Available online at http://www.ijcrls.com

International Journal of Current Research in Life Sciences
Vol. 07, No. 03, pp.1358-1363, March, 2018

ISSN: 2319-9490

RESEARCH ARTICLE

A STUDY TO EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON KNOWLEDGE REGARDING ROLE OF ECO-HEALTH IN PREVENTION OF MOSQUITO-BORNE DISEASES AMONG WOMEN IN SELECTED URBAN AREA OF BAGALKOT KARNATAKA

***[1]Praveen S Pateel and [2]Dr. Balawindar Kaur Butter**

[1]Department of Community Health Nursing, BVVS, Sajjalashree Institute of Nursing Nursing Sciences Navanagar, Bagalkot, Ph D Scholar Himalayan University, Arunachal Pradesh, India
[2]Himalayan University, Arunachal Pradesh, India

Received 05th January, 2018; Accepted 24th February, 2018; Published Online 30th March, 2018

ABSTRACT

Background; Mosquito borne diseases is a growing ubran problem because of unplanned urbanization, industrialization and excessive population growth coupled with rural to urban migration. For developing a suitable and effective health education stratergy, it is inevitable to understand the level of knowledge of urban women regarding role of eco health in prevention of mosquito borne diseases.

Materials & Methods; pre experimental one group pre test post test without control group design was used for the present study comprises of 100 women in the age group 20 years and above who are residing in selected urban areas of Bagalkot i,e 100 women from teggi layout vidyagiri Bagalkot will be selected for experimental group.

Results; Findings about the comparison of level of pre-test & post test knowledge regarding role of eco-health in prevention of mosquito borne diseases among women in experimental group shows that, in pre-test the majority (78 %) of women had Inadequate level of knowledge and 22 % percent of them had moderate level of knowledge. In post-test, the most (82%) of women had moderate level of knowledge and remaining 18 percent of them had adequate level of knowledge.

Key words: Mosquito borne diseases malaria, filarial, Chikumgunnya and dengue.

Citation: Praveen S Pateel and Dr. Balawindar Kaur Butter, 2018. "A study to evaluate the effectiveness of planned teaching programme on knowledge regarding role of eco-health in prevention of mosquito-borne diseases among women in selected urban area of Bagalkot Karnataka" *International Journal of Current Research in Life Sciences*, 7, (03), 1358-1363.

INTRODUCTION

In Karnataka many districts are endemic to mosquito borne diseases such as malaria, dengue, filariasis and Chikumgunnya Vectors are living organisms that can transmit infectious diseases between humans or from animals to humans. Many of these vectors are bloodsucking insects that ingest disease-producing micro-organisms during a blood meal from an infected host (human or animal) and later inject them into a new host during their next blood meal. Mosquitoes are the best known disease vector. Others include certain species of ticks, flies, sandflies, fleas, bugs and freshwater snails (http://www.ecdc.europa.eu/en/healthtopics/emerging_and_vector borne_diseases/vector-borne_ diseases/Pages/index.aspx). More than half the world at risk Vector-borne diseases are illnesses caused by pathogens and parasites in human populations. Every year more than one billion people are infected and more than one million people die from vector-borne diseases including malaria, dengue, schistosomiasis, leishmaniasis, Chagas disease, yellow fever, lymphatic filariasis and onchocerciasis. One sixth of the illness and disability suffered worldwide is due to vector-borne diseases, with more than half the world's population currently estimated to be at risk of these diseases (The world health report, 2004). The world's fastest growing VBD is dengue, with a 30-fold increase in disease incidence over last 50 years. Every year there are more than 1 billion cases and over 1 million deaths from VBDs. In India, 27% population lives in malaria high transmission area. The diseases are commonly in tropical and subtropical regions and places where access to safe drinking water and sanitation system is problematic. They are on the rise because of failure of these existing methods of control of vector and VBDs and the climate change. A steep rise of VBDs is due to several factors such as selection of insecticide resistant vector population, drug resistant parasite population, and lack of effective vaccines against VBDs (Gupta *et al.,* 2012). Recently, it has been suggested that VBDs incidence is bet ween 9 and 50 times greater than reported with approximately 13 fold under estimation of malaria-related mortality (Das *et al.,* 2012). Vector is an important link in transmission of VBDs and thus, protection from vector serves

Corresponding author: **Praveen S Pateel,**
Department of Community Health Nursing, BVVS, Sajjalashree Institute of Nursing Nursing Sciences Navanagar, Bagalkot, Ph D Scholar, Himalayan University, Arunachal Pradesh, India.

as one of the best strategies for prevention in population. Environmental pollution, public health hazard, and insecticide resistant vector population indicate that the insecticides are no longer a sustainable control method of vectors and VBDs. Personal protection measures (PPMs) have become important tool against VBDs. A variety of PPMs are available including repellent creams, mosquito nets, mosquito coils, liquid repellents, electric rackets, mats, smokeless coils, intense sticks, and naphthalene balls. Under national VBD control program, government has introduced insecticide treated nets for the endemic communities (Pandit *et al.,* 2010). A statistical information has been given by district vector borne diseases by 2012 dengue in 94 cases identified in Bagalkot district in urban area 06 cases, in 2013 216 cases identified in Bagalkot district in urban area 21 cases, by 2014 35 cases identified in Bagalkot district in urban area 04 cases similarly Chikumgunnya in 2012 02 cases identified in Bagalkot district, in 2013 no cases were found and by 2014 11 cases identified in Bagalkot district in urban area 06 cases so presently dengue fever creating dangerous problem in Bagalkot district (District vectore borne officer Mini vidhan souda Navanagar Bagalkot, 587103).

Problem Statement

" A Study to evaluate the Effectiveness of Planned Teaching Programme on Knowledge regarding Role of Eco-Health in Prevention of Mosquito-Borne Diseases Among Women in Selected Urban Area of Bagalkot Karnataka".

Objective of the Proposed Research

- To assess the level of the knowledge regarding role of eco-health in prevention of mosquito borne diseases among women of experimental group.
- To determine the effectiveness of Planned teaching programme by comparing pretest and post test knowledge scores of experimental group.
- To associate the pre-test knowledge levels of women with selected socio - demographic variables of both experimental.

Hypotheses

Hypotheses will be tested at 0.05 level of significance.

H1; There is a significant difference between pre-test level of knowledge between experimental group subjects.

H2; There is a significant difference between post-test level of knowledge between experimental group subjects.

H3; There is a significant difference between mean pre-test and post test knowledge scores on role of eco-health in prevention of mosquito borne diseases among women of experimental group.

H4; There is a significant difference between mean post-test knowledge scores of women of experimental group subjects.

H5: There is a significant association between pre-test knowledge levels regarding role of eco health in prevention of mosquito borne diseases and selected demographic variables of women of experimental group.

Assumptions

The study assumes that

- The study assumes that women have some knowledge about mosquito borne diseases.
- Planned teaching programme is one of the means which may be effective in improving the level of knowledge regarding role of eco-health in prevention of mosquito borne disease among women.

MATERIALS AND METHODS

Research approach

Research approach is an umbrella that covers the basic procedure for conducting research evaluative approach was used in the study. Evaluative research is an applied form of research that involves finding out how well a programme, practice or policy is working. Its goal is to assess or evaluate the success of the programme (Rosenthal and Rosnows, 1991). Evaluative approach was used in the present study to test the effectiveness of the PTP on knowledge regarding role of eco-health in prevention of mosquito borne disease among women.

Research design

The Research Design is the conceptual structure within which the research is conducted; it constitutes the blue print for the collection, measurement and analysis of data. It includes an outline of what the research will do from writing the hypothesis and it operational implication to find analysis of data (Fawcett, 2004). In the present study pre experimental one group pre test post test without control group design was selected to assess the effectiveness of planned teaching programme on knowledge of women regarding role of eco-health in prevention of mosquito-borne diseases.

Table 1.

Experimental group	O1	X	O2

O1: Administration of structured questionnaire for assessing the level of knowledge among women of both experimental group regarding role of eco-health in prevention of mosquito borne diseases.

X: Planned teaching programme on knowledge regarding role of eco-health in prevention of mosquito borne diseases on the same day after the pre-test only to experimental group.

O2: Administration of structured questionnaire for assessing the level of knowledge among women of both experimental group regarding role of eco-health in prevention of mosquito borne diseases after seven days from the Planned teaching programme

Setting of the study

Setting is a physical location and condition in which data collection takes place (Talbot, 1999). The setting of the study is selected urban areas of Bagalkot (teggi layout vidyagiri Bagalkot).

Population

The term population refers to the aggregate or totality of all subjects or numbers that confirm to a set of specifications (Niewiadomy, 1998). The target population for the study includes women with age group of 20 year and above those who meet inclusion criteria residing in selected urban areas of Bagalkot.

Sample

Sample consists of the subject of the population selected to participate in the research study. Sampling refers to the process of selecting the portion of population to represent the entire population (Basavanthappa, 2006). The sample for the present study comprises of 100 women in the age group 20 years and above who are residing in selected urban areas of Bagalkot i,e 100 women from teggi layout vidyagiri Bagalkot will be selected for experimental group.

Sampling technique

According to Polit and Hungler sampling refers to the process of selecting the portion of population to represent the entire population. Simple random sampling technique was considered appropriate for this study.

Inclusion criteria

- Women of urban area those who are willing to participate.
- Women in the age group of 20 year and above
- Women who can Read and understand Kannada.

Exclusion criteria

- Women working in the field of control and prevention of vector borne diseases.
- Medical and paramedical professional women

Variables under study: Variables are qualities, properties or characteristics of persons, things or situation that changes or vary (Stoll, 2007).

Dependent Variable: Dependent variable is the response, behaviour or outcome that predicts or explains in research. Changes in the dependent variables are presumed to be caused by independent variable (Stoll, 2007).
In this study knowledge of women regarding the role of eco-health in prevention of mosquito-borne disease was the dependent variable.

Independent Variable: An Independent variable is a variable, which influences the dependent variable (Stoll, 2007). In this study PTP on knowledge regarding role of eco-health in prevention of mosquito-borne disease was the independent variable.

Extraneous variable: An uncontrolled variable that greatly influences the result of the study is called as extraneous variable (Stoll, 2007). In this study extraneous variables were age, educational status, religion, occupation, monthly income, type of family, type of house, past history of mosquito-borne disease, area of stagnant water, source of information, precautions against mosquito borne diseases & waste management practice.

RESULTS

Organization of findings
The data were organized, analyzed and presented in following sections.

PART I: Frequency and percentage distribution of the socio demographic variables.

PART II: Analysis of pre test knowledge and post test knowledge level of respondents on role of eco-health in prevention of mosquito-borne diseases.

PART III: Evaluation of effectiveness of the PTP on knowledge regarding role of eco-health in prevention of mosquito-borne diseases.

PART IV: Association between pre test knowledge and socio demographic variables.

Findings about the comparison of level of pre-test & post test knowledge regarding role of eco-health in prevention of mosquito borne diseases among women in experimental group shows that, in pre-test the majority (78 %) of women had Inadequate level of knowledge and 22 % percent of them had moderate level of knowledge. In post-test, the most (82%) of women had moderate level of knowledge and remaining 18 percent of them had adequate level of knowledge.

The above table no 03 summarizes that there is no significant difference in pre test knowledge levels [$x2 = 1.62$, $P > 0.05$] in experimental group

Hence **H1;** There is a significant difference between pre-test level of knowledge of experimental group subjects is rejected**.** Analysis clearly depicts that, there is a significant difference between post-test knowledge levels [$x2 = 138.3$, $P < 0.05$] of women in experimental group.

Hence **H2**; There is a significant difference between post-test level of knowledge women of experimental group subjects is accepted. Hence clearly suggest that women of experimental group had experienced gain in knowledge in post test. Thus the administration of PTP on knowledge regarding role of eco-health in prevention of mosquito borne diseases among women of experimental group was successful in increasing the level of knowledge regarding prevention of mosquito borne diseases.
The above table no 04 reveals that, there is a significant difference between mean pre test [42.40 +_ 6.53] and in post test [68.80+_ 7.18] at 0.05 level of significance [$t=29.4358$, $p<0.05$] knowledge scores of experimental group [$t=-27.8027$, $p<0.05$]

Hence **H3:** There is a significant difference between mean pre-test and post test knowledge scores on role of eco-health in prevention of mosquito borne diseases among women of experimental group stated is accepted.

SECTION C

The above table no 06 reveals that, there was a significant difference between mean post test knowledge scores of experimental group [68.80 +_ 7.18] at 0.05 level of significance [$t=29.4358$, $p<0.05$]

Hence **H4:** There is a significant difference between mean post-test knowledge scores of women of experimental group subject stated is accepted

Analysis related to association between pretest knowledge levels and socio demographic variables of women of experimental group shows that, significant association was found between pre test knowledge and socio demographic variables Past history-mosquito-borne diseases [$x2 = 47.6420$, $P < 0.05$],

PART I

SECTION-A

Table 2. Frequency and percentage distribution of the socio demographic variables

Factors	Experimental group	%
Age groups		
21-30yrs	12	12.00
31-40yrs	19	19.00
41-50yrs	50	50.00
51-60yrs	19	19.00
Educational status		
Uneducated	26	26.00
Primary	27	27.00
Secondary	23	23.00
PUC/diploma	18	18.00
Graduate and above	6	6.00
Religions		
Hindu	62	62.00
Muslims	24	24.00
Christian	14	14.00
Occupations		
House wife	33	33.00
Labourer	39	39.00
Government employee	15	15.00
Private employee	6	6.00
Self employed	7	7.00
Income groups		
<3000	32	32.00
3001-5000	19	19.00
5001-7000	29	29.00
7001+	20	20.00
Type of family		
Nuclear	61	61.00
Joint	39	39.00
Type of house		
Kutcha	68	68.00
Pucca	32	32.00
Type of occupancy		
Rented	31	31.00
Own	69	69.00
Past history-mosquito-borne diseases		
Yes	29	29.00
No	71	71.00
Area of stagnant water		
Present	28	28.00
Absent	72	72.00
Sources of information		
Mass media	49	49.00
Health professionals	15	15.00
Friends/relatives	24	24.00
Others	12	12.00
Precautions against mosquito-borne diseases		
Yes	72	72.00
No	28	28.00
Waste management practice		
Yes	63	63.00
No	37	37.00
Total	100	100.00

PART II
SECTION A

Table 3. Comparison of levels of knowledge at pretest and posttest by chi-square test

Levels of knowledge	Experimental group	%	Total	Chi-square	p-value
Pre test					
Inadequate level	78	78.00	163	1.6252	0.2020
Moderate level	22	22.00	37		
Adequate level	0	0.00	0		
Posttest					
Inadequate level	0	0.00	81	138.2972	0.0001*
Moderate level	82	82.00	101		
Adequate level	18	18.00	18		
Total	100	100.00	400		

*p<0.05

PART III

SECTION A

Table 4. Comparison of pretest and posttest total knowledge and its component scores in experiment group by dependent t test

Variables	Time	Mean	SD	Mean Diff.	SD Diff.	Paired t	p-value
Knowledge towards role of eco health	Pretest	41.11	10.56				
	Posttest	69.44	10.43	-28.33	13.98	-20.2653	0.0001*
Knowledge towards mosquito borne diseases	Pretest	42.56	11.82				
	Posttest	68.00	14.41	-25.44	20.73	-12.2744	0.0001*
Knowledge role of eco health in prevention of	Pretest	49.67	29.77				
mosquito borne diseases	Posttest	67.33	29.20	-17.67	42.76	-4.1316	0.0001*
Total knowledge towards prevention of	Pretest	42.40	6.53				
mosquito borne diseases	Posttest	68.80	7.18	-26.40	9.50	-27.8027	0.0001*

*p<0.05

SECTION C

Table 5. Comparison of experimental group with respect to total knowledge and its component in posttest scores by Independent t test

Variables	Experimental group		t-value	P-value
	Mean	SD		
Knowledge towards role of eco health	41.11	10.56	1.1008	0.2723
Knowledge towards mosquito borne diseases	68.00	14.41	12.4775	0.0001*
Knowledge role of eco health in prevention of mosquito borne diseases	67.33	29.20	4.7857	0.0001*
Total knowledge towards prevention of mosquito borne diseases	68.80	7.18	29.4358	0.0001*

*p<0.05

PART IV

SECTION A

Table 07 . Association between socio-demographic characteristics with total pretest levels of knowledge in total samples (experimental group) N = 100

Sl no	socio-demographic variables	Chi-square value	p-value	Significance
1	Age	6.6640	0.0830	P>0.05, NS
2	Educational status	2.1430	0.7090	P>0.05, NS
3	Religions	0.8810	0.6440	P>0.05, NS
4	Occupations	2.3200	0.6770	P>0.05, NS
5	Income groups	0.1860	0.9800	P>0.05 ,NS
6	Type of family	0.1610	0.6890	P>0.05, NS
7	Type of house	0.0480	0.8260	P>0.05, NS
8	Type of occupancy	0.1610	0.6890	P>0.05, NS
9	Past history-mosquito-borne diseases	47.6420	0.0001*	P<0.05 , S
10	Area of stagnant water	0.0800	0.7770	P>0.05, NS
11	Sources of information	1.0820	0.7820	P>0.05, NS
12	Precautions against mosquito-borne diseases	17.2200	0.0001*	P<0.05 , S
13	Waste management practice	22.8700	0.0001*	P<0.05 , S

*p<0.05

Section B

Table 8. Association between socio-demographic characteristics with total pretest levels of knowledge in experiment group N=100

Sl no	socio-demographic variables	Chi-square value	p-value	Significance
1	Age	2.6450	0.4500	P>0.05, NS
2	Educational status	3.1440	0.5340	P>0.05, NS
3	Religions	0.0340	0.9830	P>0.05, NS
4	Occupations	0.6900	0.9530	P>0.05, NS
5	Income groups	1.4460	0.6950	P>0.05 ,NS
6	Type of family	0.0430	0.8350	P>0.05, NS
7	Type of house	0.2900	0.5900	P>0.05, NS
8	Type of occupancy	0.1830	0.6690	P>0.05, NS
9	Past history-mosquito-borne diseases	69.0540	0.0001*	P<0.05 , S
10	Area of stagnant water	0.0070	0.9310	P>0.05, NS
11	Sources of information	1.7250	0.6310	P>0.05, NS
12	Precautions against mosquito-borne diseases	10.9690	0.0010*	P<0.05 , S
13	Waste management practice	16.5650	0.0001*	P<0.05 , S

*p<0.05

precautions against mosquito-borne diseases [x2 = 17.2200, P < 0.05], and waste management practice[x2 = 22.8700, P < 0.05], and there was no significant association between found between pre test knowledge and other socio demographic variables,

Hence **H5:** There is a significant association between pre-test knowledge levels regarding role of eco health in prevention of mosquito borne diseases and selected socio demographic variables of women of experimental group, is accepted to the demographic variables like past history-mosquito-borne diseases, precautions against mosquito-borne diseases, and waste management practice and rejected for remaining socio demographic variables.

Analysis related to association between pretest knowledge levels and socio demographic variables of women of experimental group shows that, significant association was found between pre test knowledge and socio demographic variables Past history-mosquito-borne diseases [x2 = 69.0540, P < 0.05], precautions against mosquito-borne diseases [x2 = 10.9690, P < 0.05], and waste management practice[x2 = 16.5650, P < 0.05], and there was no significant association between found between pre test knowledge and other socio demographic variables,

Hence **H5:** There is a significant association between pre-test knowledge levels regarding role of eco health in prevention of mosquito borne diseases and selected socio demographic variables of women of experimental group, is accepted to the demographic variables like Past history-mosquito-borne diseases, Precautions against mosquito-borne diseases, and Waste management practice and rejected for remaining socio demographic variables.

Conclusion

Hence the study concluded with following findings about the comparison of level of pre-test & post test knowledge regarding role of eco-health in prevention of mosquito borne diseases among women in experimental group shows that, in pre-test the majority (78 %) of women had Inadequate level of knowledge and 22 % percent of them had moderate level of knowledge. In post-test, the most (82%) of women had moderate level of knowledge and remaining 18 percent of them had adequate level of knowledge. Analysis related to association between pretest knowledge levels and socio demographic variables of women of both experimental group shows that, significant association was found between pre test knowledge and socio demographic variables Past history-mosquito-borne diseases [x2 = 47.6420, P < 0.05], precautions against mosquito-borne diseases [x2 = 17.2200, P < 0.05], and waste management practice[x2 = 22.8700, P < 0.05], and there was no significant association between found between pre test knowledge and other socio demographic variables,

Recommendations

Based on findings of the study the following recommendations are made - A similar study can be undertaken with a large sample to generalize the findings

- A similar study can be undertaken on patients with mosquito-borne diseases.
- A similar study can be undertaken with a control group.
- A comparative study can be conducted to assess the knowledge of urban and rural women regarding knowledge on eco-health approach.
- Same study can be conducted by using different teaching modalities

REFERENCES

[Internet]. Climate Change. [cited 2014 Mar 10]. Available from: http://www.ecdc.europa.eu/en/healthtopics/ emerging _and_vector borne_diseases/vector-born_ diseases/Pages/ index.aspx.

The world health report, 2004. changing history. Geneva: World Health Organization; 2004.

Gupta, JP., Shyma, KP., Ranjan, S., Gaur, GK., Bhushan, B. 2012. Genetic manipulation of endosymbionts to control vectors and VBDs. *Vet World*., 2012;5(9):571-6.

Das, A., Anvikar, AR., Cator, LJ., Dhiman, RC., Eapen, A., Mishra, N. *et al.* 2012. Malaria in India: the center for the study complex malaria in India. *Acta Trop*., 121:267-73.

Pandit, N., Patel, Y., Bhavasar, B. 2010. Knowledge and practice about preventive method against mosquito bite in Gujarat. *Health Line,* 1:16-20.

District vectore borne officer Mini vidhan souda Navanagar Bagalkot, 587103.

Rosenthal, R. and Rosnows, RL. 1991. Essentials of behavioural research: Methods and data analysis. 2nd ed. New York: McGraw-Hill, Inc;

Fawcett, J. 2004. The short textbook of nursing research: Research and professionalism in nursing. 10th edn. New Delhi. Jay Pee Brothers.pp. 614-16.

Talbot, AL. 1999. Principles and practice of nursing research. St. Louis:. Mosby Publications;

Niewiadomy, RM. 1998. Foundations of nursing Research. 3rd ed. USA: Andover Publishing Services; 1998.

Basavanthappa. B T **.** 2006.Nursing Research: Variables. 5th Edition. India: Jaypee Brothers; P. 85-86.

Stoll, J. 2007. NelsonTextbook of Nursing Research: 18th edn. Vol.1. Philadelphia, Saunders pp. 698-711.

****