Effect of Planned Teaching Program on Knowledge regarding Dengue Fever among Selected Junior College Students

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Abstract

Background: Over the past 10–15 years, next to diarrheal disease and respiratory infection, dengue fever has become a leading cause of hospitalization and deaths. Today, dengue fever is considered one of the most important arthropod-borne viral diseases in humans in terms of morbidity and mortality. Hence, the investigators felt the need to increase awareness on dengue fever and its prevention.

Aim: The aim of this study was to evaluate the effect of planned teaching program on knowledge regarding dengue fever among selected junior college students

Subjects and Methods: Fifty junior college students were enrolled in the study. The data were collected using a pre-tested structured questionnaire. The planned teaching program was administered at the end of the pre-test. The post-test was carried out after 7 days, using the same tool as the pre-test. The data were expressed as frequency, proportions, and/or mean and standard deviation.

Results: Analysis of data revealed that pre-test knowledge score was 12.92. Considering the level of knowledge of the students, a planned teaching program was administered. The post-test knowledge score was 21.52. The planned teaching program significantly improved the knowledge of the college students about dengue fever.

Conclusion: Planned teaching program is an effective tool to increase knowledge of students. Large studies in communities with large sample size are required to further aware the people.

Keywords: Dengue fever, knowledge, planned teaching program

INTRODUCTION

From time memorial with the spring of newer life, clustering of ample innovation in the emerging scientific field, we have witnessed the drastic turnover of medical advancement in the prevention of various diseases; most noted are those of killer disease. A shift of focus is largely placed on those most prevalent, namely dengue, malaria, and filaria. Among communicable disease, dengue fever is nowadays the most common health concern of the world and it is significant to address this issue because it is a rapidly growing vector-borne disease.[1] The possible causes of dengue fever worldwide are rapid urbanization, population growth, and international air travel to the endemic countries. The occurrence persists to rise mostly for a reason due to the effects of globalization, unsuccessful planning for urbanization, and a shortage of vector control and climate change.

The incubation period of dengue fever is 3–12 days. Fever is the most common symptoms along with headache myalgia, arthralgia, leukopenia, and rash. The disease can be controlled through prevention. Primary prevention is protection from mosquito bite, insecticide and mosquito repellent are some effective domestic method to avoid vector. Awareness about the disease prevention will help people to avoid getting the disease.[2] According to the WHO report

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of 2009, it is estimated that 50–100 million dengue fever cases and 26,000 deaths are reported annually and 2.5 billion people or 40% of the world population is at risk of dengue fever, and the mortality rate is increasing.[1] Dengue exerts a huge burden on population, health systems, and economy as well. During multinational survey in 2007, dengue was found to be the second most common disease after malaria. Previously, it has been reported that community-based educational strategies may play an important role in prevention and spread of dengue.[3] Hence, the present study was aimed to evaluate the effect of planned teaching program on knowledge regarding dengue fever among selected junior college students.

Objectives of the study
The objectives of the study was as follows:
- To assess the knowledge in relation to dengue fever before and after the planned teaching program.
- To compare the pre- and post-test knowledge score of junior college students regarding dengue fever.
- To find out the association between selected demographic variables and post-test knowledge scores regarding dengue fever.

SUBJECTS AND METHODS

A total of 50 junior college students aged 16 years or above with the ability to understand English and willing to participate in the study were enrolled in the study at a junior college. Subjects, who were unavailable at the time of study and were not willing to participate, were excluded from the study.

Methodology
The participants were briefed about the nature of the study, consent was taken, and a pre-tested structured questionnaire was administered to them. Data that were recorded include general data comprised of age, gender, family income, stream of study, and source of information. Then, the researcher had administered planned teaching program for the students. Post-test was conducted to know the effectiveness of planned teaching program.

Statistical Analysis
Data were presented as frequency, percentage, mean, and standard deviation wherever applicable. Paired t-test was applied to compare before and after knowledge about dengue fever. $P < 0.05$ was considered to be statistically significant.

RESULTS

Demographic variables
Table 1 shows demographic data of the subjects. 94% of subjects aged between 17 and 20 years, while only 3% aged between 20 and 23 years. Male outnumbered females with male-to-female ratio of 1.27:1. 62% of the subjects were studying in Science stream, while only 32% of subjects were studying Commerce. Family income was between 10,000 and

50,000/-Rs of 60% subjects. 52% of subjects reported that their source of information was television for awareness about dengue, while 28% of patients reported newspapers.

Effect of planned teaching program on knowledge
Our study observed that mean posttest knowledge score (21.52 ± 4.59) was significantly higher than the mean pretest knowledge score (12.92 ± 3.07), showing that planned teaching program significantly increased the knowledge of subjects about dengue fever.

We also observed that, before teaching program, 84% of subjects had average-to-very poor knowledge and only 16% had good knowledge. After teaching program, 74% of subjects had excellent knowledge and 26% of subjects had good knowledge. None of the subjects had average to very poor knowledge after planned teaching program [Figure 1].

Association between demographic variables and Pre-test knowledge
Our study observed that none of the variables such as age, gender, stream of the study, family monthly income, and

Table 1: Demographic variables

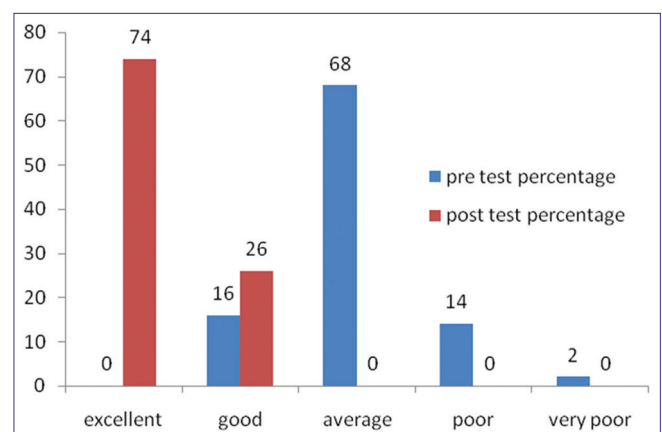| Particulars	Frequency (%)
Age (years)	
17–20	47 (94.00)
20–23	3 (6)
23–26	0 (0.00)
>26	0 (0.00)
Gender	
Male	28 (56.0)
Female	22 (44.0)
Stream of the study	
Science	31 (62.0)
Commerce	19 (38.0)
Family monthly income (Rs.)	
<10,000	7 (14.0)
10,000–50,000	30 (60.0)
>50,000	13 (26.0)
Source of information	
Magazines	3 (6.0)
Newspapers	14 (28.0)
Health workers	7 (14.0)
Television	26 (52.0)

Figure 1: Comparison between pre- and post-test knowledge

Table 2: Association of knowledge with demographic variables

Particulars	Pre-test knowledge score		χ^2	Inference
	<Mean	>Mean		
Age (years)				
17–20	17	30	8.719	NS
20–23	2	1		
23–26	0	0		
>26	0	0		
Gender				
Male	11	17	0.744	NS
Female	8	14		
Stream of the study				
Science	9	22	3.11	NS
Commerce	10	9		
Family monthly income				
<10,000	4	3	4.42	NS
10,000–50,000	11	19		
>50,000	4	9		
Source of information				
Magazine	0	3	3.75	NS
Newspaper	6	8		
Health worker	4	3		
Television	9	17		

NS: Not significant

source of information were associated with the knowledge of the subjects about dengue [Table 2].

DISCUSSION

Our study observed that planned teaching education is an effective way of increasing awareness about dengue fever. Similar findings have also been shown by Shine *et al*. Observed that the knowledge score of the students' nurses regarding prevention and control of dengue fever was less before the introduction of planned teaching program. The planned teaching program facilitated them to gain more knowledge about prevention and control of dengue fever which was evident in post-test knowledge scores. Hence, they concluded that PTP was an effective strategy to provide information and to improve knowledge of student nurses regarding prevention and control of dengue fever.[4] We observed an average-to-poor knowledge before implementation of planned teaching. Similar findings were also observed by Dhimal *et al*.[5] Most subjects in our study had gained knowledge through television. Similar findings were reported from Jamaica,[6] Laos,[7] and the Philippines.[8] In Pakistan, the major source of information on dengue fever was reported to be television

followed by newspapers and relatives/friends/family.[9] In the present study, more than half of the participants had received information about dengue fever television. This indicates role of education through various channels in increasing awareness about dengue fever.

CONCLUSION

The present study has found that junior college student had poor knowledge on dengue and its prevention. A significant number of students were unaware of preventive measures. Various awareness programs for school children regarding communicable diseases should be arranged by administrators with up to date knowledge so that they can implement in their day-to-day life. The limitations of this study included the absence of a comparative group and the small sample size.

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