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A Pre-Experimental Study to Assess the Effectiveness of Structured Teaching Programme on Knowledge Regarding Prevention of Dengue Fever among Children

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Abstract

Health is the precious possession of all human being as it is an asset for an individual and community as well. Today health is recognized as a fundamental right of human being. Nowadays the major health problems in India are more in rural as well as urban areas. In rural areas mosquito borne disease are more due to unhygienic practices. Mosquito are the most important vectors of human infectious disease like malaria, Dengue, Filaria and Chikungunya. This mosquito came more human suffering than any other organism. Over one million people die from mosquito-borne disease every year. Today, dengue fever is considered one of the most important arthropod-borne viral diseases in humans in terms of morbidity and mortality. So researcher felt that is vital that children's should possess knowledge on some vector born diseases especially dengue fever and its prevention. The research approach adopted in the present study was evaluative approach, and research design was one group pre test and post test design which belongs to pre-experimental design. Purposive Non random sampling technique was used to select the school as well as the sample. The sample size was of 60 children's of aged between 10 to 18 years. Data were collected by using structured interview schedule and structured teaching programme was intervened, again after a gap of seven days post test was conducted with the same tool. Result showed that the pre test mean score was 14.03 (S.D =4.190) and in post test it was 22.80 (S.D =1.538) which indicated an improvement in the knowledge level of the respondents after structured teaching programme.

Keywords: Dengue; vectors borne disease; structured teaching programme; knowledge.

Introduction

Health is the precious possession of all human being as it is an asset for an individual and community as well. It is a basic fundamental right of each individual, to maintain a level of health that will promote them to work productively and participate actively in the social life of their community. A person is said to be healthy when he or she is completely fit with physical, mental, spiritual and well adjusted with their environment and also if there is no complaints or absence of any discomfort [1].

Nowadays the major health problems in India are more in rural as well as urban areas. In rural areas mosquito borne disease are more due to unhygienic practices. Mosquito are the most important vectors of human infectious disease like malaria, Dengue, Filaria and Chikungunya. This mosquito came more human suffering than any other organism [2].

Dengue fever is caused by a bite from an infected mosquito. This species of mosquito has black and white stripes on its legs and body. It bites during day light hours. Its preferred breeding waters are

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clean stagnant waters in shady areas. The WHO says some 25 billion people two fifths of the world's populations are now at risk from dengue and estimates that there may be 50 million of dengue infection worldwide every year [3]. During the rainy season mosquitoes breed in stagnant water. Water storage, containers for drinking, washing, bathing, is the primary source of larval accounting for 90% of the total breeding place. Important breeding place of mosquitoes is in slums, and open drainage, waste disposal. The people living in the hereby area are easily become the victims of vector – borne disease [4].

Dengue fever and dengue hemorrhagic fever are acute febrile disease found in the tropics and caused by four closely related virus serotypes of the genus Flavivirus, family Flaviviridae. It is also known as break bone fever. Dengue spreads by the bite of an infected mosquito Aedes Aegypti. The mosquito gets the virus by biting the infected persons [5]. The first symptoms of the diseases occur about 5-7 days often after an infected bite. dengue fever is an acute febrile infection characterized by sudden onset fever for 3-8 days intensive Headache, Muscle pain, Joint pain, Eye pain, Anorexia & disturbances and rash. Dengue is a fatal disease and deserves immediate medical treatment [6].

Prevention can be done by protecting individual themselves from bites of mosquitoes and it is possible by controlling proliferation of mosquitoes in stagnant water, properly covering all water tanks, people should wear long sleeves shirts and long pants, use of mosquito spray, repellents (coils, cream), chemical agents such as NNDB, DEET etc are used to kill Aedes mosquitoes [7]. The above facts created an insight in the investigor mind that by improving the knowledge of school going children through structured teaching programme, the incidence of some vector born diseases especially dengue fever and its prevention may be reduced.

Methods

The research approach adopted in the present study was evaluative approach, and research design was one group pre test and post test design which belongs to pre- experimental design. Purposive Non random sampling technique was used to select the school i.e. Government Arya senior secondary school sohana mohali. The sample size was of 60 school children's age between 10 to 18 years. The pilot study revealed the feasibility of the study. Reliability of the tool was determined by the test retest method. By using Karl Pearson's co- efficient of co relation method "r" value is obtained. [r^1=0.92]. It shows that the tool was highly reliable for the final study. Data were collected by using structured interview schedule through multiple choice questions and structured teaching programme was intervened, again after a gap of seven days post test was conducted with the same tool. Analysis of the data was done by using descriptive statistics as mean, standard deviation and paired' test and 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 children by their socio demographic variables.

Frequency distribution		Frequency	Percentage
Age in years	10-12	33	55
	13-15	11	18.3
	16-18	16	26.6
Gender	Male	31	51.6
	Female	29	48.3
Religion	Hindu	27	45
	Sikh	20	33
	Muslim	10	17
	Others	3	5
Type of family	Nuclear	33	55
	Joint	27	45
Type of House	Kaccha	16	27
	Paccka	44	73
Monthly family income	5000-10000	43	72
	10001-15000	7	12
	15001-20000	5	8
	>20000	5	8
Source of information	Books	38	63
	Newspapers	8	13
	Mass Media	3	5
	Family, Friends, Teachers	11	18

- More than half of the children 55% (33) were from 10-12 years, 18.3% (11) were from 13-15 years and 26.63% (16) were from 16-18 year age group**.**
- Majority of subjects were males 51.6% (31) and 48.3% (29) were females.
- Majority of subjects were in Hindu religion 45% (27,) Sikh religion 33% (20), Muslim religion 17% (10) and 5% (3) are others religion.

- Majority of subjects were living in nuclear family 55% (33) and 45% (27) in joint family.
- Majority of children were living in paccka house 73% (44) and 27% (16) living in Kaccha house.
- Majority of children's parents income between 5000 to 10000 72% (43), 10001 to 15000 12% (7), 15001 to 20000 8% (5) and more than 20000 8% (5).
- Majority of subjects were get information from books 63% (38), and 13% (8) from Newspapers, 5% (3) and 18% (11) from family, friends and teachers (Table 1).

In pre test, more than half of the informants had average knowledge (65%) followed by low knowledge (35%) and no single informant had high knowledge. The score of post test indicated marked increase in knowledge levels of children that is more than half of the respondents had average knowledge (56.7%) followed by high knowledge (43.3%) and it was also interesting to know that no single respondent in post test obtained low knowledge (Table 2).

The pre test mean score was 14.03 (S.D =4.19) and in post test it was 22.80 (S.D =1.53) which indicated an improvement in the knowledge level of the respondents after structured teaching programme (Table 3).

The Mean difference of (8.77), S.D = 2.66 of overall knowledge with paired 't' value (15.62). Thus it reveals that the mean post test knowledge scores were significantly higher than the mean pre test knowledge scores of children. It shows there is a significant difference between pre test and post test knowledge scores of children regarding prevention of dengue fever (Table 4).

There is no significant relationship between age, gender, religion, type of family, type of house family monthly income and sources of information regarding prevention of dengue with post test knowledge scores regarding prevention of dengue among children (Table 5).

Table 2: Frequency and percentage distribution of overall level of knowledge regarding dengue fever among children

Level of knowledge	Pre Test		Post Test	
	Frequency	Percentage	Frequency	Percentage
Low knowledge	21	35%	0	00 %
Average knowledge	39	65%	34	56.7%
High knowledge	00	00%	26	43.3%

Table 3: Mean and Standard Deviation of pre test and post test knowledge scores regarding prevention of dengue among children

	Pre		Post	
	Mean	SD	Mean	SD
Knowledge regarding prevention of dengue	14.03	4.19	22.80	1.53

Table 4: Comparison of knowledge scores of children before and after Structured Teaching Programme regarding prevention of dengue

	Mean diff	SD Difference	SE differe	Paired t test
Knowledge of dengue	8.77	2.66	0.46	15.62

Table 5: Association between socio demographic variables of children with their post test knowledge scores regarding dengue

Variables	Calculated χ^2 value	Association	Degree of freedom	χ^2 Table value at 5% level of significance
Age	3.119	NS	3	7.81
Gender	0.019	NS	1	3.84
Religion	4.25	NS	3	7.81
Type of family	0.043	NS	1	3.84
Type of house	4.324	NS	3	7.81
Family monthly income	2.72	NS	3	7.81
Sources of information	2.481	NS	3	7.81

Note: NS denotes No Significant.

Disscussion

Healthy environment depends upon the healthy family. Healthy family again depends upon the individual. Every individual have the right of good health. As many micro organisms are around human, there is a need for everyone to make aware how to protect and how to prevent from occurrence of diseases.

- The pre test mean score was 14.03 (S.D =4.19) and in post test it was 22.80 (S.D =1.53) which indicated an improvement in the knowledge level of the respondents after structured teaching programme.
- The Mean difference of (8.77), S.D = 2.66 of overall knowledge with paired 't' value (15.62). Thus it reveals that the mean post test knowledge scores were significantly higher than the mean pre test knowledge scores of children. It shows there is a significant difference between pre test and post test knowledge scores of children regarding prevention of dengue fever. Thus the research hypothesis was accepted.
- There is no significant relationship between age, gender, religion, type of family, type of house family monthly income and sources of information regarding prevention of dengue with post test knowledge scores regarding prevention of dengue among children.

Conclusion

The conclusion of the study regarding knowledge of the pre test mean score was 14.03 (S.D =4.19) and in post test it was 22.80 (S.D =1.53) which indicated an improvement in the knowledge level of the respondents after structured teaching programme. Thus it reveals that the mean post test knowledge scores were significantly higher than the mean pre test knowledge scores of children regarding prevention of dengue. Thus the research hypothesis was accepted. It shows that there is a significant difference between pre test and post test knowledge scores of children. Chi square result showed that there is no association was between age, gender, religion, type of family, type of house family monthly income and sources of information regarding prevention of dengue with post test knowledge scores regarding prevention of dengue among children. Hence, the research hypotheses related to above demographic variables has rejected.

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Conflict of Interest

The authors declare that they have no conflicts of interest.

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