

Effectiveness of Structured Teaching Programme on Knowledge Regarding Zika Virus Among the Adults at Rural Community Dehradun

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ABSTRACT

Zika virus infection during pregnancy is a cause of microcephaly and other congenital abnormalities in the developing fetus and newborn. Zika infection in pregnancy also results in pregnancy complications such as fetal loss, stillbirth, and preterm birth. Zika virus infection is also a trigger of Guillain-Barré syndrome, neuropathy and myelitis, particularly in adults and older children. The objective of the study was to assess the level of knowledge regarding Zika virus among the adults by conducting pre-test and post-test and to find out the association between the pre-test and post-test knowledge score with selected demographic variables. The methodology was used an experimental research approach with one group pre and posttest quasi experimental design was used for this study. The sample consisted of 60 adults from rural community at Dehradun. They were selected by purposive sampling technique. The tools developed and utilized was structured schedule questionnaire seeks information about socio-demographic variable and structured knowledge questionnaire. The data was analyzed by descriptive and inferential statistics. The mean of pre-test knowledge scores of adults was found to be 12. The mean of post-test knowledge scores of pregnant women was found to be 20. Mean percentage of pre-test knowledge score of adults were found to be 48%. Mean percentage of post-test knowledge score of adults were found to be 80%. The mean percentage enhancement was 32%. Paired t-test was used to find out the effectiveness that is 50.719. The study concluded that the assessment of the effectiveness of the structured teaching program on knowledge of adults regarding Zika virus and its prevention, revealed that, the knowledge increased after intervention is 32% at $P < 0.05$ using structured knowledge questionnaire. Hence, it is inferred that, there is a significant increase in the knowledge of the adults.

Keywords: Experimental Study, Assess, Knowledge, Adult, Zika Virus, Structured Teaching Program.

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INTRODUCTION-:

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WHO (2018) Zika virus disease is caused by a virus transmitted primarily by *Aedes* mosquitoes, which bite during the day. Symptoms are generally mild and include fever, rash, conjunctivitis, muscle and joint pain, malaise or headache. Symptoms typically last for 2–7 days. Most people with Zika virus infection do not develop symptoms. An increased risk of neurologic complications is associated with Zika virus infection in adults and children, including Guillain-Barré syndrome, neuropathy and myelitis. Research is ongoing to investigate the effects of Zika virus infection on pregnancy outcomes, strategies for prevention and control, and effects of infection on other neurological disorders in children and adults.

Anitha.B, Annie Annal.M (2016) has conducted the study to assess the knowledge of zika fever among staff nurses in MGMCRI, at Puducherry. Pre experimental (one group pre-test and post-test research design) was used. The findings of the study revealed that post-test mean Knowledge score was higher than the pre-test mean score. Thus the difference in the level of knowledge was found to be significant at $P < 0.001$ level. This Study concluded that the Structured Teaching Programme was effective to improve the knowledge of Staff Nurses.

There is no treatment available for Zika virus infection or its associated diseases. Symptoms of Zika virus infection are usually mild. People with symptoms such as fever, rash, or arthralgia should get plenty of rest, drink fluids, and treat pain and fever with common medicines. If symptoms worsen, they should seek medical care and advice. Pregnant women living in areas with Zika transmission or who develop symptoms of Zika virus infection should seek medical attention for laboratory testing and other clinical care. Protection against mosquito bites during the day and early evening is a key measure to prevent Zika virus infection. Special attention should be given to prevention of mosquito bites among pregnant women, women of reproductive age, and young children.

Personal protection measures include wearing clothing (preferably light-coloured) that covers as much of the body as possible; using physical barriers such as window screens and closed doors and windows; and applying insect repellent to skin or clothing that contains DEET, IR3535 or icaridin according to the product label instructions. Young children and pregnant women should sleep under mosquito nets if sleeping during the day or early evening. Travellers and those living in affected

areas should take the same basic precautions described above to protect themselves from mosquito bites. *Aedes* mosquitoes breed in small collections of water around homes, schools, and work sites. It is important to eliminate these mosquito breeding sites, including: covering water storage containers, removing standing water in flower pots, and cleaning up trash and used tires. Community initiatives are essential to support local government and public health programs to reduce mosquito breeding sites. Health authorities may also advise use of larvicides and insecticides to reduce mosquito populations and disease spread.

Zika virus can be transmitted through sexual intercourse. This is of concern due to an association between Zika virus infection and adverse pregnancy and fetal outcomes. For regions with active transmission of Zika virus, all people with Zika virus infection and their sexual partners (particularly pregnant women) should receive information about the risks of sexual transmission of Zika virus. WHO recommends that sexually active men and women be correctly counselled and offered a full range of contraceptive methods to be able to make an informed choice about whether and when to become pregnant in order to prevent possible adverse pregnancy and fetal outcomes.

Mosquito control is an important component of the prevention and management of Zika virus and complications. WHO encourages affected countries and their partners to scale up the use of current mosquito control interventions as the most immediate line of defence. WHO recommends approaches that tackle all life stages of the *Aedes* mosquito, from the egg, to the larva/pupa to the adult. Hence the researcher find need for the study regarding Zika virus and complications to impart the knowledge regarding interventions to tackle this deadly disease.

STATEMENT OF THE PROBLEM

“A study to assess the effectiveness of structured teaching programme on knowledge regarding Zika virus among the adults at rural community, Dehradun”.

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding Zika virus among the adults by conducting pre-test.
2. To assess the level of knowledge regarding Zika virus among the adults by conducting post-test.
3. To assess the effectiveness of structured teaching program on level of knowledge regarding Zika virus among the adults at rural community, Dehradun.

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4. To determine the association between the level of knowledge regarding Zika virus among the adults with selected demographic variables.

HYPOTHESES OF THE STUDY

H₁: There will be a significant difference between the pre-test and post-test level of knowledge of adults regarding Zika virus.

H₂: There will be significant association in the mean improvement of level of knowledge of adults with the selected social demographic variable

RESEARCH METHODOLOGY

The methodology was used an experimental research approach with one group pre and post test quasi experimental design was used for this study. The sample consisted of 60 adults from rural community at Dehradun. They were selected by purposive sampling technique. The tools developed and utilized was structured schedule questionnaire seeks information about socio-demographic variable and structured knowledge questionnaire.

The formula used;

$$\text{Pre-test}(x) + \text{Treatment STP} = \text{Post test}(y) = \text{Effectiveness } (y-x)$$

DESCRIPTION OF TOOL

Part-I

It deals with demographic data, which consists of six items to collect the sample characteristics, which comprises, Age, Gender, Educational qualification, Occupation, Income of the family, source of information

Scoring: No scoring in section-I.

Part-2

Structured knowledge questionnaire is used to assess the knowledge of adults regarding Zika virus. The scales mainly consist of 25 questions.

Scoring: Each correct answer was given a score of ‘One’ mark and wrong answer was given ‘Zero’ score. In this structured knowledge questionnaire, the minimum score is 0 and maximum score is 25.

Table-: 1 The respondent are classified based on the levels of knowledge as

Sr. No.	Level	Level of Knowledge
1.	Inadequate	Below 50 percentage (0-12)
2.	Moderate	51-74 percentage (13-18)

3.	Adequate	75 and above percentage (>18)
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RESULT

The age of adults between the 20-21 years was 31.70% (19), 22-23 years were 56.70% (34), 24-25 years were 11.6% (07). The gender of adults females were 20% (12) and males were 80% (48). The educational qualification of the adults are primary education were 66.70%(40), secondary education were 18.30%(11), intermediate was 22.5%(09) and graduation and above was 0% (0). The Occupation of adults private employee were 83.3% (50), self-employed were 13.3% (08), government employee were 0 and unemployed were 3.30 % (02). The income of the family of adults monthly income of 5001 to 10000 were 35% (21), 10001 to 15000 were 58.30% (35), 15001 to 20000 6.70% (04) and more than 20001 were 0% (0). The source of information of adults who get information from books/newspaper/journals were 18.30% (11), from tv/internet/radio were 56.70% (34), from health workers were 20% (12) and from family/friends/relatives were 5% (03).

Figure and table projected frequency and percentage distribution of adults regarding Zika virus. The result shows that 56.70% (34) had inadequate knowledge, 43.3% (26) had moderate knowledge in pre-test and 100% (60) had adequate knowledge in post-test regarding Zika virus.

Table -: 2 Knowledge Level of Adults in Pre & Post Test N=60

Knowledge level	Pre test		Post test	
	Frequen cy	Perce nt	Frequen cy	Perce nt
a. Inadequate	34	56.7%	00	0%
b. Moderate	26	43.3%	00	0%
c. Adequate	00	0%	60	100%
Total	60	100%	60	100%

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Table represents comparison of pre and post-test knowledge score of adults regarding Zika virus. In pre-test mean is having 12 and mean percentage 48%. In post-test, mean is having 20 and mean percentage 80%. Enhancement percentage is 32%. The difference between pre and post-test mean score revealed the effectiveness of structured teaching program (STP) on Zika virus. Hence, there is highly significant increase in knowledge of adults regarding Zika virus after their exposure to STP on zika virus. Therefore, H1 is accepted.

Further, the paired t- test was used to find the significant difference between the pre and post-test knowledge score. Table 11 shows that the t- value 50.79 is highly significant at p<0.05%. Hence there is significant difference between the pre and post-test knowledge scores and that difference is due to exposure of adults to STP on Zika virus.

Table-: 3 Comparison of Pre Test and Post Test Knowledge Scores of Adults regarding Zika virus

N = 60

Sl. No.	Knowledge	Mean	Mean %	SD	Enhancement	t Value	Df	Inference
1	Pre test	12	48	1.23	32%	50.79	59	S
2	Post test	20	80	1.39				

Table-: 3 Association of pre-test knowledge scores of adults with selected demographic variables

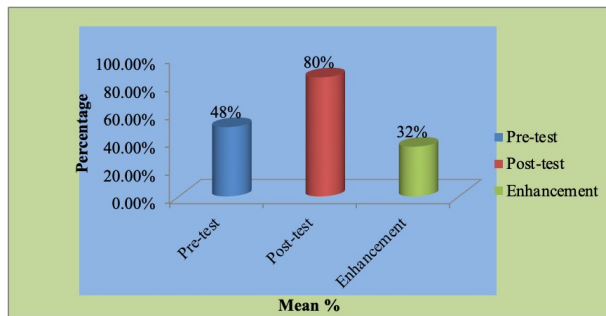


Table-: 3 Association of pre-test knowledge scores of adults with selected demographic variables

N= 60

Demographic variables of the nurses		Inadequate	Mode rate	Chi square	Inference
Age in year	20-21 years	12	07	1.902 DF=2	NS
	22-23 years	20	14		
	24-25 years	02	05		
Gender	Male	30	18	3.326 DF=1	NS
	Female	04	08		
Educational qualification	Primary education	22	18	0.266 DF=3	NS
	Secondary education	08	03		
	Intermediate	04	05		
	Graduation and above	00	00		
Occupation	Private employee	28	22	2.706 DF=3	NS
	Self employed	05	03		
	Government employee	00	00		
	Unemployed	01	01		
Income of the family	5001 to 10000	10	11	4.041 DF=3	NS
	10001 to 15000	22	13		
	15001 to 20000	02	02		
	Above 20001	00	00		
Source of information	Books/newspaper/journals	05	06	2.528 DF=3	NS
	TV/internet/radio	23	11		
	Health workers	05	07		
	Family/friends/relatives	01	02		

Table deals χ^2 value computed between the pre-test knowledge level of adults on zika virus and selected demographic variables. All demographic variables are not significant at 0.05 levels. Thus it can be inferred that there is no significant association between knowledge

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levels of the adults regarding zika virus and selected variables. Therefore, the hypothesis stated there is will be significant association between pre-test knowledge level of adults regarding zika virus and selected demographic variables are rejected.

CONCLUSIONS

Zika virus infection during pregnancy is a cause of microcephaly and other congenital abnormalities in the developing fetus and newborn. Zika infection in pregnancy also results in pregnancy complications such as fetal loss, stillbirth, and preterm birth. Zika virus infection is also a trigger of Guillain-Barré syndrome, neuropathy and myelitis, particularly in adults and older children. Research is ongoing to investigate the effects of Zika virus infection on pregnancy outcomes, strategies for prevention and control, and effects of infection on other neurological disorders in children and adults. Zika virus is primarily transmitted by the bite of an infected mosquito from the Aedes genus, mainly Aedes Aegypti, in tropical and subtropical regions. Based on the findings of the study, there was no association between the knowledge level and demographic variables of the adults. Therefore the investigator felt that it was necessary to improve the knowledge level.

RECOMMENDATIONS

Similar study can be replicated in other part of the country and on a large scale sample for a long period. A quasi-experimental study can be carried out to find the effectiveness of a structured teaching programme on Zika virus and its prevention. A descriptive study can be done to determine the prevalence of Zoonotic diseases among elderly.

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