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A pre-experimental study to assess the effectiveness of structured teaching plan on dengue fever among people of rural area in Sangrani, district Ambala (Haryana)

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Abstract
Objectives
1. To assess pre-test knowledge on Dengue Fever among people of rural area in before implementation of self-teaching plan.
2. To assess the post-test knowledge on Dengue Fever among people of rural area in after Sangrani implementation of self-teaching plan.
3. To compare the knowledge on Dengue Fever among people of rural area in Sangrani before and after implementation of self-teaching plan.
4. To fine out the association on Dengue Fever among people rural area in after Sangrani implementation of self-teaching plan with their selected variables.
Methodology: A quantitative study by using pre-experimental pre-test and post-test design, A sample size of 30 Rural People were selected by using random sampling technique, semi structured questionnaire was used process the level of knowledge of Rural People on Dengue Fever.
Result: The finding of the study reveals that mean of pre-test level of knowledge score is 7.56.and mean of post-test level of knowledge score is 11.3.

Keywords: Knowledge, assess, effectiveness and dengue fever

Introduction

Dengue virus infection is increasingly recognized as one of the world emerging in infectious disease about 50-100million cases of dengue fever and 500,000 cases of dengue hemorrhagic fever (DHF) resulting in around 24 thousands deaths are repotted annually [5, 6] over half of the world's population resides in area potentially at risk for dengue transmission, making dengue one of the most important human viral disease transmitted by arthropod vectors in terms of morbidity and mortality.

Dengue also known as dengue fever an acute mosquito- borne viral illness of sudden onset that usually follows a benign course with headache, fever prostration, severe joint and muscle pain, swollen glands and rash. The presence of fever, rash, and headache is particularly characteristic of dengue. It goes by other names including break bone or dandy fever. Victims of dengue often have contortions due to the intense joint and muscle pain

At the time of the establishment of the World Health Organization (WHO), in 1948, Health was defined as being, "A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". Health is not perceived the same way by all members of the community. In fact, all communities have their concept of health, as part of culture.

Public health is "The science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, public and private, communities and individuals" (Winslow, 1920). It is concerned with threats to the overall health of a community based on population health analysis. Unlike clinical professionals, public health is more focused on entire populations rather than on individuals. Its aim is preventing from happening or re-occurring health problems by implementing educational programs, developing policies, administering services and conducting.

The great positive impact of public health programs is widely admitted. Because of the health policies and the actions public health professionals develop, the 20th century has

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registered a decrease of the mortality rates in infants and children and a constant increase in life expectancy. Health in a broad sense of the word does not merely mean the absence of disease or provision of diagnostic, curative and preventive services. The state of positive health implies the notion of "Perfect functioning" of the body and mind. Hence overall health is achieved through a combination of physical, mental, and social well-being, which, together is commonly referred to as the Health Triangle. Nowadays so many diseases are attacking the people. In that an important one is Dengue fever.

Dengue fever, commonly known as "break bone fever" for its classic symptoms of severe joint and muscle pain and high fever, once mostly occurred in tropical and subtropical zones. But during the last 20 years, dengue fever and its more severe form, dengue hemorrhagic fever (DHF), have been spreading worldwide. Factors contributing to the spread include increasing international travel, migration, urbanization, and perhaps even global warming, among others. Although most U.S. cases have occurred in travelers' returning from abroad, the risk of infection is increasing for people living along the U.S.–Mexico border and in other parts of the southern United States.

The first isolation of dengue virus was reported from India in 1964, Dengue virus serotype 3 in 1968. Ever since, intermittent reports of Dengue and its sequel have come from various parts of the country. These includes reports from Ludhiana, Delhi, Lucknow, Calcutta, Chennai, Mangalore, Assam, Nagaland and Vellore.

Dengue fever and DHF are caused by four serotypes of dengue viruses from the genus Flavivirus. As one review noted, "the clinical spectrum can vary from asymptomatic to more severe infections with bleeding and shock". The hemorrhagic form involves plasma leakage, as evidenced by elevated hematocrit levels, pleural effusion, and ascites; this can progress to severe hypovolemic shock and even death. The virus is transmitted by the bite of an infected female Aedes mosquito. The species most often implicated is Aedes aegypti (known as the yellow fever mosquito), a diurnally active mosquito that prefers feeding on humans. Infected mosquitoes suffer no pathogenic effects. The cycle of transmission begins when a mosquito feeds from a human whose blood contains dengue virus. The virus infects the epithelial cells of the mosquito's midgut, then "escapes" into the insect's body cavity and travels to the salivary gland. The disease is transmitted through the mosquito's saliva during subsequent biting. The risk of DHF appears higher in patients who acquire a second dengue infection than in those experiencing a first, third, or fourth dengue infection. Because increasing global tourism and migration have disseminated the four serotypes worldwide, the risk of a second infection has also risen.

Problem Statement A pre-experimental study to assess the effectiveness of structured teaching Plan on Dengue fever among people of rural area in Sangrani, Ambala (Haryana).

Objectives
1. To assess pre-test knowledge on Dengue Fever among people of rural area in before implementation of self-teaching plan.
2. To assess the post-test knowledge on Dengue Fever among people of rural area in after Sangrani implementation of self-teaching plan.
3. To compare the knowledge on Dengue Fever among people of rural area in Sangrani before and after implementation of self-teaching plan.
4. To fine out the association on Dengue Fever among people rural area in after Sangrani implementation of self-teaching plan with their selected variables.

Material and Methods: A pre-experimental pre-test and post-test research design was used to conduct the study in Sangrani District Ambala (Haryana).A sample size of 30 rural people were selected by using random sampling technique. Permission was obtained from the research committee of Himalayan School of nursing Kala-amb, Ambala (Haryana).and Sarpanch of Village Sangrani. The informed consent was taken from rural people who were willing to participate in the study. Self-structured questionnaire was used to assess the level of knowledge rural people on Dengue Fever.

Tools of data collection
The tool consists of 3 parts:
- Demographic data profile sheet: Demographic data profile sheet was used for assessment of demographic variables such as age, gender, religion, place, occupation, source of information.

Self-Structured Questionnaire: Self Structured Questionnaire was used to assess the knowledge on Dengue Fever among people of rural area.

Data Analysis

Sr. No.	Data analysis	Method	Objectives
1.	Descriptive statistics	Frequency and percentage distribution, mean, mode, median and standard deviation.	Distribution based on demographic variable to assess the level of knowledge on Dengue Fever among people of rural area in Sangrani.
2.	Inferential statistics	Chi-square test, one sample t-test.	To associate level of knowledge on Dengue Fever among rural people with their selected demographic variables.

Result

Table 1: Frequency and percentage distribution of demographic characteristics of rural peoples.

Sr. No.	Selected demographic variables	Frequency (f)	Percentage (%)
1.	Age		
1.1	25-35	5	16.7%
1.2	36-45	10	33.3%
1.3	46-55	4	13.3%
1.4	56-65	5	16.7%
1.5	66-75	6	20%
		Total=30	Total=100%
2.	Gender		
2.1	Male	11	36.7%
2.2	Female	19	63.3%
		Total=30	Total=100%
3.	Religion		
3.1	Hindu	0	0%
3.2	Muslim	2	6.7%
3.3	Christian	0	0%
3.4	Sikh	28	93.3%
		Total=30	Total=100%
4.	Place		
4.1	Rural	30	100%
4.2	Urban	0	0%
		Total=30	Total=100%
5.	Occupation		
5.1	Farmer	10	33.3%
5.2	Housewife	12	40%
5.3	private job	5	16.7%
5.4	Government job	3	10%
		Total=30	Total=100%
6.	Source of information		
6.1	Elders in family	10	33.3%
6.2	Friends	5	16.7%
6.3	News paper	5	16.7%
6.4	TV-Computer	10	33.3%
		Total=30	Total=100%

Table 1depicts that

The frequency distribution of demographic variables of rural people according to age majority of the rural people 16.7% were in the age group of 25-35 years following by 33.3% were in age group of 36-45 years, 13.3% were in the age group of 46-55 years and 16.7% were in age group of 56-65years and 20% were in age group of 66-75.

The frequency distribution of demographic variables of rural people according to gender majority of rural people i.e. 63.3% were females following by 36.7% were males.

The frequency distribution of demographic variables of rural people according to religion majority of rural people 0% were from Hindu following by 6.7%were from Muslim following by 93.3% were from Sikh following by 0% Christian.

The frequency distribution of demographic variable of rural people according to Place majority of the rural people 100% were from rural area following by 0% urban area.

The frequency distribution of demographic variables of rural people according to the Occupation majority of the rural people 33.3% were from Farmer following by 40% were from housewife and following by 16.7% were from private job following by 10% were from government job.

The frequency distribution of demographic variables of rural people according to the source of knowledge majority of the rural people 33.3% get information from elders in the family following by 16.7% through friends and 16.7% through newspaper and 33.3% from TV-computers.

Table 2: Mean, median, standard deviation and range was used to assess the knowledge on Dengue Fever among rural area people in Sangrani district Ambala (Haryana).

Group	Mean		Difference of mean	Standard Deviation		Paired t-test and df
Rural people	**Pre-test**	**Post-test**	3.74	**Pre-test**	**Post-test**	.000 df=3
	7.56	11.3		38.3	373.3	

Table 2 Data in the table no.2.1represents that mean post-test knowledge score x_2=11.3 was apparently higher than the mean pre-test knowledge score x_1=7.56 the difference between the mean is 3.74 and SD in pre-test 38.3 in post-test 373.3 and the paired t-test value .000 i.e. Non -significant.

Table 3: Frequency and percentage distribution of pre-test and post-test level of knowledge on Dengue Fever among rural area people in Sangrani district Ambala (Haryana). N=30

Level of knowledge pre-test	Frequency	Percentage %	Mean	Median	SD	Range
Poor (0-5)	5	16.66				
Average (6-10)	20	66.66	7.56	15.5	38.3	9
Good (11-15)	5	16.66				
Very Good (16-20)	0	0				

Table 3 The data presented in table no.3.1fullfil the objective 1 as out of 30 (100%) samples, majority 20(66.66%), had average knowledge, 5(16.66%) had good knowledge, 5(16.66%) had poor knowledge, no rural people had very good or good knowledge regarding Dengue Fever .

The mean, median, SD, and range also justify the knowledge of rural peoples.

Post -test knowledge:

Table 4: Post -test knowledge:

Level of post-test knowledge	Frequency	Percentage %	Mean	Median	SD	Range
Poor (0-5)	0	0				
Average (6-10)	8	26.66	11.3	15.5	373.3	7
Good (11-15)	22	61.33				
Very Good (16-20)	0	0				

Table 4 the data presented in the table no.3.2 fulfill the objective as out of 30(100%) samples, majority 22(61.33%) had good knowledge, 8(26.66%), had average knowledge, 0(0%) had very good knowledge, 0(0%) poor level of knowledge on Dengue Fever. The mean, median, SD and range also justify the knowledge of rural peoples.

Table 5: Chi square showing the Association of knowledge on Dengue Fever among rural area people in Sangrani district Ambala (Haryana). N=30

Sr. no.	Selected demographic variables	Frequency (f)	Percentage (%)	Chi-square, df, p-value
1.	**Age**			
1.1	25-35	5	16.7	
1.2	36-45	10	33.3	
1.3	46-55	4	13.3	8.000, 4, .091578.NS
1.4	56-65	5	16.7	
1.5	66-75	6	20	
2.	**Gender**			
2.1	Male	11	36.7	2.000, 1, .157299.NS
2.2	Female	19	63.3	
3.	**Religion**			
3.1	Hindu	0	0	
3.2	Muslim	2	6.7	5.000, 4, .287297.NS
3.3	Christian	0	0	
3.4	Sikh	28	93.3	
4.	**Place**			
4.1	Rural	30	100	2.000, 1, .157299.NS
4.2	Urban	0	0	
5.	**Occupation**			
5.1	Farmer	10	33.3	
5.2	Housewife	12	40	8.000, 6, .238103.NS
5.3	private job	5	16.7	
5.4	Government job	3	10	
6.	**Source of information**			
6.1	Elders in family	10	33.3	
6.2	Friends	5	16.7	4.000, 2, .135335.NS
6.3	News paper	5	16.7	
6.4	TV-Computer	10	33.3	

(*S) Significant {p≤0.05}, (NS) Non Significant {≥0.05}.

Table 5 shows that chi-square test for association between the post-test knowledge score with the selected demographic variables.
The data revealed that age (8.000), Gender (2.000), Religion (5.000), Place (2.000), occupation (8.000) and level of Source of information (4.000) were found statistically non - significant because p value more than {≥0.05}.

Conclusion
The finding of the study had showed that in pre-test knowledge score majority of the rural peoples had average level of knowledge i.e. 66.66% followed by 16.66% had good level of knowledge and 16.66% had poor level of knowledge.
In post-test knowledge score majority of rural peoples had good level of knowledge i.e. 61.33% following by 26.66%

had average level of knowledge, 0% had very good level of knowledge, 0% poor level of knowledge.

It was concluded that there is increased in post-test knowledge score as compared to pre-test knowledge score. It was the result of Self structured teaching plan on knowledge regarding Dengue Fever.

It was found that all the socio-demographic variables like age, gender, Religion, Place, Occupation and source of information on Dengue Fever

Conflict of interest: There was no such conflict and bias during the study.

Source of finding: It is self-funded research study.

Ethical consideration: No ethical issue exists.

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