IJNRD.ORG ISSN : 2456-4184
INTERNATIONAL JOURNAL OF NOVEL RESEARCH AND DEVELOPMENT (IJNRD) | IJNRD.ORG
An International Open Access, Peer-reviewed, Refereed Journal

PRE-EXPERIMENTAL STUDY TO ASSESS THE EFFECTIVENESS OF HEALTH AWARENESS PROGRMME ON KNOWLEDGE AND PRACTICE REGARDING CONTROL AND PREVENTTION OF DENGUE FEVER AMONG ADULT PEOPLE

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Abstract

Dengue, the vector born disease has become a fast growing public health threat in India, due to gradual increasing morbidity and mortality since 2012. Dengue disease transmitted through the bites of Aedes mosquitoes, primarily Aedes aegypti and Aedes albopictus, is regarded the most everyday human Arbo viral infection worldwide. So, researcher felt that to find out the knowledge and practice of Dengue fever among Adult people. The research approach adopted in the present study was evaluative approach, and research design was one group pre-test post test design, which belongs pre-experimental design. Non-probability sampling technique was used and sample size was 84. Data was collected through self- structured tool. The collected data analyzed and interpreted by using descriptive and inferential statistics by the help of IBM statistics 22spss software. Results shows that the mean pre-test score was 11.13 and (S.D.= 2.43) and post-test score was 18.87 and (S.D.= 3.64) which indicate that health awareness programme was effective .

KEYWORDS: Dengue; vectors borne disease; health awareness programme; knowledge.

INTRODUCTION:

Dengue, the vector born disease has become a fast growing public health threat in India, due to gradual increasing morbidity and mortality since 2012. Dengue disease transmitted through the bites of Aedes mosquitoes, primarily Aedes aegypti and Aedes albopictus, is regarded the most everyday human Arbo viral infection worldwide.

According to World Health Organization estimates that more than 2.5 billion people are at risk of contracting dengue, and most of them will be infected with no symptoms sign and symptom of this illness is characterized by bleeding and shock, known as dengue hemorrhagic fever and shock syndrome Dengue,(DHF/DSS). Mostly Dengue is widespread throughout the tropics and subtropics regions, with local variations in risk influenced by rainfall, temperature, relative humidity and unplanned rapid urbanization.[1]

Dengue virus firstly discover by A Japanese scientist in 1943 and by 1956 the four serotype of virus were identified and every outbreak of disease things has been due to virus belonging to one of the four serotype dengue virus is affect both gender and all ages.[1] Dengue fever and dengue hemorrhagic fever are acute febrile diseases, also known

as bone-break fever. Dengue fever is transmitted through the bite of an infected mosquito, because the mosquito first bites the infected person and spreads symptoms of the viral disease. The incubation period of Dengue is 5-7 days. Dengue infection is characterized by sudden fever for 3 to 8 days, severe headache, muscle pain, Arthralgia, pain, anorexia and irritability, dengue fever is a fatal disease, and you should seek medical attention immediately.[2]

Dengue cases increasing rapidly in country so, the government launched a programme that is "National vector born Disease control programme" in 2003. The National vector borne Disease control programme is an umbrella programme for the prevention and control of six vector borne ailments that is malaria, Japanese encephalitis, Dengue, Chikungunya, Kala-azar and lymphatic filariasis.[3]

In 2019, over 4,300 cases of dengue had been reported in the state, including 2,923 from the Dehradun district alone. Uttarakhand health department is facing huge challenge to combat the mosquito-borne disease in the hill state. According to official data, 2,595 Dengue cases have been so far registered in Uttarakhand. Dehradun district is worst affected, followed by Haridwar, Udham Singh Nagar, and Nainital.[4]

In India, the **National Dengue Day** is observed every year on **16 May.** The day is an initiative by the **Ministry of Healthy and Family Welfare,** to raise awareness about dengue and its preventive measures, and preparedness for control of the vector-borne disease before the transmission season begins.[5]

When the researcher's observation regarding mosquito breeding at Dehradun in the most rainfall area and the lack of knowledge regarding dengue fever among people living in urban area, so this incidence made the investigator to take study conducted on urban area people at Dehradun district.

METHOD:

The research approach adopted in the present study was evaluative approach, and research design was one group pre-test post test design which belongs to pre-experimental design, convenient non-probability sampling technique was used. The sample size was 84 people residing in urban slums area ,age group (18-45) years. The pilot study revealed the feasibility of the study. Reliability of tool was obtained through split-half and inter-rater method. Data was collected through self-structured questionnaire and observational checklist. Health awareness programme administered after pre-test. Again after a gap of 7th day post-test was conducted with the same tool. Analysis of data was done by using descriptive and inferential statistics as mean ,standard deviation ,paired-t-test, and chi-square test.

RESULTS

The analysis and interpretation of data have been organized and presented under the following section.

TABLE– 1: Frequency and percentage distribution of samples based on the Demographic variables.

N=84

S.No.	Demographic variable	Frequency	Percentage
1.	Age of Participants		
a)	18-26	33	39%
b)	27-35	31	37%
c)	36-44	20	24%
2.	Gender		
a)	Male	38	45%
b)	Female	46	55%
3.	Educational Status		
a)	Informal Education	40	48%
b)	Primary Education	23	27%
c)	Secondary	15	18%
d)	Metric	3	3.5%
e)	Intermediate	3	3.5%

4.	Type of family		
a)	Single	48	57%
b)	Joint	36	43%
c)	Extended	0	0
5.	amily member		
a)		21	25%
b)		30	36%
c)	>7	33	39%
6.	Type of House		
a)	Kaccha House	49	58%
b)	Pakka House	35	42%
7.	Drainage System		
a)	Open	49	58%
b)	Closed	35	42%
8.	Do you Have Dengue		
	Yes	40	48%
	No	44	52%
9.	Source of Information		
a)	Newspaper	12	14%
b)	TV/Advertisement	35	42%
d)	Social Media	37	44%

- Majority of the Participants are from the age group of 18 -26 years 33 (39%) and less are from 36-44 years 20 (24%).
- Majority of participants are Female (55%) and rest of male Participants (45%)
- Majority of the participants are comes from the informal category which is 48% of all respondents and only 3.5% comes from the metric and Intermediate category.
- According to the type of families, most of them belong to nuclear 48(57%), remaining belong to joint family 36(43%) and there is no family which belongs to extended family.
- According to the number of persons in home, most of them have seven and above persons 33(39%), remaining had 2-4 persons 21(25%), 5-7persons 30(36%).
- According to the type of House, 58% respondents(49) have Kaccha House and 42% respondents(35) have Pakka House.
- According to the data which we obtain, 58% respondents (49) have open drainage system and 42% respondents (35) have closed drain system.
- According to the data which we obtain, 48% respondents (40) were suffering from Dengue.

According to the Source of information, majority of them got information from social media 37(44%), remaining got information from news paper 12(14%) , TV 35(42%).

TABLE – 2: Analysis between pre test and post test level of knowledge score on control and prevention of dengue fever among Respondents.

n=84

Knowledge	Inadequate	Moderately adequate	Adequate
Pre- test	51	21	12
Post-test	18	41	25

Among 84 respondents in pre test there are 12 (14.29%) respondents who has adequate knowledge, 21 (25%) have moderate knowledge and 51 respondents (60.71%) have inadequate knowledge regarding control and prevention of dengue fever.

In post test, 25 (29.76%) respondents have adequate knowledge, 41 respondents (48.81%) have moderate knowledge and 18 respondents (4%) have inadequate knowledge regarding control and prevention of dengue fever.

TABLE-3: Comparison of mean standard deviation and 't' test scores of Respondents in pre and post test over all knowledge regarding control and prevention of Dengue fever

N =84

Knowledge	Mean	Mean score	Standard Deviation	T calculated Value	Tabulated value	P Value
Pre test	11.13	30	2.4385	23.557	1.66	<0.00001
Post test	18.87	30	3.646			

Mean value of pre and post knowledge regarding control and prevention of Dengue Fever is 11.13 and 18.87 respectively and standard deviation of pre and post knowledge regarding control and prevention of Dengue Fever is 2.4385 and 3.646 respectively. Tabulated value of t at 5% level of significance at 83 degree of freedom is 1.65.Since calculated value of t statistic 23.557 is less than 1.66, H_0 is rejected at 5% level of significance.

TABLE 4: Analysis between pre test and post test level of practice score on control and prevention of Dengue fever among Respondents.

Practice score	Inadequate	Moderately adequate	Adequate
Pre-tset	36	36	18
Post –test	15	39	30

Among 84 respondents in pre test there are 18 respondents who has adequate knowledge, 30 (35.71%) have moderate knowledge and 36 respondents (42.86%) have inadequate practice regarding control and prevention of dengue fever.

In post test, 30 (35.71%) respondents have adequate knowledge, 39(46.42%) respondents have moderate knowledge and 15 respondents (017.85%) have inadequate practice regarding control and prevention of dengue fever.

TABLE 5: Analysis the effectiveness of Health awareness programme on practice regarding control and prevention of dengue fever among Respondents.

Practice	Mean score	Mean value	Standard deviation	T calculated	T tabulated	p value
Pre-test	15	7.59	2.72	17.5	1.66	<0.0001
Post-test	15	1.76	2.54			

Tabulated value of t at 5% level of significance at 83 degree of freedom is 1.66. since calculated value of t statistic (17.524) is less than 1.65,H_0 is rejected at 5% level of significance. Hence we conclude that pre and post test practice regarding control and prevention of Dengue fever is significant.

TABLE-6: Correlation between post test knowledge and practice score regarding control and prevention of Dengue fever among Respondents**.**

Aspects	Mean Value	Standard Deviation	Correlation	T Calculated	T Tabulated	P value

Knowledge Practice	18.87 10.76	3.65 1.60	0.07903	0.71793	2.015	0.302

Correlation between post knowledge and practice regarding control and prevention of Dengue Fever is 0.07903. There is negative correlation between knowledge and practice regarding control and prevention of Dengue Fever .Value of t statistic is 0.71793, and tabulated value is 2.015. Since calculated value is less than tabulated value and P value is greater than alfa (0.05).

❖ Association between pre- test score of knowledge and practice with their selected demographic variable**.**

The analysis of association between the selected demographic variables and the knowledge and practice score of participants during pre-test reveals the following information. The $\chi 2$ value was computed to find association between the pre-test knowledge and practice level of participants on control and prevention of Dengue Fever and selected demographic variables. The calculated $\chi 2$ value is less than the critical value for all demographic variables such as age, gender, educational status, types of housing, types of drainage system total family member, and source of information were not significant at 0.05 level.

DISCUSSION

- Mean value of pre and post knowledge regarding control and prevention of Dengue Fever is 11.13 and 18.87 respectively and standard deviation of pre and post knowledge regarding control and prevention of Dengue Fever is 2.4385 and 3.646 respectively. Tabulated value of t at 5% level of significance at 83 degree of freedom is 1.65.Since calculated value of t statistic 23.557 is less than 1.66, H_0 is rejected at 5% level of significance.
- Mean value of pre and post practice regarding control and prevention of Dengue Fever is 7.59and 10.76 respectively and standard deviation 2.72and 2.57 respectively. Tabulated value of t at 5% level of significance at 83 degree of freedom is 1.66. since calculated value of t statistic (17.524) is less than 1.65,H_0 is rejected at 5% level of significance. Hence we conclude that pre and post test practice regarding control and prevention of Dengue fever is significant.
- Correlation between post knowledge and practice regarding control and prevention of Dengue Fever is 0.07903. There is negative correlation between knowledge and practice regarding control and prevention of Dengue Fever .Value of t statistic is 0.71793, and tabulated value is 2.015. Since calculated value is less than tabulated value and P value is greater than alfa (0.05).
- The $\chi 2$ value was computed to find association between the pre-test knowledge and practice level of participants on control and prevention of Dengue Fever and selected demographic variables. The calculated $\chi 2$ value is less than the critical value for all demographic variables such as age, gender, educational status, types of housing, types of drainage system total family member, and source of information were not significant at 0.05 level. There is no association between practice and knowledge with selected demographic variable.

CONCLUSION

The study reveals that there was not significant association between demographic variables in knowledge are Age, Educational status, type of housing , Type of waste disposal and Source of information, knowledge and practice regarding control and prevention of Dengue fever. The exited knowledge and practice regarding control and prevention of Dengue fever was inadequate for majority of samples before a health awareness programme. After health awareness programme, the knowledge and practice regarding control and prevention of Dengue fever among Adult people were significantly increased. There is weak relationship between knowledge and practice so need more data to find positive relationship between knowledge and practice.

ACKOWLEDGEMENT

I would like to thank to my respected guide, and study participants of this study

Conflict of Interest

The authors declare that they have no conflicts of interest.

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