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Knowledge and Practice on Mosquito Control Measures Among People Residing in the Selected Urban Area

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ABSTRACT

Statement: Study to assess the knowledge and practice on mosquito control measures among people residing in the selected urban area at Gorimedu, Puducherry.

Objectives of the Study: To assess the level of knowledge regarding mosquito control measures among the subjects.

To assess the level of practice regarding mosquito control measures among the subject's.

To associate between demographic variable and level of knowledge about mosquito control measures in selected urban area.

To associate between demographic variable and level of practice on mosquito control measures in selected urban areas.

Keeping in view, the objectives of the study, research approach used for the study was quantitative research approach and non-experimental descriptive research design was selected for the study.

The study was conducted in Gorimedu kamaraj Nagar, Puducherry and the sample size was 100 selected people in urban area. Socio-demographic data including age, gender, religion, education, occupation, family income, housing, disposal of waste, drainage, kitchen garden and source of information. Self administered structured closed ended knowledge questionnaire was used to assess the knowledge among selected people. Questionnaire was used to assessed the knowledge and check list was used to assessed the practice on among selected people in urban area. Data analyzed by descriptive statistical method.

Result: The study revealed that among 100 selected people 44(44%) have adequate level of knowledge, 51(51%) have moderate level of knowledge whereas only 5(5%) have inadequate knowledge. Then 79 (79%) has safe level of practice, 21(21%) has unsafe level of practice.

Keywords: Knowledge; Practice; People; Urban Area; Mosquito Control Measures.

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INTRODUCTION

According to American Mosquito Control Association, Mosquitoes cause more human suffering than any other organism over one million people worldwide die from mosquito-borne diseases every year. Not only can mosquitoes carry diseases that afflict humans, they also transmit several diseases and parasites that dogs and horses are very susceptible. These include dog earthworm, West Nile virus (WNV) and Eastern equine encephalitis (EEE). In addition, mosquito bites can cause severe skin irritation through an allergic reaction to the mosquito's saliva this is what causes the red bump and itching. Mosquito vectored diseases include protozoan diseases, ie, malaria, filarial diseases such as dog earthworm, and viruses such as dengue, encephalitis and yellow fever.

According to WHO vectors are residing 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, sand-flies, fleas, bugs and freshwater snails.

Vector control is an method to limit or eradicate the mammals, birds, insects or other arthropods collectively called vectors. Which transmit disease pathogens. The most frequent type of vector control is mosquito control using a variety of strategies. Several of the "neglected tropical diseases" are spread by such vectors. National Vector Borne Disease Control Programme.

Anti-larval operations causing the reduction or permanent elimination of mosquito breeding places or sites are defined as source reduction methods. Source reduction primarily aims to prevent development of aquatic stages of mosquito larvae reducing breeding source. These methods are environment friendly, economical in the long run with minimum maintenance and surveillance.

In India some sates like Tamil Nadu and Kerala have been very badly affected knowing that there is no cure can make the disease daunting in the minds of the people. Mosquito borne disease is still major health problem in the rural areas even after implementation of national vector bone disease control programme in India.

The annual report survey of 2022 show that in puducherry: The two recent deaths due to Dengue in Puducherry have revealed a worrying trend of the disease's rise in the union territory (UT) even before the onset of the northeast monsoon. According to statistics from the health department, a total of 1,175 Dengue cases have been reported till September 13. This is 383 cases more than the number recorded during the same period last year. The cases of Dengue have also tripled in the last three months, the report added.

STATEMENT OF THE PROBLEM

The statement for the study is

A study to Assess the knowledge and practice on mosquito control measures among people residing in the selected urban area (Kamaraj nagar) Goridmedu of Puducherry, India.

OBJECTIVES

The objectives of the study are:

- To assess the level of knowledge regarding mosquito control measures among the subject's.
- To assess the level of practice regarding mosquito control measures among the subject's .
- To associate the level of knowledge with the selected demographic variables among the subject's.
- To associate the level of practice with the selected demographic variables among the subject's.

RESEARCH METHODOLOGY

Research Approach:

"**Quantitative research approach "** was adopted.

Research Design:

Non experimental descriptive research design was used to assess the knowledge and practice regarding the mosquito control measures among people residing in the selected urban area of Puducherry, India.

Research Variables:

In this study, the research variable was assessment of knowledge and practice regarding mosquito control measures.

Research Setting

The study was conducted in selected urban area Gorimedu kamaraj Nagar situated in Puducherry district.

Population

In this study, population comprises of people in the age group 20-50 years residing in the selected urban area (Gorimedu kamaraj nagar), Puducherry.

Sample

The sample for this study were people in the age group 20-50 years residing in the Gorimedu Kamaraj nagar, Puducherry.

Sample Size

The sample size was 100 people in the age group 20-50 years residing in the Gorimedu, Puducherry.

Sampling Technique

Simple random technique was used for this study.

Sampling Criteria

Inclusion criteria

1. Subject's those who were:
   - Residing in the urban area i.e. Gorimedu kamaraj nagar.
   - In the age group of 20 to 50 years.
   - Present at the time of data collection.
   - Willing to participate.
2. Both male and female are included.
3. Subject's who can read and speak Tamil

Exclusion criteria

Subject's who were suffering from a chronic illness like cancer, renal failure

Development of Data Collection Tool

The tool consists of three sections

Section-A: Socio Demographic Data

It consisted of socio demographic variable such as age, sex, educational

qualification, occupation, religion, income, housing, disposal of waste, drainage, kitchen garden and source of information.

Section-B: Questionmaire

It consisted of structured closed ended knowledge questionnaire regarding the mosquito borne disease, mosquito control measures, prevention and management of vector borne disease.

Section-C: Checklist

The investigator used a checklist that consists of 10 questions to assess the practice regarding the following mosquito control measures

DATA COLLECTION PROCEDURE

The data was collected over the period of one week from 07/08/2023 to 12/08/2023 in Gorimedu area (Kamaraj street), Puducherry. The researchers sought permission from the institute and then from the authority of the Gorimedu area, Puducherry. The structured closed ended questionnaire that contains 25 questions regarding knowledge and the checklist that contains 10 questions for practice. These questions were given to the people in the age group 20-50 years and the direction was explained to them to answer the question. The people were asked to give the response in the respective boxes. They were given about 20-25 minutes to complete the questionnaire. The checklist was evaluated by ourself based upon the practice of the people that takes 5 mins to complete.

Plan for Data Analysis:

Descriptive statistics (Frequency and percentage distribution) was used to analyse the data.

DATA ANALYSIS AND INTERPRETATION

Organisation ff the Data:

Data collected were organized under the following sections.

- Section-A: Description of demographic variables of the subject.
- Section-B: Assessment of the level of knowledge on mosquito control measures among people residing in selected urban area.
- Section-C: Association of the level of knowledge about mosquito control measures among people residing in selected urban area.
- Section D: Assessment of the level of practice

on mosquito control measures among people residing in selected urban area.

- Section E: Association of the level of practice on mosquito control measures among people residing in selected urban area.

Section-A: Description of the Demographic Variables

Table 1: Frequency and Percentage wise distribution of demographic variables among Puducherry

(N=100)

Demographic Variables	**Frequency (N)**	**Percentage (%)**
Age		
20 - 30 Years	28	28
31 - 40 Years	24	24
41 - 50 Years	21	21
> 50 Years	27	27
Total	100	100
Gender		
Male	37	37
Female	61	61
Transgender	2	2
Total	100	100
Education		
Illiterate	18	18
Primary	17	17
Higher Secondary	42	42
Total	100	100
Occupation		
Coolie	30	30
Government Job	10	10
Housewife	29	29
Unemployed	31	31
Total	100	100
Religion		
Hindu	84	84
Muslim	1	1
Christian	14	14
Others	1	1
Total	100	100
Income		
3000 - 5000	24	24
5000 - 10000	58	58
>10000	18	18
Total	100	100
Housing		
Tiled	15	15
Kutcha	82	82
Pucca	3	3
Total	100	100
Waste Disposal		
Dumping	2	2
Burial	93	93
Municipality	5	5
Total	100	100
Drainage		
Open	22	22
Closed	78	78
Total	100	100
Kitchen Garden		
Present	20	20
Not Present	80	80
Total	100	100
Source of Information		
Newspaper	9	9
Social Media	19	19
Television	71	71
Health Pesonnal	1	1
Total	100	100

Section-B: Assessment of Level of Knowledge about Mosquito Control Measures.

Table 2: Frequency and percentile distribution of the level of knowledge about mosquito control measures

(N=100)

Level of Knowledge	**Frequency (N)**	**Percentage (%)**
Inadequate level of knowledge	5	5%
Moderate level of knowledge	51	51%
Adequate level of knowledge	44	44%
Total	***100***	***100%***
Mean+Standard deviation	33.3 + 24.7857	

table cont..

- Majority of the people had moderate level of knowledge (51%).
- Nearly 44(44%) had adequate level of knowledge.
- Only 5(5%) had inadequate level of knowledge.

The mean and standard deviation for level of knowledge about mosquito control measures among selected people residing in urban area of Puducherry is (33.3±24.7857) respectively.

Section-C: Association Between Demograpic Variable and the Level of Knowledge about Mosquito Control Measures among Selected People Residing in Puducherry.

Association between demograpic variable and the level of knowledge about mosquito control measures among selected people residing in puducherry. (N=100)

The demographic variable, Education (P=0.038), Housing (P=0.000), Kitchen Garden (P=0.003), Source Information (p=0.001) had shown statistically significant association between the level of knowledge about mosquito control measures among selected people residing in urban area of Puducherry. The other demographic variable had not shown statistically significant association between the level of knowledge about mosquito control measures among selected people residing in urban area of Puducherry with the demographic variables respectively.

Section D: Assessment of The Level of Practice on Mosquito Control Measures among Selected People Residing in Puducher

Table 3: Frequency and percentile distribution of the level of practice on mosquito control

(N=100)

Level of Practice	Frequency (N)	Percentage (%)
Safe Level of Practice	79	79%
Unsafe Level of Practice	21	21%
Total	100	100%
Mean+Standard Deviation	50 + 41.0122	

- Majority of the people had safe level of practice 79(79%) regarding the mosquito control measures.
- 21(21%) of the people had unsafe level of practice regarding mosquito control measures.

The mean and standard deviation for level of practice about mosquito control measures among selected people residing in urban area of Puducherry is (50 + 41.0122) respectively.

Section E: Asocition Between The Demographic Varible and Level of Practice on Mosquito Control Measures.

Association of level of practice on mosquito control measures.

The demographic variable, *Waste Disposal (0.011)* had shown statistically significant association between the level of knowledge about mosquito control measures among selected people residing in Puducherry. The other demographic variable had not shown statistically significant association between the level of knowledge about mosquito control measures among selected people residing in urban area of Puducherry with selected demographic variables respectively.

Percentage Distribution of Demographic Variables

The first objective of the study is to assess the level of knowledge regarding mosquito control measures among the subject's.

The result shows that the level of knowledge on mosquito born disease prevention among the rural area people reveal that about 44% of them had adequate knowledge 51% had moderate knowledge and only 5% had inadequate knowledge. SD 33.3 +24.7857

The second objective of the study was to assess the level of practice regarding mosquito control measures among the subject's.

The results reveal that only 21% of the subject's had unsafe practice and about 79% of the subject's had safe practice on the mosquito prevention measures. SD 50 + 41.0122

The third objective of the study was to associate the demographic variable with the level of knowledge regarding mosquito control measures.

On computing the association between the demographic variables and the knowledge of the subject's on mosquito control measures, Education (p=0.038), Housing (p=0.000), Kitchen garden (p=0.003), Source of information (p=0.001) had shown statistically significant association between the level of knowledge about mosquito control measures among selected people residing in urban area of Puducherry. The other demographic

variable had not shown statistically significant .

The fourth objective of the study was to associate the selected demographic variable with the Level practice on mosquito control measures.

The reults shows that the demographic variable ,waste disposal (0.011**)** had shown statistically significant association between the level of Practice about mosquito control measures among selected people residing in Puducherry. The other demographic variable had not shown statistically significant.

SUMMARY

The researchers conducted A study to assess the knowledge and practice on mosquito control measures among the people residing in the selected urban area of Puducherry, India

The objective of study was:

- To assess the level of knowledge regarding mosquito control measures among the subject's.
- To assess the level of practice regarding mosquito control measures among the subject's.
- To associate between demographic variable and the level of knowledge regarding mosquito control measures.
- To associate between demographic variable and the level of practice on mosquito control measures.

The research approach was quantitative approach and the design selected was Non-experimental descriptive study. 100 adults in the age group, 20-40 yrs residing in the urban area Gorimedu Puducherry were selected randomly by using simple random sampling. The data was collected by using structured questionnaire to assess their level of knowledge and practice on prevention of mosquito borne disease. The data was analyzed by using descriptive and inferential statistics.

Major Findings of the Study

On assessing the level of knowledge and practice only 44% of the subject's have adequate knowledge and about 71% were following safe practice and all of them have positive attitude and adequate practice towards mosquito prevention measures.

CONCLUSION

The research concludes that the subject's having moderate knowledge and safe practice and still there is continuous awareness programme were needed to promote the health of the individual, family and the community on prevention of mosquito born diseases for building a healthy nation. This will improve the level of knowledge and practice of the community people and through this we can provide a promotive and curative health care to the individuals.

Implications

The implications of this can lie in the areas of nursing research, nursing education, nursing administration.

NURSING PRACTICES

The interest and the confidence of the community people showed that there is a strong need of further education programme.

There is a need to awareness among the public, regarding control and prevention of the mosquito borne disease problems by providing mass health education programme The special teaching programme to the community re presenters will help to improving the quality of the health status in the urban areas.

Nursing Education

Nursing students should be regularly assessed for knowledge, skills relating mosquito prevention measures and to motivate the health education to the individuals, family and the community. Students in the college's students will come forward to providing a mass education to the public.

Nursing Administration

Administration in the community should take initiative to implement various teaching strategies to increase knowledge and create awareness among the health care workers and the public on the newer mosquito prevention measures through mass media, video assisted technology, journals magazines etc. conducting of the national vector borne control programme. And conducting different kind of mass media educations like role play on mosquito borne disease and plots and to participation of the people to the mosquito control programme to improve their knowledge.

Nursing Research

The researcher believes that this study paves way for the research in this field of study. Knowledge of mosquito control measures and its practice increase the awareness about the mosquito born disease. The findings in this study may help the people to prevent the mosquito born disease and to gain knowledge on mosquito control measures.

RECOMMENDATIONS

- A similar study can be conducted on greater samples to assess the level of knowledge, attitude and on mosquito prevention measures.
- A similar study can also be done among the other health care professionals in the community areas.
- A similar study can be conducted to assess the knowledge of mosquito control measures among people residing in Rural area.
- A Correlative study can be used to assess the knowledge, attitude and practice on mosquito control meaures.
- This study can be conducted on the longer duration for generalizing the findings

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