden. The global strategy's key components included diagnosis and case management, integrated surveillance and outbreak preparedness, sustainable vector control, future vaccine development, and basic operational and implementation research 12. This global strategy also includes engaging the community and relevant professional organizations in dengue prevention and control, as well as their participation in the disease prevention and control process.⁽⁶⁾

A descriptive research design on Awareness of dengue fever among 500 school children a comparison between private and government schools in Ludhiana, India. A total enumerative sampling method was used and the data were collected by questionnaire method. The results showed that the mean knowledge scores were higher in students of Private schools i.e. 31.45 ± 6.41 as compared to students of Government schools i.e. 28.17 ± 5.39 at $t=6.19$ ($p=0.00$). The study concluded that there is need for further information, education and communication programs regarding prevention of dengue fever and this can be achieved by organizing health education campaigns in community involving schools.⁽⁷⁾

Dengue fever arises due to uncontrolled urbanization and concurrent population growth, deterioration of public health infrastructure increased travelling. Mosquito control methods are responsible for global emergency of danger. Early clinical diagnosis and appropriate management of the cases is the preventive measures of the dengue fever. This education is to increase the knowledge of adults regarding the prevention and management of dengue fever and guidance reveals the translation of knowledge.

2. MATERIALS & METHODS:

Design: Pre test and post test design was adapted for the present study.

Sample Size: 120 Adults were selected for the study.

Sampling Technique: Convenient sampling technique was used to select the samples.

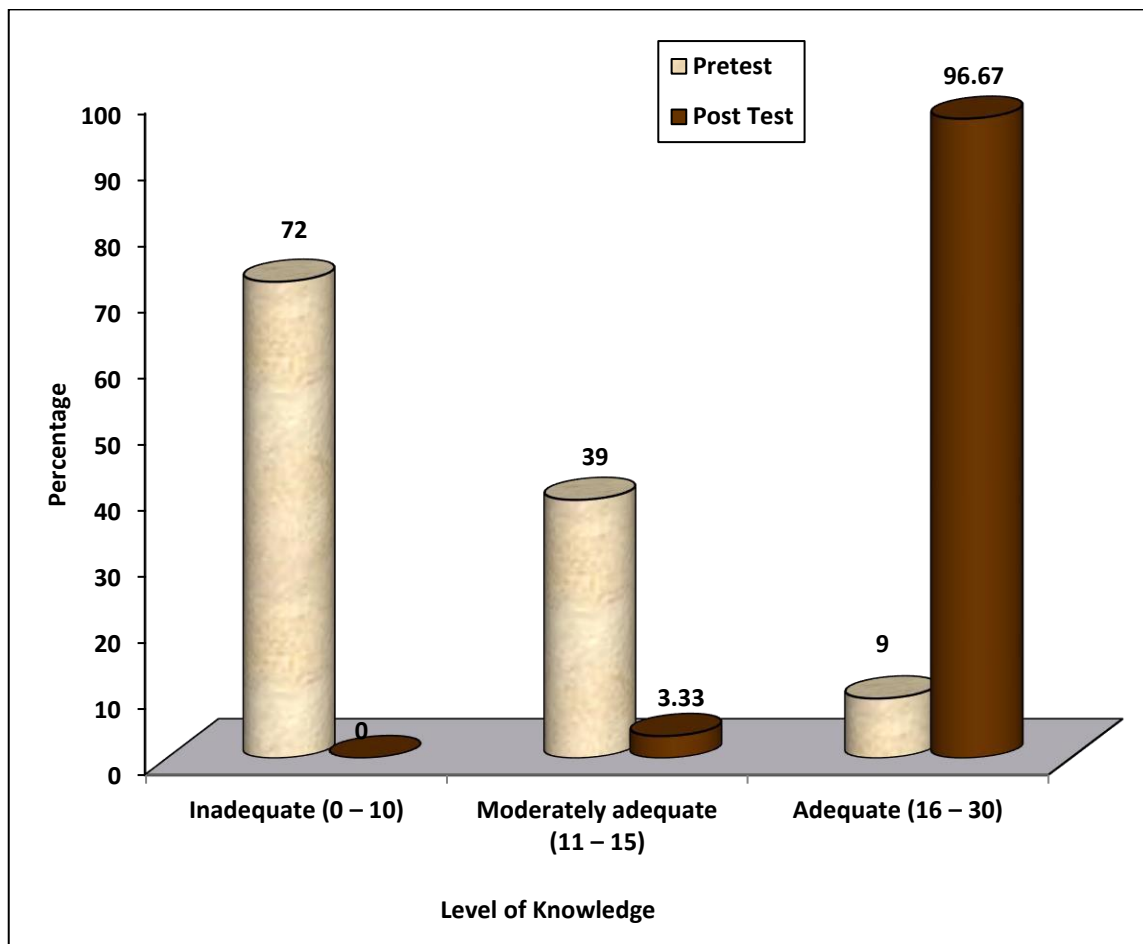
Data collection Procedure: Formal written permission has been obtained from the Dean, AVMC&H, Puducherry to conduct the study in the rural field practice areas of AVMC&H, Puducherry. A convenience sampling technique was used to select the participants. Pre test data collection was carried out in rural practice area of AVMC&H. A pretest was done to assess the level of the knowledge on prevention and management of dengue fever. By using structured questionnaire followed by information communication education module was administered to the adults residing in adopted villages of AVMC&H. The adults were given opportunity to clarify the doubts while teaching. After the pretest, post test was done after 8th day with same tool and plan for data analysis.

3. RESULTS:

Percentage distribution of demographic variables among the adults. The majority of the study population adult, 45(37.5%) were aged between 18 – 19 years, 98(81.7%) were female, 40(33.3%) had middle school education, 39(32.5%) were doing daily wages, 39(32.5%) about total family income of 32(26.7%)Rs. 26,355-52.733 per month, about residency 76(63.3%) were in urban area. In source of information 36(30.0%) were belongs to mass media and professionals.

Percentage distribution of pretest among adults, 72(60%) had inadequate knowledge, 39(32.5%) had moderately adequate and 9(7.5%) had adequate knowledge on prevention and management of dengue fever and in the post test after the intervention, 116(96.67%) had adequate knowledge and 4(3.33%) had moderately adequate knowledge. **(Figure 1)**

Figure 1: Percentage distribution of pretest and post test level of knowledge on prevention and management of dengue fever among adults.



The pretest mean score of knowledge was 9.37 ± 4.42 and the post test mean score was 18.35 ± 1.26 . The mean difference score was 8.98. The calculated paired ‘t’ test value of $t = 21.804$ was statistically significant at $p < 0.001$ level. This clearly infers that STP on knowledge on prevention and management of dengue fever administered among adults was found to be effective in improving the level of knowledge among them in the post test.

(Table 1)

Table 1: Effectiveness of Information education communication module on knowledge on prevention and management of Dengue Fever among adults.

N = 120

Knowledge	Mean	S.D	Mean Difference	Paired ‘t’ test & p-value
Pretest	9.37	4.42	8.98	t=21.804 p=0.0001 S***
Post Test	18.35	1.26		

***p<0.001, S – Significant

The Demographic variables total family income ($\chi^2=28.946$, $p=0.001$) and residency ($\chi^2=16.277$, $p=0.0001$) had shown statistically significant association with pretest level of knowledge on prevention and management of Dengue Fever among adults at $p\leq 0.001$ level. The demographic variables age ($\chi^2=21.482$, $p=0.002$) and source of information ($\chi^2=20.956$, $p=0.002$) had shown statistically significant association with pretest level of knowledge on prevention and management of Dengue Fever among adults at $p<0.01$ level. The demographic variable educational status ($\chi^2=25.622$, $p=0.012$) had shown statistically significant association with pretest level of knowledge on prevention and management of Dengue Fever among adults at $p<0.05$ level and the other demographic variables had not shown statistically significant association with pretest level of knowledge on prevention and management of Dengue Fever among adults.

4. DISCUSSION:

A Pre test and post test design design was used to this study. Total of 120 adults were selected by convenient sampling technique. The first objective was to assess the level of knowledge on prevention and management of dengue fever among adults. The result exhibited that, Percentage distribution of level of knowledge on prevention and management were 72(60%) had inadequate knowledge, 39(32.5%) had moderately adequate knowledge and 9(7.5%) had adequate knowledge on prevention and management of dengue fever and in the post test after the intervention. 116(96.67%) had adequate knowledge and 4 (3.33%) had moderately adequate knowledge. The present study was supported by the previous study of Risa Takahashi et al., (2019) conducted a cross-sectional study on knowledge, attitude, and practices related to dengue among caretakers of elementary school children in chanthaburi province, Thailand. A sample consists of 640 respondents. A stratified sampling method was used and the data were collected by pre-tested, self-administered questionnaire. The results showed that attitudes towards dengue prevention were moderate and no significant association between attitude score and sex, age, education, income, occupation, or knowledge score. ⁽⁸⁾

The second objective was to find the Effectiveness of Information education communication module on knowledge on Prevention and management of Dengue fever among adults. The result depicts that, effectiveness of Information education communication module on prevention and management were score of knowledge in pretest was that the pretest mean score of knowledge was 937-442 and the post test mean score was 18.35+1.26. The mean difference score was 8.98. The calculated paired T test value of $t=21.804$ was statistically significant at $p=0.001$ level. This clearly infers that STP on knowledge on prevention and management of dengue fever administered among adults was found to be effective in improving the level of knowledge among them in the post test. The present study was supported by the previous study of Kavipriya, A. Felicia Chitra (2021) did a pre-experimental one group pre- test post-test design on effectiveness of educational intervention programme on knowledge and practice about dengue fever among people in Puducherry. A total of 60 samples were selected by using convenience sampling technique. After pre-test educational intervention programme on dengue fever was given for 30 minutes through power point presentation on the same day. Post test was conducted on 8th day following the intervention with same tool. The results showed that the mean score of practice was increased from the pre-test score of 39.37-3.25 to post test score of 44.08+5.34. This result was found to be statistically significant at $p<0.001$ level. ⁽⁹⁾

The third objective is to associate the level of knowledge with selected demographic variables. Regarding the association of level of knowledge that the demographic variables total family income ($\chi^2=28.946$, $p=0.001$) and residency ($\chi^2=16.277$, $p=0.0001$) had shown statistically significant association with pretest level of knowledge on prevention and management of Dengue Fever among adults at $p\leq 0.001$ level. The demographic variables age ($\chi^2=21.482$, $p=0.002$) and source of information ($\chi^2=20.956$, $p=0.002$) had shown statistically significant association with pretest level of knowledge on prevention and management of Dengue Fever among adults at $p<0.01$ level. The present study was supported by the previous study of A. Binsaced et al., (2018) conducted a cross-sectional study on knowledge, attitudes and preventive practices of dengue fever among 742 secondary school students in Jazan, Saudi Arabia. The results showed that the most common practice to prevent mosquito breeding were found to be the disposing of water from breeding containers (85.5%) and covering of water containers (68.6%). A significant association between the practice of DF preventive and control measures and the gender of the respondents was found ($P<0.005$).

5. CONCLUSION:

The study concluded that the most of them are having adequate knowledge regarding prevention and management of dengue fever. A further result indicates that the awareness is needed for the adults to prevent themselves from dengue

fever with constant support. Hence, the prevention and management of the dengue can given the support to the adults to have a healthy future.

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