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Effectiveness of structured teaching program regarding knowledge of dengue among the adults of selected urban areas of Raipur, Chhattisgarh

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Abstract
Dengue is a tropical disease caused by a virus carried by mosquito. Dengue is found in tropical and subtropical region around the world predominately in urban and semi-urban area and is now spreading in rural areas. An estimated 50 million dengue infection occurred worldwide annually. To assess the knowledge of adults regarding dengue 2) to evaluate the effectiveness of structured teaching programme regarding knowledge of dengue among the adults in selected urban areas of Raipur, Chhattisgarh. The research design adopted was pre-experimental (one group pre-test post-test design). The study was conducted at selected urban areas of Raipur with sample size of 100 adults (18-55 years). Non probability convenient sampling technique was adopted to select the sample. The data was collected by means of self-structured questionnaire to assess the knowledge among adults.at the end of pre –test structured teaching was given.and then after 10-15 days post-test was conducted. The mean score of pre-test was 17.45 and mean score of post-test was 23.17 and the mean improvement was 5.72, which is 32.77% of total Adults. The Paired't' value obtained for knowledge was 17.308 which was found significant at 0.05 level ($p<0.05$).

Keywords: structured teaching programme, knowledge, dengue fever, adults

1. Introduction
Dengue is a tropical disease caused by a virus carried by mosquito. Dengue is found in tropical and subtropical region around the world predominately in urban and semi-urban area and is now spreading in rural areas. An estimated 50 million dengue infection occurred worldwide annually. Approx. 90% of the children are less than 5 years and about 2.5%, of those affected, die [1]. In India, the risk of dengue has shown an increase in recent years due to rapid urbanization, life style changes and deficient water management including improper water storage practices in urban and rural areas leading to proliferation of mosquito breeding sites. The cases are peak after monsoon. According to WHO, the number of cases reported increased from 2.2 million in 2010 to 3.2 million worldwide in 2016. The year 2016 was the largest dengue outbreak worldwide [2]. In 2015, Delhi recorded its worst outbreak since 2006 with over 15000 cases. The no. of dengue cases across Chhattisgarh in 2017 amounted to approximately 433, up from about 356 cases in 2016 [3]. Recently on 21 august 2018, 2 more youth died because of dengue, Chhattisgarh government has claimed that 7 patient died of dengue in the month of July 2018. Due to Lack of awareness a number of cases remain unreported [4].

Objectives
1. To assess the knowledge of adults regarding dengue in selected urban areas of Raipur.
2. To assess the effectiveness of the structured teaching programme regarding knowledge of dengue among the adults in selected urban areas of Raipur.
3. To find the association between the pre-test knowledge score and selected demographic variables of adults in selected urban areas of Raipur.

Hypotheses
H_0: There will not a significant difference between pre-test and post-test knowledge Score among adults regarding knowledge of Dengue. H_1: There will be a significant association between pre-test knowledge score with selected demographic variables.

Material and methods
A quantitative research approach was used with one group pre-test post-test research design to evaluate the effectiveness of structured teaching programme regarding knowledge of dengue among the adults in selected urban areas. 100 samples using non-probability - convenient sampling technique were selected for the study. Adults were selected by Non-probability convenience sampling technique. After obtaining the written consent, the investigators used self structured questionnaire to assess the pre-test knowledge regarding Dengue. Then a structured teaching program was provided to adults of study and Post-test was taken after 10-15days.

Results
Out of 100 adults (41) belonged to the age group of (18-30 years) (41%), (39) belonged to the age group of(31-42 years) (39%), (20) belonged to the age group of (43-55 years) (20%).Majority 47 (47%) of adults were male and 53 (53%) were female.13(13%) of the sample were studied up to primary, 32(32%) of sample studied up to secondary, 41(41%) was graduate and 14(14%) was post-graduate. Regarding occupation 12(12%) were doing government job, 39(39%) were doing private job, 15 (15%) were unemployed, and 34(34%) were self-employed.
Regarding the types of family 44(44%), were belonged to joint family 49(49%), were belonged to nuclear family 6(6%) were belonged to extended family and 1(1%) single

parent. Maximum 88(88%), were living in pucca house, 8(8%) were living in kutcha house and 4(4%) were living in semi pucca house. In case of drainage system 52(52%) had open drainage system and 48(48%), had closed drainage system. Regarding use of protective measures 99(99%), adults were using protective measures while only 1(1%) was not using protective measures, 60(49.5%) were using mosquito net, 34(28.09%) were using mosquito coil, 22 (18.18%) were using liquid repellent and 5 (4.13%) were using other measures. Regarding source of education 86(63.70%) adults got knowledge from T.V. 19 (14.07%)], adults got knowledge from newspaper, 5 (3.7%) adults got knowledge from radio and 25 (18.51%) adults got knowledge from internet.

Section I: Assessment of knowledge of adults regarding dengue

Table 1: Frequency and percentage distribution of pretest and post-test level of knowledge regarding dengue among adults (18-55 years) of selected urban areas of Raipur. N=100

Knowledge	Inadequate Knowledge (0 -50%)		Adequate knowledge (50-100%)	
	Total no. of cases	%	Total no. of cases	%
Pre-Test	29	29%	71	71%
Post Test	1	1%	99	99%

Shows that in the pre-test (29) out of 100 adults have inadequate knowledge which is less than 50% of the total data. Further (71) out of 100 have adequate knowledge which is in the range of 50-100%. In the post-test (1) out of 100 adult have inadequate knowledge, 99 out of 100 adult have gained adequate knowledge, which significantly shows an improvement in the knowledge of the adults after the structured teaching programme on Dengue.

Section II: Comparison of mean, standard deviation of pre-test and post-test knowledge of adults.

Table 2: Comparison of pretest and post-test level of knowledge regarding dengue among adults (18-55 years) of selected urban areas of Raipur N= 100

Knowledge	Mean	S.D	Mean improvement	Paired 't' value
Pre-test	17.45	3.780	5.72 (32.77 %)	't'(cal)= 17.308 't'(tab)= 1.98 S*****
Post –test	23.17	3.05		

S - Significant

Shows that there is mean improvement of 5.72 (32.77%) in the score of pretest and post-test as the mean score of pre-test is 17.45 with the S.D is 3.780 and mean score of post-test is 23.17 with S.D of 3.05 respectively. Here, the't' (cal) (17.308) >'t' (tab) (1.98) at 5% level of significance. Hence, null hypothesis is rejected, which reveals that there is a significant improvement in the knowledge of adults after the structured teaching program on dengue.

Section-III: Level of association of pre-test knowledge regarding dengue among adults with selected demographic variables.

Table 3: N=100

Demographic variables	Inadequate knowledge		Adequate knowledge		Chi-square value (p<0.05)
	F	%	F	%	
Age					$x2$(cal) = 0.779 $x2$(tab) =5.99 d.f= 2 *N.S*
18-30 years	3	3	30	30	
31-42 years	11	11	26	26	
43-55 years	4	4	16	16	
Gender					$x2$ (cal) = 0.229 $x2$(tab) =3.84 d.f= 1 *N.S*
Male	13	13	34	34	
Female	17	17	36	36	
Education					$x2$(cal) = 10.813 $x2$(tab) =7.82 d.f= 3 *S***
Primary	3	3	9	9	
secondary	13	13	18	18	
Graduation	13	13	30	30	
Post-Graduation	1	1	13	13	
Occupation					$x2$(cal) = 1.306 $x2$(tab) =7.82 d.f= 3 *N.S*
Government service	3	3	9	9	
Private services	11	11	28	28	
Self employed	9	9	24	24	
Unemployed	7	7	9	9	
Type of Family					$x2$(cal) =1.224 $x2$(tab) =5.99 d.f= 2 *N.S*
Nuclear	14	14	36	36	
Joint	13	13	31	31	
Extended	3	3	3	3	
Type Of House					$x2$(cal) = 0.265

Kutcha	3	3	5	5	$x2$(tab) = 5.99
Pucca	26	26	62	62	d. f= 2 *N.S*
Semi-Pucca	1	1	3	3	
Draingae System					$x2$(cal) = 0.35
en	13	13	35	35	$x2$(tab) = 3.84
Closed	17	17	35	35	d.f= 1 *N.S*

N.S - Not – significant
*S***- significant*

It is clear from the above table that there is significant association between the pre-test level of knowledge with the educational status $x2= 10.813$ ($p < 0.05$) and with other demographic variables it is not-significant. Hence, H1 stated that there will be a significant association between pre-test knowledge score with selected demographic variables is accepted.

Conclusion

In pretest 29% adults had inadequate knowledge (0-50%) and 71 % had adequate knowledge (50-100%). In posttest there is a significant increase in knowledge, only 1% have inadequate knowledge and 99% adults have adequate knowledge regarding dengue. The main difference (5.72) 32.77% between pre-test (17.45) and posttest (23.17) score among adults. The study is significant.

References

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