Original Research Article

Knowledge and Attitude on Dengue Fever among III Year Engineering Students at SGT University, Budhera, Gurugram with a View to Develop a Self Instructional Module

Kavita Pillai[1], Rashmi[1], Priyanka[2], Rahul[2], Rahul maan[2], Rahul Yadav[2], Ramandeep Kaur[2]

[1]Lecturer, [1]Assistant Professor; Faculty of Nursing, SGT University, Gurugram, Haryana
[2]Students, Faculty of Nursing, SGT University, Gurugram, Haryana

Corresponding Author: Rashmi

ABSTRACT

Dengue is one of the most common mosquitoes borne disease in India. It causes a high fever and a rash. Unlike most mosquitoes, dengue causing mosquitoes bites during the day. These mosquitoes breed in warm, humid weather and in stagnant water. This is why the number of cases of dengue goes up high during monsoon season. A descriptive study was done to assess the knowledge and attitude on Dengue fever among 3rd year Engineering students at SGT University, Gurugram. The objectives of the study were to assess the level of knowledge and attitude among engineering students regarding Dengue fever and to find the association between level of knowledge and attitude and socio demographic variables. A descriptive survey approach and design was used for the present study. The study was conducted in the Engineering College SGT University, Budhera, Gurugram. The sample comprised of 60 III year engineering college students. Convenient sampling method was used to collect the data from the samples. Findings of the present study concluded that the mean score of knowledge is 3.3 and mean for attitude is 5.38, mode for knowledge is 2 and mode for attitude is 6, median for knowledge is 3 and median for attitude is 6 and standard deviation for knowledge is 13.95 and standard deviation for attitude is 17.82 hence the study shows that there is need for IEC (information education communication) activities for the engineering college students regarding Dengue Fever.

Keywords: Assess, *Knowledge, Attitude, Dengue fever, Engineering students*

INTRODUCTION

Dengue is one of the most common mosquitoes borne disease in India. It causes a high fever and a rash. Unlike most mosquitoes, dengue causing mosquitoes bites during the day. These mosquitoes breed in warm, humid weather and in stagnant water. This is why the number of cases of dengue goes up high during monsoon season[1]. The earliest known documentation of dengue fever like illness was in the Chinese Encyclopaedia of symptoms in Chin Dynasty (CE 265-420).The illness was called „Water poison‟ and was associated with flying insects near water. Outbreak of febrile illnesses compatible with dengue fever have been recorded throughout history, with first epidemic described in 1635 in West Indies. In 1779-1780 the first confirmed, outbreak reported, almost simultaneously in Asia, North America and Africa. Benjamin Rush coined the term break bone fever to describe the intense symptoms reported by one of his patients. A dengue like epidemic in East Africa in the early 1820's was called, in Swahili, ki denga pepo (it is a sudden taking over by the spirit).The English version of this term "Dandy Fever" was applied to an 1827-28 Caribbean outbreak, and in the

Spanish Caribbean colonies, the term was altered to "dengue".[2]

Dengue is an acute fever caused by a virus. It occurs in two form; Dengue fever and Dengue Hemorrhagic Fever. Dengue fever is marked by the onset of sudden high fever, severe headache and pain behind the eyes, muscles and joints. Dengue Hemorrhagic fever (DHF) is more severe form, in which bleeding and sometimes shock occurs – leading to death. It is most serious in children. Symptoms of bleeding usually occur after 3-5 days of fever. The high fever continues for five to six days (103-105F or 39-40C). It comes down by the third or the fourth day but rises again. The patient feels much discomfort and is very weak after the illness. Dengue spreads rapidly and may affect large number of people during an epidemic resulting in reduced work productivity, but most importantly causing the loss of lives[3].

Recognition of Dengue Hemorrhagic fever and Shock includes symptoms similar to Dengue fever ,any one of the following; severe and continuous pain in abdomen, frequent vomiting with or without blood, excessive thirst(dry mouth),restlessness or sleepiness, bleeding from the nose, mouth and gums or skin bruising, black stools like coal tar, pale, cold skin. Prevention of Dengue involves all efforts of control is directed against mosquitoes. It is important to take control measures to eliminate the mosquitoes and their breeding place. However, the efforts should be intensified before the transmission season (during and after the rainy season) and at the time of the epidemic.[4] Dengue virus transmission occurs round the year. However; the risk of infection tends to be seasonal and can be expected to be highest during a recognized outbreak of dengue infection. Dengue virus affects both the sexes and all age groups. In South East Asia, where dengue is hyper endemic, dengue hemorrhagic fever usually affects children below 15years of age. Dengue viruses are transmitted to humans through the bites of infective female Aedes aegypti mosquitoes. In children the most

common symptoms are fever, cough and mild gastrointestinal symptoms and a mild running nose. The only method of controlling and preventing dengue and dengue hemorrhagic fever is to combat the vector mosquitoes.[5]

Need of the Study

Dengue has become a major international public health problem in recent year. During epidemic of dengue attack rate among susceptible are often 40 – 50% but may reach 80 – 90%. An estimated 500,000 cases of dengue hemorrhagic fever require hospitalization each year of which 90% are children. 8 The World Health Organization estimates that around 2.5 billion people are at a risk for dengue infection. It has become a leading cause of death among children [6]. Without adequate treatment DHF case fatality rate can exceed 20%. There was a steady rise in number of cases from 2002 to 2007, with the largest number of cases seen in 2007. Most cases were observed in the post monsoon season in the month of September. Out of total of 344 cases 285 (82.8%) patients had dengue fever, 34(9.8%) had DHF & 25 (7.3%) had DSS. Deaths were reported in 9 cases with the majority of deaths occurring in 2003. Uncontrolled urbanization and concurrent population growth, deterioration of public health infra structure increased travelling, non – existence of effective mosquito control methods are responsible for dramatic global emergency of danger. The disease control should emphasis on vector surveillance integrated vector control, emergency response, early clinical diagnosis and appropriate management of the cases.[7]

Prevention of Dengue involves all efforts of control is directed against mosquitoes. It is important to take control measures to eliminate the mosquitoes and their breeding place. However, the efforts should be intensified before the transmission season (during and after the rainy season) and at the time of the epidemic. [8] A study done on community and schooled based health education for

prevention of dengue control in rural Cambodia. Dengue fever epidemic in Chennai, a study on clinical profile and outcome was done in the month of October to December 2001. It showed 59 Sero positive cases were reported in the hospital during the study, of which 5 were DSS, 11 were DHF and 20 were DF. The age groups affected are between 7 months to12 years.[7] Today's children are tomorrow's future, protecting them from this dreaded illness is the key to good healthy life of our children [8].

Statement of the problem

A Descriptive study to assess the Knowledge and Attitude on Dengue fever among III year Engineering Student at SGT University, Budhera, Gurugram in a view to develop a self instructional module.

Objectives

1. To assess the Knowledge on Dengue fever among III year Engineering Students at SGT University, Gurugram.
2. To assess the Attitude on Dengue fever among III year Engineering students at SGT University, Gurugram.
3. To find out the Association between the level of Knowledge and Attitude on Dengue fever among III year Engineering Students with the selected demographic variables.

Operational Definitions:

1. **Knowledge:** In the present study knowledge refers to the level of awareness that respondents have regarding the cause, transmission, clinical manifestations and prevention of dengue fever.
2. **Attitude:** In the present study attitude refers to the feeling and belief of the respondents with regard to dengue fever and its prevention.
3. **Practice:** In the present study practice refers to the actions intended to do in order to prevent from dengue fever.
4. **Adult:** In the present study adult refers to the age group of more than 18 years

and pursuing engineering from the SGT University.
5. **Dengue:** In the present study Dengue refers to an acutely infectious mosquito borne viral disease (namely arbo virus) showing symptoms such as high grade fever, nausea, vomiting and muscle pain.

Assumption:

Present study assumes that III year engineering college students may have some knowledge regarding Dengue fever and its prevention and management.

HYPOTHESIS

H1- There will be significance difference between knowledge and attitude regarding dengue fever among III year engineering students.
H2- There will be significant association between level of knowledge and attitude and selected socio demographic variables.

REVIEW OF LITERATURE

A Descriptive study was conducted by Kumari Meena, Lakhbeer Kaur, Kaur Mandip among the people of village Payal, Ludhiyana, Punjab in July 2015. There objective were to assess the knowledge and practice regarding dengue fever and the sample was 100 people with 20 to 60 years of age. Finally the study concluded that maximum of subjects i.e. 86% had good knowledge, 14% had average knowledge and none had poor knowledge regarding dengue fever. Regarding practice it was found that maximum of subjects i.e. 98% had good practice and 2% had poor practice regarding dengue fever. Further it was found that there was statistically significant different knowledge score with age, gender, marital status and per capita income and in case of practice, there was statistically difference of practice score with marital status.[9] A similar descriptive research study conducted by professor Jindal AK, Ritu R, Shilpa V among the selected students of RPIIMS Bastara, Karnal, and Haryana in June 2016. Their objectives were to assess the knowledge regarding dengue fever and 74 students were selected from B.Sc.

nursing, GNM, BSLP department. Finally the conclusion of this study was that maximum number of medical students i.e. 92% had good level of knowledge followed by 8% of medical students had average level of knowledge. There was no significant association with age, education of medical student, religion, course of study and suffered with dengue. So there is great need to aware about the change so that mortality rate can be reduced[10]

METHODOLOGY
Research approach
A Descriptive survey approach was used for the present study
Research Design
The investigator selected descriptive survey design to assess the knowledge of III year Engineering students.
Setting of the study
The study was conducted in the Engineering College SGT University, Budhera, Gurugram.
Population
In the present study population consisted of all 3rd year Engineering college students of SGT University, Budhera, Gurugram.
Sample
The sample comprised of 60 engineering college students in the Engineering College, SGT University, Budhera, Gurugram.
Sampling size and Technique
Sample size consisted of the 60 college students in the Engineering College, SGT University. Convenient sampling technique was used to collect the data from the samples.

ELIGIBILITY CRITERIA
Inclusion Criteria:
- Students studying in engineering college SGT University.
- Students who are available at time of data collection.
- Students who are willing to participate.

Exclusion Criteria:
- Students who are not willing to participate in the study.

- Students who are not available at the time of data collection.

DEVELOPMENT OF THE TOOL
Based on objectives of the study a structured questionnaire was prepared to assess the knowledge and attitude regarding Dengue Fever among the students of Engineering College SGT University.

The tool consists of three sections:
Section A: Questionnaire on Demographic variables
Section B: Knowledge Questionnaire
Section C: Attitude Questionnaire
Description of the tool:
The tool consists of:
Section A:
It consist of demographic variables such as age, gender, place of living, family income and source of knowledge.
Section B:
This section consists of 10 items to assess the knowledge regarding Dengue fever among college students.

Each item has options with one most correct answer. For each item the correct response carries one score and wrong response carries zero score. Thus for 10 items in that maximum obtainable score is 10.
For each correct answer score of one was given for wrong answer was given zero score.
Section C:
This section consists of 10 items on attitudes of students on Dengue fever.

RESULTS
SECTION I: SOCIO-DEMOGRAPHIC CHARACTERISTIC OF THE STUDY PARTICIPANTS

Table: 1 Frequency and percentage distribution according to the age. N=60

Sr. No	Age (years)	Frequency	Percentage (%)
1.	18-19 years	6	10
2.	19-20 years	13	21.67
3.	20-21 years	21	35
4.	21-22 years	20	33.33

Table 1depicts that most of the study participants (35%) falls in the age group of 20-21 years of age.

Table:2 Frequency and percentage distribution according to gender. N=60

Sr. No.	Gender	Frequency	Percentage (%)
1	Male	49	81.67
2	Female	11	18.33

Table 2 shows that most of the study participants (81%) were males while 18% were females.

Table-3 Frequency and percentage distribution according to marital status. N=60

Sr. No.	Marital Status	Frequency	Percentage (%)
1.	Married	9	15
2.	Unmarried	51	85

Table 3 shows that most of the study participants (85%) were unmarried and only 15% were married.

Table: 4 Frequency and percentage distribution according to place of living. N=60

Sr. No	Place Of Living	Frequency	Percentage (%)
1.	Rural	16	26.67
2.	Urban	44	73.33

Table 4 depicted that majority of the study participants (73%) belongs to urban area while the rest of the participants (26%) were from rural area.

Table-5 Frequency and distribution according to monthly household income. N=60

Sr.No.	Monthly Income (In Rs.)	Frequency	Percentage (%)
1.	Below 50,000	11	18.33
2.	1,00,000-1,50,000	28	46.67
3.	2,00,000-5,00,000	19	31.67
4.	Above 5,00,000	2	3.33

Table 5 interpreted that majority of the study participants have average family income between 100000 to 1500000 and only 3% of sample were having monthly income more than 500000 and above.

Table - 6 Frequency and distribution according to source of information. N=60

Sr. No.	Source of Information	Frequency	Percentage (%)
1.	Television	17	28.33
2.	Radio	21	35
3.	Newspaper	19	31.67
4.	Others	3	5

Table 6 depicts that majority of the study participants have newspaper as source of information regarding dengue fever and its prevention and management.

Table-7 Chi Square for finding the association between the level of knowledge and attitude: N=60

Sr. No	Level	Chi Square (x^2)	Degree of Freedom	p-value	Validity
1	Knowledge	63.8184	59	0.6975	NS
2	Attitude	82.5105	59	0.9766	NS

NS- Non-significant s- significant   p at 0.05 level of significance.

Table 7 depicts that p value is non-significant at 0.05 level of significance. This shows that the knowledge and attitude regarding dengue fever is not associated with socio-demographic variables of the study participants.

IMPLICATIONS IN NURSING:
Nursing Education:
1. As a nurse educator there are abundant opportunities for nursing professionals to educate regarding the prevention and management of dengue fever.
2. Nursing curriculum should be up to dated so that the knowledge of nursing student can be adequate.
3. In order to update knowledge on dengue fever management and prevention nurses must be encouraged to attend seminars, workshop, conferences and short courses.

Nursing Service:
Nurses are the key person of the health team, who play a major role in the health promotion and maintenance. This study implies a basis for developing standards of care in the OPD as well as in community. By providing prevention facilities nurses can impart knowledge to other staff nurses about the importance of knowledge of dengue.

Nursing Administration:
1. The nursing administration can take part in conducting health education programme and activities to improve the knowledge of patient regarding dengue fever.

2. Health education materials such as handouts and pamphlets should be made available to the patients.

3. The nurse administration should plan and organize continuing education programme for the faculty of nursing college and schools to organize the campaigns regarding the dengue fever.

Nursing Research:

1. The study helps the nurse researcher to develop appropriate health education tools for educating regarding the dengue fever.

2. The study will motivate the researchers to conduct same study with different socio-demographic variables on a large scale. The public and private agencies should also encourage research in this field through materials and funds.

3. Nurses should come forward to take up unsolved questions in the field of disease condition to carry out studies and publish them for the benefits of patients and their family.

DISCUSSION

In the present study, an attempt has been made to discuss the finding of the study in accordance with the objective of the study. The present study was conducted at selected engineering college of SGT University, Budhera Gurugram. Non-probability convenient sampling technique was used to collect the sample. This study was carried out with an objective to assess the knowledge and attitude regarding Dengue. In this study gross inadequacy of knowledge and attitude was found during the test which can significantly be improved after providing the booklet. A similar Cross sectional study was conducted by Ahmed Itrat, Abdullah khan, Sunniya javed, Imtiaz Jehan in tertiary care hospital in Karachi Pakistan from March 2008 to June 2008 their objective is to reveal the awareness practices of the country's adult population regarding on Dengue fever among 447 visitors. Finally the conclusion was that population of Karachi has adequate knowledge regarding the disease condition Dengue on isolated aspects, but the overall prevalence of sufficient knowledge based on their criteria is poor. They demonstrate adequate prevalence practices against the disease.[11]

CONCLUSION

This study concluded that, there is a significance difference between knowledge and attitude among III year engineering students after the implementation of SIM (self instruction module) regarding dengue and assessed by administering questionnaire on various aspect of dengue fever. In present study the mean score of knowledge is 3.3 and mean for attitude is 5.38, mode for knowledge is 2 and mode for attitude is 6, median for knowledge is 3 and median for attitude is 6 and standard deviation for knowledge is 13.95 and standard deviation for attitude is 17.82 hence the study shows that there is need for such IEC (information education communication) in the engineering college students.

REFERENCES

1. O.P Gai, Gupta, et al, Essential paediatris.6th ed. New Delhi: SDR Printers;2007.
2. Dengue fever and dengue haemorrhagic fever; book review the Nursing Journal of India.2006.vol-xcvii no.11:246-247.
3. Park.K. Preventive and social Medicine.17th ed. Jabalpur: Jaypee publishers;2002.
4. Dengue Virus Net.com. History of Dengue
5. Susanne Moore shepherd. Dengue fever 2007.Medscape.ref.
6. Khun.S, Mandererson.L. Health seeking and access to care for children with suspected dengue in cambodie. An ethmographic study.BMC public health 2007,7:262 .
7. Hammod.N.S, Balmesede.A, et al.The American journal of tropical medicine and hygiene, 140 warren hall Berkeley, CA .1999-2001.
8. Siddique. F.J, Haider .S.R, Bhutta. Endemic dengue fever: seldom recognized hazard for Pakistani children. Journal Infection Dev 2009; 3(4):306-312.
9. Meena Kumari Bimal, Lakhbir Kaur, Mandeep Kaur. Assessment of Knowledge and Practices of People Regarding Dengue Fever.Int. J. Nur. Edu. and Research.2016;

4(2):174-178. Available from URL: http://ijneronline.com/HTML_Papers/Internatioanal%20Journal%20of%20Nursing%20Education%20and%20Research__PID__2016-4-2-15.html

10. Arun Kumar Jindal, Ritu Rani, Vernika Shilpa. A Descriptive study to assess the Knowledge Regarding Dengue among selected Medical Students of RPIIMS Bastara, Karnal (Haryana) with a view to develops an Information Booklet. Int. J. Adv. Nur. Management. 2017; 5(3): 255-258.

11. Ahmed Itrat, Abdullah Khan, Sunniya Javaid, Mahwash Kamal, Hassan Khan. Knowledge, Awareness and Practices Regarding Dengue Fever among the Adult Population of Dengue Hit Cosmopolitan. US National Library of Medicine National Institutes of Health. v.3(7); 2008 PMC2440812. Available from URL: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2440812/

******