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RESEARCH ARTICLE

A STUDY TO ASSESS THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON PREVENTION OF MOSQUITO BORNE DISEASES AMONG WOMEN IN A SELECTED RURAL AREA, VIZIANAGARAM

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ABSTRACT

Introduction: Rural women play a key role in supporting their households and communities in achieving food and nutrition security, generating income, and improving rural livelihoods and overall well-being. Mosquito-Borne Diseases or mosquito-borne illness is disease caused by bacterial, viruses, parasites transmitted by mosquitoes. This can transmit disease without being affected themselves. Mosquitoes play essential role in the transmission of animal diseases. Mosquitoes borne diseases involve the transmission of viruses and parasites from animal to animal, animal to person or person to person without affecting the insect vectors with symptoms of disease. It is a main leading problem to human kind. Some mosquitoes are vectors for some of the diseases. Typically, the diseases are caused by viruses or tiny parasites mosquitoes are now called 'public enemy no.1' by the world health organization. There are more than 4500 species of mosquitoes distributed throughout the world under 34 genera, but mostly belongs to aedes, anopheles and culex. They are visitors of several public and life-threatening disease including protozoan's (malaria), viral (yellow fever, dengue fever, chikungunya, west Nile virus, Japanese encephalitis) or pelmentic (filariasis) infections. These diseases not only cause mortality or morbidity among the humans and cause social, cultural environmental and economic loss of the society. **Methodology:** Pre-experimental research approach was adopted to achieve the objectives of the study, which was felt to be most appropriate in the field of education for its practicability in real life situation. Research design was one group pre-test, post-test research design. The study was conducted in selected area of Vizianagaram. Population includes women residing in the savaravilli village of Vizianagaram. Sample size consists of 60 women under inclusion criteria. Non probability convenient sampling technique was adopted for the present study based on inclusion criteria. **Results:** The study findings reveal that, knowledge scores on mosquito borne diseases among women in pre-test. Out of 60 women majority i.e., 45(75%) were having inadequate knowledge followed by 13(21.70%) were had moderate knowledge and few of them i.e., 2(3.30%) had adequate knowledge. Mean value was (15.83) & Standard Deviation was (6.26). Whereas in post-test i.e., 41(68.30%) were having moderate knowledge followed by 10(16.70%) were having adequate knowledge and few of them having 9(15%) inadequate knowledge. Mean value was (25.32) & S.D was (5.07) and t value was (18.903), p value was significant at 0.000 level. In pretest, knowledge scores on prevention of mosquito borne diseases among women. Majority i.e., 50(83.30%) were having inadequate knowledge followed by 10(16.70%) were had moderate knowledge and none of them had adequate knowledge. Mean value was (5.28) & Standard Deviation was (1.21). Whereas in post-test i.e., 18(30%) were having moderate knowledge followed by 33(55%) were having adequate knowledge and few of them having 9(15%) inadequate knowledge. Mean value was (9.25) & Standard Deviation was (1.89) and t value was (13.073), p value was significant at 0.000 level.

- Related to total knowledge scores on prevention of mosquito borne diseases among women in pretest, majority i.e., 47(78.30%) were having inadequate knowledge followed by 13(21.70%) were had moderate knowledge and none of them had adequate knowledge. Mean value was (21.12) & Standard Deviation was (6.24). Whereas in post-test i.e., 36(60%) were having moderate knowledge followed by 21(35%) were having adequate knowledge and few of them having 3(5%) inadequate knowledge. Mean value was (34.57) & Standard Deviation was (5.99) and t value was (26.752). p value was significant at 0.000 level. Hence HO1 was rejected.
- It evidences that the planned teaching programme was significantly effective on improving knowledge on prevention of mosquito borne diseases among women.
- In pre-test there was significant association found between level of knowledge on prevention of mosquito borne diseases among women and some of socio – demographic variables like age, education of women and education of husband, occupation of the women, occupation of the husband, family income, and source of information was significant at 0.01 level and other source of water supply significant at 0.05 level. There was no significant association found between knowledge on prevention of mosquito borne diseases such as religion, type of house, method of waste disposal.
- In post-test there was significant association found between knowledge on prevention of mosquito borne diseases and some of socio – demographic variables are age of the women, educational status of the women, occupational status of the women, occupational status of the husband, source of information on prevention of mosquito borne diseases was significant at 0.01 level. and only educational status of the husband, family income per month was significant at 0.05 level. Remaining other variables like religion, type of family, type of house, source of water supply, method of waste disposal was not significant. Hence HO2 was rejected.

Conclusion: The present study revealed that women have inadequate knowledge on prevention of mosquito borne diseases in pre-test and after planned teaching programme knowledge had improved among women.

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INTRODUCTION

Mosquito-Borne Diseases or mosquito-borne illness is disease caused by bacterial, viruses, parasites transmitted by mosquitoes. This can transmit disease without being affected themselves. Mosquitoes play essential role in the transmission of animal diseases. Mosquitoes borne diseases involve the transmission of viruses and parasites from animal to animal, animal to person or person to person without affecting the insect vectors

with symptoms of disease. It is a main leading problem to human kind. Some mosquitoes are vectors for some of the diseases. Typically, the diseases are caused by viruses or tiny parasites mosquitoes are now called 'public enemy no.1' by the world health organization. There are more than 4500 species of mosquitoes distributed throughout the world under 34 genera, but mostly belongs to aedes, anopheles and culex. They are visitors of several public and life-threatening disease including protozoan's (malaria), viral (yellow fever, dengue fever, chikungunya, west Nile virus, Japanese encephalitis) or pelmentic (filariasis) infections. These diseases not only cause mortality or morbidity among the humans and cause social, cultural environmental and economic loss of the society. According to WHO, mosquitoes are one of the deadliest insects in the world. Their ability to carry and spread diseases to human, causes millions of deaths every year. In 2015, malaria alone caused 43,80,00 deaths. The worldwide incidence of dengue fever has risen 30- fold in the past 30 years. zika virus, dengue fever, chikungunya and yellow fever are all transmitted to humans by the aedes aegypti mosquito. Some other species of mosquitoes like culex and anopheles are also responsible in spreading diseases. More than half of the world 's population live in areas where this mosquito species is present. Sustained mosquito control efforts are important to prevent outbreaks of the diseases.

Malaria is transmitted into human bodies by the bite of anopheles mosquitoes dengue fever and chikungunya are transmitted to human bodies by the bite of female aedes mosquitoes. The most common symptoms of malaria are high grade fever, constipation, disorientation and kidney dysfunction. In dengue fever, the patient suffers from fever for the initial three-four days, followed by body pain and retro-orbital pain. in acute cases, decreased urine output, respiratory difficulties and increased bleeding tendencies also accompany the usual symptoms. Prominent symptoms of chikungunya include excessive body pain, swelling in the joints and rashes across the body. For treating malaria, anti- malaria drugs like chloroquine and artemisinin are available, since dengue fever and chikungunya are viral diseases and do not have specific treatment. The treatment for dengue fever and chikungunya is symptomatic, based on the specific diagnostic investigation. Dengue fever patents are given antipyretics for the fever to subside, and in the case of chikungunya antipyretics and anti-inflammatory drugs are given. The patients are prone for dehydration and advised to increase their intake of fluids along with nutritional supplements. "Avoid getting bitten by mosquito," because there are no vaccines to prevent these diseases. Wear clothes that cover fully and apply mosquito repellent creams. As a community to prevent such diseases ensure that there is no water stagnation in the surroundings because they become excellent breeding grounds for mosquitoes. Also make sure that living area and surroundings are hygienic and clean. Destroy the breeding places of mosquitoes and use mosquito nets, coils it will help to prevent the mosquito bite.

NEED FOR THE STUDY: According to World health organization (WHO), Mosquito is the greatest menace, spreading malaria, dengue fever and chikungunya. Malaria is endemic in 91 countries with about 40% of the world's population at risk. An estimate of 500 million malaria infectious occur each year, 90% of them in Africa and there are up to 2.7 million deaths annually. Dengue Fever is the world's most important rapidly spreading mosquito- borne disease with 2500 million people worldwide at risk of infection and 20 million cases a year in more than 100 countries. Chikungunya is a mosquito- borne disease first described during an outbreak in southern Tanzania in 1952. In 2017 the African region, Kenya reported an outbreak of chikungunya resulting in more than 1700 suspected cases. In India, for each of these diseases, the number of cases was less than in 2017, when there were 8,44,558 cases of malaria, 1,88,401 of dengue and 67,769 of chikungunya. In 2018, the country recorded 4,29,928 cases of malaria, 1,01,192 cases of dengue, and 57,813 clinically suspected cases of chikungunya. The highest number of malaria cases in 2018 was recorded in Uttar Pradesh, at 86,486, followed by Chhattisgarh (78,717), Odisha (66,311), Jharkhand (57,095) and West Bengal (26,440). Except Uttar Pradesh, all these states registered a lower number of cases than in 2017. In Uttar Pradesh, the number of cases rose from 32,345 in 2017. For dengue, Punjab recorded the highest number of cases in 2018, at 14,890, down from 15,398 cases in 2017. It was followed by Maharashtra (11,011), Rajasthan (9,587), Gujarat (7,579) and Delhi (7,136). While the number of cases decreased in Punjab and Delhi between 2017 and 2018, it rose in each of the other three states. For clinically suspected cases of chikungunya, the highest count was 20,411 in Karnataka, down from 32,831 cases in 2017. Karnataka is followed by Gujarat (10,601), Maharashtra (9,884), Jharkhand (3,405) and Madhya Pradesh (3,211).

MATERIALS AND METHODS

RESEARCH APPROACH: The research approach adopted was pre-experimental approach. This approach was considered most appropriate as the study was focused to assess the effectiveness of planned teaching programme on prevention of mosquito borne diseases among women in a selected rural area, Vizianagaram.

RESEARCH DESIGN: The research design used for the study was pre-experimental one group pre-test, post-test research design to achieve the objectives of the study.

VARIABLES OF THE STUDY

Independent Variable: In this study age of the women, religion, educational status of the women, educational status of the husband, occupational status of the women, occupational status of the husband, family income per month, type of family, type of house, source of water supply, method of waste disposal, source of information on prevention of mosquito borne diseases.

Dependent variable: In this study knowledge of women on prevention of mosquito borne diseases was the dependent variable.

SETTING OF THE STUDY: The study was conducted in Savaravilli (village), Vizianagaram, district, Andhra Pradesh.

POPULATION: The population for the present study were total women residing in the Savaravilli village of Vizianagaram.

SAMPLE: The sample for the comprised that selected women in the age group of 18 – 49 years.

SAMPLE SIZE: The sample size was 60 members who were available at the time of data collection.

SAMPLING TECHNIQUE: The sample was selected by using non-probability convenience sampling technique.

CRITERIA FOR SAMPLE SELECTION

I. Inclusion criteria: - women those who:

- Were willing to participate in the study.
- Can able to understand both telugu and English.
- Were available at the time of data collection.

II. Exclusion criteria: - women those who: -

- were physically and mentally compromised.
- were not willing to participate in the study.
- were residing other than selected area.

DEVELOPMENT & DESCRIPTION OF THE TOOL: The tool was developed with the help of related literature form journals, websites, discussion and guidance from the experts in the field of nursing and medicine.

The tool consists of two sections:

Section – 1	:	Consists of socio-demographic data.
Section – 2	:	Questionnaires consist of 27 questions to assess the level of knowledge on mosquito borne diseases among women.
Section – 3	:	Questionnaires consist of 9 questions to assess the level of knowledge on prevention of mosquito borne diseases among women.

SCORING INTERPRETATION

Section – 1	:	By coding the socio- demographic variables.
Section – 2	:	Consists of 27 questions related to knowledge on mosquito borne diseases among women
Section – 3	:	Consists of 9 questions related to knowledge on prevention of mosquito borne diseases among women. Each question has 3 options and more. Each right answer carriers '1' mark, each wrong answer carries '0' mark, each wrong answer carries '0'. Total score was 52.

Adequate knowledge	-	>75%	(>45)
Moderate knowledge	-	51 – 75 %	(29 – 36)
Inadequate knowledge	-	< 50%	(< 18)

Content validity: Content validity was obtained for the questionnaire from 10 experts: 5 in the field of community medicine, 5 in the field of nursing and modifications were made and the tool was finalized and incorporated in the study.

Reliability of the tool: The reliability of the instrument was established by administering the tool to 10women residing at Borapeta, Vizianagaram. Who were not included in the pilot study and who fulfilled the inclusion criteria. The reliability was established by Cranach's alpha formula. The tool was reliable with the score of r= 0.8754. The test was conducted on 30-04-2020.

PILOT STUDY: Pilot study was conducted in Akivaram, Vizianagaram. Prior permission was obtained was obtained from health officer, for conducting the study. 10 women who fulfilled the inclusion criteria were selected by convenient sampling technique. Rapport was established with self-introduction to the women and a written consent was obtained from the participants to participate in the study. Investigator administered the questionnaire by using interview schedule and the responses of the participants were recorded. Statistical analysis was done by using descriptive and inferential statistics. The findings of the study revealed that tool was reliable and feasible to conduct the study.

PROCEDURE FOR DATA COLLECTION: A formal written permission was obtained from the authority to conduct the study. 60 samples were selected by convenient sampling technique.

The schedule adopted was given below: (pre – test)

Date	Time	Number of samples per day	Duration of data collection
15-05-2020	9-4 pm	12	6 hours
16-05-2020	9-4pm	12	6 hours
17-05-2020	9-4pm	12	6 hours
18-05-2020	9-4pm	12	6 hours
19-05-2020	9-4pm	12	6 hours
20-05-2020	9-4pm	12	6 hours
21-05-2020	9-4pm	12	6 hours

The schedule adopted was given below: (post – test)

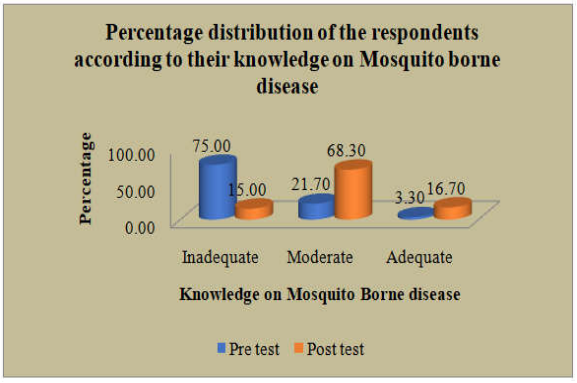
Date	Time	Number of samples per day	Duration of data collection
22-05-2020	9-4 pm	12	6 hours
23-05-2020	9-4pm	12	6 hours
24-05-2020	9-4pm	12	6 hours
25-05-2020	9-4pm	12	6 hours
26-05-2020	9-4pm	12	6 hours
27-05-2020	9-4pm	12	6 hours
28-05-2020	9-4pm	12	6 hours

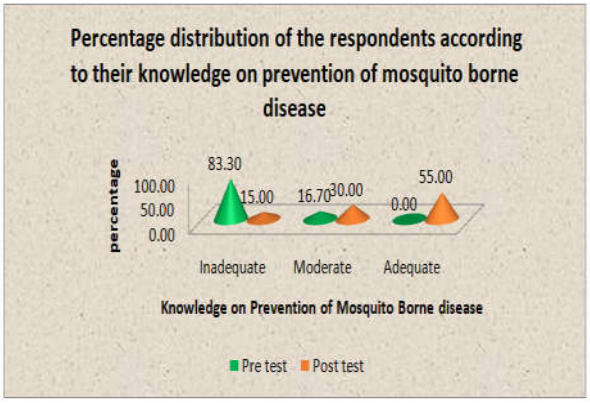
The investigator made the participants to sit comfortable and self-introduced to each participant and explained the purpose of the study and took written consent. The investigator administered questionnaire to the women by using interview schedule and responses were recorded. The data was collected from 15-05-2020 to 28-05-2020 each day 12 samples were chosen. Total duration of data collection was three days. After data collection, on the same day with help of A.V aids the investigator had given planned teaching programme on knowledge and prevention of mosquito borne diseases to women. After 7 days of planned teaching programme post test was conducted to each participant and collected the responses to each question and thanked the participants for their willingness and cooperation.

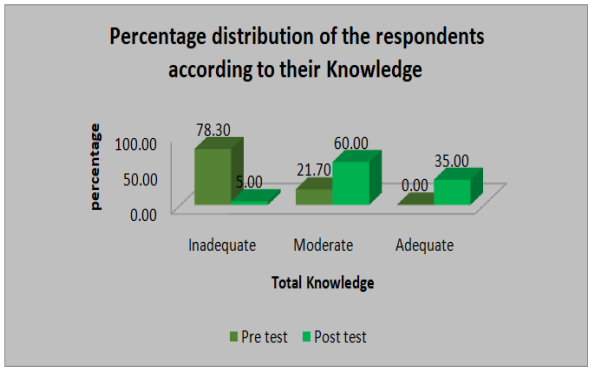
RESULTS

- The study findings reveal that, knowledge scores on mosquito borne diseases among women in pre-test. Out of 60 women majority i.e., 45(75%) were having inadequate knowledge followed by 13(21.70%) were had moderate knowledge and few of them i.e., 2(3.30%) had adequate knowledge. Mean value was (15.83) & Standard Deviation was (6.26). Whereas in post-test i.e., 41(68.30%) were having moderate knowledge followed by 10(16.70%) were having adequate

knowledge and few of them having 9(15%) inadequate knowledge. Mean value was (25.32) & S.D was (5.07) and t value was (18.903), p value was significant at 0.000 level.







- In pretest, knowledge scores on prevention of mosquito borne diseases among women. Majority i.e., 50(83.30%) were having inadequate knowledge followed by 10(16.70%) were had moderate knowledge and none of them had adequate knowledge. Mean value was (5.28) & Standard Deviation was (1.21). Whereas in post-test i.e., 18(30%) were having moderate knowledge followed by 33(55%) were having adequate knowledge and few of them having 9(15%) inadequate knowledge. Mean value was (9.25) & Standard Deviation was (1.89) and t value was (13.073), p value was significant at 0.000 level.
- Related to total knowledge scores on prevention of mosquito borne diseases among women in pretest, majority i.e., 47(78.30%) were having inadequate knowledge followed by 13(21.70%) were had moderate knowledge and none of them had adequate knowledge. Mean value was (21.12) & Standard Deviation was (6.24). Whereas in post-test i.e., 36(60%) were having moderate knowledge followed by 21(35%) were having adequate knowledge and few of them having 3(5%) inadequate knowledge. Mean value was (34.57) & Standard Deviation was (5.99) and t value was (26.752). p value was significant at 0.000 level. Hence HO1 was rejected.
- It evidences that the planned teaching programme was significantly effective on improving knowledge on prevention of mosquito borne diseases among women.
- In pre-test there was significant association found between level of knowledge on prevention of mosquito borne diseases among women and some of socio – demographic variables like age, education of women and education of husband, occupation of the women, occupation of the husband, family income, and source of information was significant at 0.01 level and other source of water supply significant at 0.05 level. There was no significant association found between knowledge on prevention of mosquito borne diseases such as religion, type of house, method of waste disposal.
- In post-test there was significant association found between knowledge on prevention of mosquito borne diseases and some of socio – demographic variables are age of the women, educational status of the women, occupational status of the women, occupational status of the husband, source of information on prevention of mosquito borne diseases was significant at 0.01 level. and only educational status of the husband, family income per month was significant at 0.05 level. Remaining other variables like religion, type of family, type of house, source of water supply, method of waste disposal was not significant. Hence HO2 was rejected.

DISCUSSION

The discussion of the present study is based on the findings obtained from the descriptive statistical analysis of the collected data.

To assess the knowledge regarding prevention of mosquito borne diseases among women by pre-test: Pertaining to total knowledge on women in pre-test was 5 (83.30%) study subjects had inadequate knowledge whereas 10(16.70%) had moderate knowledge, and there was no adequate knowledge regarding mosquito borne diseases in pre-test.

To evaluate the effectiveness of planned teaching programme on prevention of mosquito-borne diseases among women by post-test: Pertaining to total knowledge on women in post-test was 9 (15%) of study subjects had inadequate knowledge whereas 18(13%) had moderate knowledge, and 33(55%) had adequate knowledge regarding mosquito borne diseases in post-test.

To find out the association between pre and post-test knowledge scores on prevention of mosquito-borne diseases among women with their selected socio demographic variables: The present study shows that there was significant association between the pre-test knowledge and demographic variables such as, age, educational status women, educational status of the husband, occupational status of the women, occupational status of the husband, religion, monthly family income, method of waste disposal, source of water supply were significant at $p<0.05$ level. The present study shows that the association of post-test knowledge score of subjects with demographic variables such as education of the mother,

occupational status of the women, religion, monthly income of the family, sources of information was significant at $p<0.01$ level and source of health information, whereas age of the women, type of family was significant at $p<0.05$ level. Remaining other variables like education of the husband, occupation of the husband was not significant. Hence HO2 was rejected.

Conclusion

- Out of 60, majority of the sample were having adequate knowledge on prevention of mosquito borne diseases among women.
- The demographic variables such as age of the women, religion, educational status of the women, educational status of the husband, occupational status of the women, occupational status of the husband, family income per month, type of family, type of house, source of water supply, method of waste disposal, source of information on prevention of mosquito borne diseases were associated with their knowledge on mosquito borne diseases.

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