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A study to assess effect of self-instructional module on knowledge and practice regarding dengue fever among people residing in slums

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Abstract
Introduction: Dengue fever is an acute, mosquito-transmitted viral disease characterized by fever, headache, arthralgia, myalgia, rash, nausea, and vomiting. Infections are caused by any of four virus serotypes (DEN-1, DEN-2, DEN-3, and DEN-4).The incidence of dengue is increasing in most tropical areas throughout the world. Dengue fever, a very old disease, has reemerged in the past 20 years with an expanded geographic distribution of both the viruses and the mosquito vectors, increased epidemic activity, the development of hyperendemicity (the co-circulation of multiple serotypes),and the emergence of dengue hemorrhagic fever in new geographic regions. In 1998 this mosquito-borne disease is the most important tropical infectious disease after malaria, with an estimated100 million cases of dengue fever, 500,000cases of dengue hemorrhagic fever, and 25,000deaths annually.

Methods Research Approach
Research Approach: Exploratory Approach
Research design used was pre-test-post-test pre-experimental design. The conceptual framework based on health belief model was used for the study which is designed by Hochbaum (1958). The setting for this study was the selected areas of the study was conducted at the Gawali nagar, Phuleaagar, and Vitthalnagar of pimpri chinchwad Municipal Corporation of Pune city. Non-probability Convenience sampling technique was used for 60 samples.

Results: It has been observed that in this study pre-test-post-test pre-experimental design was used. The population for the present study comprised of people above 20 to 60years residing in their own home in selected slums at PCMC at Pune city. Total 60 samples were taken, Sample was collected through the use of Non-probability Convenience sampling technique.

Conclusion: It has been observed that in Exploratory study indicates that there is In pretest, majority of 65% of the people had poor knowledge (score 0-6) and 35% of them had average knowledge (score7-13) regarding dengue fever. In pre-test, more than half (53.3%) of the people had good practices (score11-15) and 46.7% of them had average practices (score6-10) regarding dengue fever among people residing in slums. In pre-test, majority of 65% of the people had poor knowledge (score0-6) and 35% of them had average knowledge (score 7-13) regarding dengue fever. In post-test, 45% of them had good knowledge (Score14-20) and 55% of them had average knowledge (score7-13) regarding dengue fever among people residing in slums.

Keywords: Assess, effect, self-instructional module, knowledge, practice, dengue fever

Introduction
The first large dengue epidemic record occurred in Hawaii in the mid-19th century. During 2012, 27dengue cases were reported in the island of St. Croix. Some of which were Later laboratory confirmed. A serosurway found that around 20%of the students and staff from a school of island was positive for the antibodies to dengue. It has been studied that dengue is derived from the Swahili phrase Ka-dingapepo which describes the disease as being caused by an evil spirit. As may 398 cases has been confirmed in Pimpri Chinch wad so far this year, of which 2 patients have succumbed to the infection. Updating the civic general body about the dengue cases in Pimpri Chinch wad, as of today, there are119 patients with fever admitted to the Yastwantrao Chavan Memorial (YCM)hospital, of which 74 are suspected with dengue, Around 256 patients suspected with dengue fever are admitted to different private hospital across the city.

The emergence of DEN-4 was repeated in 2003 in Delhi and in 2007 in Hyderabad. To determine the annual number of dengue patients in India.

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The researchers collected data on patients who had been hospitalized with the disease in the Madurai district of the state of Tamil Nadu during a three-year period (2009-2011).They then used that data, along with less completed disease surveillance data form 18 other states and information from a panel of dengue experts, to calculate a national estimate for annual dengue cases, including ambulatory cases(ones in which the patient was treated but not hospitalized).To estimate the cost of each dengue case, the researchers analyzed the medical record of 1,541 dengue patients who had been treated in 10 public and private medical college hospitals across India from 2006 through 2011.Gaps in those data were then filled in through a survey of 151 patients who had received care at a medical college hospital in Mumbai in 2012 and 2013.It was found that India had nearly 6 million annual clinically diagnosed dengue cases between 2006 and 2012-almost 300 times greater than the number of cases that had been officially reported, by the health economics professor at brandeis" Heller School for social Policy and Management.

Research Design
The research design selected for the study was an exploratory Research Design

Research Setting
The present study was conducted at the selected slums of Gawali nagar, Phulenagar, and Vitthalnagar of pimpri chinchwad Municipal Corporation of Pune city.

Population
In the present study sample was selected as a population of the present study were people residing at Gawalnagar, Phuleaagar, and Vitthalnagar of pimpri chinchwad Municipal Corporation of Pune city.

Sample
In the present study sample was the people at age of 20 to 60 years from selected slums of PCMC.

Sample size
Sample sizes selected for this study were 60 people.

Sample technique
In the present study the sample was collected through Non probability Convenience sampling technique.

Criteria for selection of sample
Inclusion Criteria
The study included the following participants:-
1. Samples at the age of 20 to 60 years
2. Samples who are residing in at selected areas
3. Samples can understand, read and write Marathi and English

Exclusion Criteria
The study was excluded those participants who are:-
1. Samples those are not willing to participate

Development of tool
Information on demographic profile of sample such as age, gender, occupation, income, education, knowledge, and source. Structured Questionnaire was used to assess knowledge of people and Observation checklist to assess

practice regarding dengue fever among people residing in slums. For assess the Effect of knowledge and practice of people regarding dengue fever used self-instructional module, among people residing in slums was prepared. and used for data collection. Opinions and suggestions were taken from the experts, which helped in determining the important areas to be included.

Description of the tool
In this study the tool consisted of:
Section A: Demographic Performa
Section B: Structured Questionnaire was used to assess knowledge.
Section C: Observation checklist to assess practice of people.
Section D: Assess the Effect of knowledge and practice regarding dengue fever used self-instructional module

Section 1: Demographic Performa
The Demographic Performa which included Structured Interview Schedule to collect sample characteristics like Age,Gender, Occupation, monthly income in rupees, education, Have you heard about Dengue Fever?, If yes from which source?
Section II: Section II Contain:
It deals analysis of data related to knowledge and practices regarding dengue fever among the people.
Section III: Section III Contains:
Analysis of data related to the effect of self-instruction module on knowledge and practice on dengue fever..
Section IV: Analysis of data related to the association of knowledge and practice regarding dengue fever with related demographic variable.

Validity
The tools and content were given to 20 experts. These were received with their valuable suggestions & comments on the study tool. The experts belonged to different fields which included professors & lecturers in the field of Medical Surgical Nursing, Community Health Nursing, Physiotherapists, Psychiatric Nursing, Psychologist, Dieticien, Statistan, Surgical, Medical departments Sociologist. They were requested to give their opinion on the appropriateness & relevance of items in the tool.

Reliability of the Tools
Reliability co-efficient was calculated using" Cronbach's Alpha Method for knowledge.reliability of the tool was done by test retest method.The reliability co-efficient was found to be 0.88 significant. Reliability for practices was found using inter-rater method Cohen's Kappa was to be found 0.88.

Ethical consideration
Researcher had obtained approval from appropriate review boards to conduct the study.
- Researcher had taken formal permission from care givers to conduct study.
- Only the samples who had signed the consent form are included in the study.
- Confidentiality of the data is maintained strictly.

Plan for data collection
- Ethical committee clearance

- Permission from the local leader and Nagar Sevak of selected slims.
- Consent from People from selected slums.
- The investigator approached the people of selected samples, informed them regarding the objectives of the study and obtained their informed consent after assuring the confidentiality of the data.

The data collection was done among selected sample by using structured questionnaires for knowledge and observational checklist for practice. Data related to the effect of self-instruction module on knowledge and practice on dengue fever.

- The duration of the data collection for each sample was 45 minutes.

Pilot study

A pilot study conducted from 17th July to 25th July 2015to assess the Feasibility of the study and decided the plan for data analysis. Prior administrative permission was obtained from the, local leader and Nagar Sevak of selected slums. Pimpri Pune.

The objective of study and obtained consent for participation in study. The study was conducted on 10 peoples. Data was collected through the structured Questionnaire. Pre-test was given on used of self-instructional module was administered on the same day, and post-test was done on using the same tool. After post-test the data was analysed with the help of descriptive and inferential statistics. Findings indicated that self-instructional module was effective for people of slums in increasing their knowledge regarding dengue fever among people residing in slums. The informed written consent taken prior to the study from the subjects & objective of the study were informed & assured the subjects about the confidentiality of data. So, the present study was feasible to carry out or an actual study.

Data analysis and interpretation

For the analysis of demographic variable would be analyzed in terms of frequency and percentage was be calculated. The investigator was obtaining the permission prior to data collection from concerned authority. Analyze the data using descriptive and inferential statistics and present them in tables, graphs and figures. For analysis of demographic data, frequencies and percentage was calculated. Analysis of data related to knowledge and practices regarding dengue fever among the people: In pre-test, majority of 65% of the people had poor knowledge (score 0-6) and 35% of them had average knowledge (score 7-13) regarding dengue fever. In pre-test, more than half (53.3%) of the people had good practices (score 11-15) and 46.7% of them had average practices (score 6-10) regarding dengue fever.

Analysis of data related to the effect of self-instruction module on knowledge and practice on dengue fever: In pre-test, majority of 65%of the people had poor knowledge(score 0-6)and 35% of them had average knowledge(score7-13)regarding dengue fever.In post-test, 45% of them had good knowledge(Score 14-20)and 55% of them had average knowledge(score7-13)regarding dengue fever. Association of knowledge and practice regarding dengue fever with selected demographic variables was assessed using Fisher's exact test.

Result

Section i-The major findings of the study were based on the objective of the study. Description of samples according to personal characteristics in terms frequency and percentage. Major findings of the studying related to samples demographic characteristics31.7% of them were in age group31-40 years,51.7% of the samples were in age group 21-30years,and only 16.7%of them were from age group 41-50 years.25.0% of people had their primary education, 36.7% of them had secondary education, and 6.7% of them had graduation.

The who were participated in the study among them 48.5% were males and 36.3% were females.63.3%.Samples had daily wages/unemployed, 18.3% of them had Govt service,46.9% of them had Pvt. Service and others mostly 83% / 26.7% of them had some other occupation.28.3% samples had their monthly income Rs. 3001-5000, 28.3% of them had income more than Rs. 5000,16.7% of them had income Rs.500 -10,000 and only 55% of them had income below Rs.3000.In pretest, majority of 65% of the people had poor knowledge (score 0-6)and 35% of them had average knowledge (score 7-13) regarding dengue fever.In posttest, 45% of them had good knowledge(Score 14-20)and 55% of them had average knowledge (score 7-13) regarding dengue fever among people residing in slums.

Section ii-Data analysis of Data Related to Knowledge and Practices Regarding Dengue Fever among the people residing in slums.

1. Knowledge regarding dengue fever among the people residing in slums:-In pre-test, majority of 65% of the people had poor knowledge (score0-6) and 35% of them had average knowledge (score7-13) regarding dengue fever.
2. Practices regarding dengue fever among the people residing in slums:-In pre-test, more than half (53.3%) of the people had good practices (score11-15) and 46.7% of them had average practices (score 6-10) regarding dengue fever among the people residing in slums.

Section iii-Analysis of data related to the effect of self-instruction module on knowledge and practice on dengue fever among the people residing in slums.

In pre-test, majority of 65% of the people had poor knowledge (score 0-6) and 35% of them had average knowledge (score 7-13) regarding dengue fever. In post-test, 45% of them had good knowledge (Score14-20) and 55% of them had average knowledge (score 7-13) regarding dengue fever among the people residing in slums.

Paired t-test for the effect of self-instruction module on practices of people regarding dengue fever among the people residing in slums:-Applied paired t-test for comparison of pre-test and post-test practice scores of people regarding dengue fever. Average practice score in pre-test was 10.8 which increased to11.8 in post-test. T-value for this comparison was5.3 with 59 degrees of freedom. Corresponding p-value was of the order of 0.000 which is small (less than 0.05), the null hypothesis is rejected. The self-instructional module was found to be significantly effective in improving the practices of people regarding dengue fever among the people residing in slums.

Section iv-Analysis of data related to the association of knowledge and practice regarding dengue fever with selected demographic variables

Association of knowledge and practice regarding dengue fever with selected demographic variables was assessed using Fisher's exact test. Since p-values corresponding to gender,(0.011) occupation,(0.002) monthly income (0.000) and education(0.019) were small (less than 0.05),demographic variables gender, occupation, monthly income and education were found to have significant association with knowledge of people regarding dengue fever.

Fisher's exact test for association of practices regarding dengue fever with selected demographic variables

Since all the p-values were large (greater than 0.05), Null Hypothesis of the demographic variable was found to have significant association with practices of people regarding dengue fever among the people residing in slums.

Conclusion

The study was a new learning experience for the investigator. Analysis of the problem faced by the care givers due to knowledge and practice regarding dengue fever among people residing in slums. This study highlights that knowledge and awareness doesn't always lead to the importance of cleanliness. One needs to understand the level of awareness and practices in the community before implementing the programme. There is a need to educate and motivate the people to keep area clean. Present suggest that there is need to improve knowledge level and practice of people toward dengue fever. The study was a new learning experience for the investigator.

Discussion

In pre-test, and post assess the knowledge and practice used structured questionnaire. Analysis of data related to the effect of self-instruction module on knowledge and practice on dengue fever. Paired t-test for the effect of self-instruction module on practices of people regarding dengue fever. T-value for this comparison was 5.3 with 59 degrees of freedom. Corresponding p-value was of the order of 0.000 which is small (less than 0.05), the null hypothesis is rejected. The self-instructional module was found to be significantly effective in improving the practices of people regarding dengue fever. Fisher's exact test for association of knowledge regarding dengue fever with selected demographic variables. Since p-values corresponding to gender,(0.011) occupation,(0.002) monthly income (0.000) and education(0.019) were small (less than 0.05), demographic variables gender, occupation, monthly income and education were found to have significant association with knowledge of people regarding dengue fever. Since all the p-values were large (greater than 0.05), Null Hypothesis of the demographic variable was found to have significant association with practices of people regarding dengue fever.

Limitations
- Data collection period was limited to 4 weeks
- The data was collected only through the baseline data and a Questionnaire.
- The tool used by the Investigator needed a broad & comprehensive validation.

- The study was conducted to only one group of 60 people at selected slums in PCMC.Pune,hence generalization was limited to the population under study.
- The study did not use a control group and there was a threat to internal validity as the Investigator had no control over the events that took place between the test and re-test.
- Extraneous variables such as exposure to mass media were beyond researcher's control.

Recommendations
1. .On the basis of the findings of the study, the following recommendations are made for the future research:
2. A similar study may be replicated on large samples; there by findings can be generalized.
3. A study can be done on association between various demographic variables,which were significant on larger sample.
4. A study can be undertaken in different settings and different target population.
5. A comparative study may be repeated in the urban and rural areas.
6. A similar study can be replicated on a larger sample with different demographic characteristics.
7. A similar study can be replicated with broader content area on chronicle illness.
8. A similar study can be done in different setting.
9. Same study can be conducted by using different set of questionnaires.

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