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A study to assess the knowledge regarding West Nile fever among adults at selected areas of Pallithottam, Kollam with a view to develop an information booklet

Abstract

Introduction: West Nile fever is an infection by the West Nile Virus, which is typically spread by mosquitoes. Most people infected with West Nile virus do not have symptoms About one and five people have symptoms like fever, rash and muscle aches. [1].The present study was entitled "A study to assess the knowledge regarding West Nile Fever among adults in selected areas at Pallithottam, Kollam."

Objectives: The objectives of the study were to assess the knowledge regarding West Nile Fever among adults, to find the association between knowledge regarding West Nile Fever among adults and selected demographic variables and to develop and distribute an information booklet regarding the West Nile Fever.

Materials and Methods: Non-experimental descriptive research design was used for this study. The sample comprised of 100 adults residing in selected area atPallithottam, Kollam. The tool used for data collection was self-administered knowledge questionnaire for assessing the knowledge regarding West Nile Fever among adults and selected demographic variables. The collected data were analysed by using descriptive and inferential statistics.

Results: The findings of present study revealed that out of 100 samples, 54 % had poor knowledge , 46% had average knowledge and no one had good knowledge regarding West Nile Fever and that there was significant association between knowledge regarding West Nile Fever among adults and the demographic variables such as age, religion and education. There was no significant association between knowledge and demographic variables such as gender, marital status, occupation, economic status, presence of pets athome and previous knowledge regarding West Nile fever.

Discussion: The present study was conducted to assess the knowledge regarding West Nile fever among adults in selected areas at Pallithottam, Kollam.The present study revealed that out of 100 sample, 46% had poor knowledge, 54% had average knowledge and no one had good knowledge regarding West Nile fever.

Conclusion: In order to enhance the knowledge regarding West Nile fever among adults in community areas, we need to conduct more awareness programme, publicity through mass media and inclusion of preventive measures of West Nile fever in the community health practice.

Keywords: Knowledge, West Nile Fever and adults.

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Introduction

West Nile Fever is a disease caused by the West Nile virus (Family Flaviviridae, Genus Flavivirus). The virus is transmitted by insects, known as arboviruses[1]. The West Nile virus is most usually transmitted to people through the bite of an infected mosquito. Mosquitoes become infected when they bite infected birds. In humans, the incubation period is normally two to six days, but in immunocompromised people, it can go up to 21 days. The majority of those infected with West Nile virus (8 out of 10) show no symptoms. Some persons get febrile sickness[2]. Approximately one in every 150 infected people develops a severe infection involving the central nervous system, such as encephalitis or meningitis. West Nile Fever has no specific treatment; instead, clinical care is supportive[3].

During a health survey conducted in Gandhi Nagar, Pallithottam, researchers identified significant risk for communicable diseases. As a result, the community is highly vulnerable to mosquito-borne diseases such as dengue fever, malaria, filariasis, chikungunya, West Nile fever, and Zika virus. Contributing factors include improper attitudes toward mosquito prevention, inadequate drainage facilities leading to water stagnation, poor hygiene, and overcrowding.

Objectives

✻ To assess the knowledge regarding West Nile fever among adults.

✻ To find out the association between knowledge regarding West Nile Fever among adults and selected socio-demographic variables.

✻ To develop and distribute an information booklet regarding West Nile Fever.

Research Methodology

Research Approach : A Quantitative research approach was adopted for the study.

Research Design : Non-experimental Descriptive research design was considered appropriate for the study.

Research Variables : The variables under this study are age, gender, religion, marital status, education, occupation, economic status, presence of pets at home and previous knowledge regarding West Nile fever.

Research Setting of thestudy : The study was conducted at Anugraha Nagar of Pallithottam, Kollam.

Population : The population for present study included adults residing atPallithottam, Kollam.

Sample and sampling technique

a) Sample : In this study, sample consisted of 100 adults in Anugraha Nagar at Pallithottam, Kollam.

b) Sampling technique: Non-probability conveni ence sampling technique was used for the study.

Criteria for selection of sample

Inclusion criteria

✻ Adults who are available at the time of data collection

✻ Adults who can understand Malayalam

✻ Adults at the age group of 18-60 years residing at Anugraha Nagar.

Exclusion criteria

✻ Adults who are medical professionals

✻ Adults who are not interested to participate

✻ Adults who are critically ill.

Tools/instruments

The tool consisted of two sections:

Section A : Socio-Demographic Proforma It includes age, gender, religion, marital status, education, occupation, economic status,presence of pets at home, previous knowledge regarding West Nile fever.

Section B : Self-administered knowledge question naire to assess the knowledge regarding West Nile fever among adults.Self-administered knowledge questionnaire consisted of 20 multiple choice questions. Each correct response was given score one and zero score for wrong answers. The maximum score was 20 and minimum score was zero.

Content validity : Validity of content was established by submitting the tool to three experts in nursing professions. Based on their suggestion, the tool was modified.

Reliability : Karl Pearson's correlation coefficient was used to determine the tools reliability using the test-retest method.The reliability score obtained was 0.91 indicating that the tool is reliable.

Pilot study: The pilot study was conducted in Snehatheeram Nagar at Pallithottam, Kollam on 09/07/2024 among adults regarding West Nile Fever. Formal permission was obtained from the concerned authorities such as the Institutional Ethics Committee of Bishop Benziger College of Nursing, Kollam and the Bishop Benziger Community Health Centre, Pallithottam. The purpose of the study was explained to the sample before the study. A total of 10 adults were selected by using a non-probability convenience sampling technique. The researcher obtained consent from all participants prior to the study and assured them that the data collected will be kept confidential. The study was conducted on ten adults aged 18- 60 years who fulfilled both inclusion and exclusion criteria. The researcher administered a self-administered knowledge questionnaire regarding the West Nile fever among adults. After the data collection, the researcher distributed an information booklet on knowledge regarding West Nile fever to the selected sample.

Data collection Process : The main study was conducted in Anugraha Nagar at Pallithottam, Kollam from 10/07/2024 to 13/07/2024. Formal permission was obtained from the concerned authorities such as the Institutional Ethics Committee of Bishop Benziger College of Nursing, Kollam, and the Bishop Benziger Community Health Centre, Pallithottam. The purpose of the study was explained to the sample before the study.Data were collected based on inclusion and exclusion criteria from 100 adults in the age group of 18- 60 yearsby using a non-probability convenience sampling technique. The researcher obtained consent from all participants prior to the study, and assured them that the data collected were kept confidential.

The researcher administered a self-administered knowledge questionnaire regarding West Nile Fever among adults. After the data collection, on 13/07/2024 the researchers conducted a role play regarding West Nile fever atAnugraha Nagar and Snehatheeram Nagar, Pallithottam and distributed an information booklet regarding West Nile Fever to selected samples of the study.

Data analysis: The data obtained from the samples were organized, tabulated, and analyzed based on the objectives of the study by using descriptive and inferential statistics.

Section A: Descriptive statistics (Frequency and percentage distribution) were used to analyze the demographic variables.

Section B: Descriptive statistics (Frequency and percentage distribution) were used to assess the knowledge regarding West Nile fever among adults.

Section C: Inferential statistics (Chi-square test) was used to find out the association between the knowledge regarding West Nile fever among adults and selected demographic variables.

Results

Section A: Description of samples according to their demographic variable

Table 1: Frequency and Percentage distributions of sample according to their demographic variables.

Sl. No	Demographic Variables	Frequency (f)	Percentage (%)
1	**Age(In Years)**		
	18-32	28	28%
	33-46	30	30%
	47-60	42	42%
2	**Gender**		
	Male	25	25%
	Female	75	75%
3	**Religion**		
	Christian	91	91%
	Hindu	7	7%
	Muslim	2	2%

4	**Marital Status**		
	Married	93	93%
	Unmarried	7	7%
5	**Education**		
	Primary Education	54	54 %
	SSLC/Plus Two	38	38%
	Graduate	8	8 %
6	**Occupation**		
	Employed	70	70%
	Unemployed	30	30%
7	**Economic Status**		
	APL	6	6%
	BPL	94	94%
8	**Presence of Pets at Home**		
	Yes	7	7%
	No	93	93%
9	**Previous knowledge regarding West Nile fever**		
	Yes	5	5%
	No	95	95%

The data presented in the Table 1 shows that out of 100 samples, 42% were in the age group 47-60 years ,others were in the age group of 33-46 years (30%) and 18-32 years (28%).Out of 100 samples, 75% were females and 25% were males,majority were Christians (91%) ,others were Hindus(7%) and Muslims(2%).Out of 100 samples, 93% were married, 7% were unmarried .Out of 100 samples, 54% had education up to primary level, 38% had education upto SSLC/Plus Two and 8% were graduates.The majority of sample were employed (70%) and remaining were unemployed(30%).Out of 100 samples, 94% belongs to BPL category and remaing 6% belongs to APLcategory.Majority of sample (93%)have no pets at home and 7% have pets at home.Out of 100 samples, majority had no previous knowledge regarding West Nile fever (95%) and remaining had previous knowledge of West Nile fever (5%)via social media.

Section B:Assess the knowledge regarding West Nile Fever among adults in selected areas at Pallithottam, Kollam

Table 2: Frequency and percentage wise distribution of knowledge regarding West Nile Fever among adults.

Score	Score range	Frequency	Percentage
20-14	Good	0	0%
13-08	Average	46	46%
07-00	Poor	54	54%

Table 2 shows that, out of 100 samples 46% had average knowledge, 54 % had poor knowledge and no one had good knowledge regarding West Nile Fever.

Section C: Find out the association between knowledge regarding West Nile fever and selected demographic variables.

Table 3: Association between knowledge regarding West Nile fever and selected demographic variables

Sl No	Variables	Knowledge			Df	Chi Square Value	Table Value	Level of Significance at 0.05 Level
		Good	Average	Poor				
1.	**AGE (IN YEARS)**							
	18-32	0	13	15	4	2.43	2.13	S
	33-46	0	17	13				
	47-60	0	16	26				
2	**Gender**							
	Male	0	8	17	2	2.64	2.92	NS
	Female	0	38	37				

3	**Religion**							
	Christian	0	44	47	4	3.03	2.13	S
	Muslim	0	1	1				
	Hindu	0	1	6				
4	**Marital status**							
	Married	0	42	51	6	0.38	1.94	NS
	Unmarried	0	4	3				
	Divorced	0	0	0				
	Separated	0	0	0				
5	**Education**							
	Primary	0	21	33	4	2.64	2.13	S
	SSLC\Plus two	0	20	18				
	Graduate	0	5	3				
6	**Occupation**							
	Unemployed	0	31	39	2	0.27	2.92	NS
	Employed	0	15	15				
7	**Economic Level**							
	APL	0	4	2	2	1.10	2.92	NS
	BPL	0	42	52				
8	**Presence of Pets at home**							
	Yes	0	3	4	2	0.02	2.92	NS
	No	0	43	50				
9	**Previous knowledge**							
	Yes	0	2	3	2	0.08	2.92	NS
	No	0	44	51				

Table 2: The association was computed by using chi square test. It was inferred that the present study showed significant association between knowledge regarding West Nile fever and selected demographic variable like age, religion and education. Regarding age, the calculated chi square value 2.43 was greater than table value 2.13 at 0.05 level of significance. Regarding the religion, the calculated chi square value 3.03 was greater than table value 2.13 at 0.05 level of significance. Regarding the education, the calculated chi square value 2.64 was greater than table value 2.13 at 0.05 level of significance.

There was no significant association between knowledgeregarding West Nile fever and demographic variables like gender, marital status, occupation, economic status, presence of pets in home and previous knowledgeregarding West Nile fever. Regarding gender the calculated chi square value 2.64 was less than table value 2.92 at 0.05 level of significance. Regarding marital status, the calculated chi square value 0.38 was less than table value 1.94 at 0.05 level of significance. Regarding occupation, the calculated chi square value 0.27 was less than table value 2.92 at 0.05 level of significance. Regarding economic status, the calculated chi square value 1.10 was less than table value 2.92 at 0.05 level of significance. Regarding presence of pets at home ,the calculatedchi square value 0.02 was less than table value 2.92 at 0.05 level of significance. Regarding previous knowledgeregarding West Nile fever, the calculated chi square value 0.08 was less than table value 2.92 at 0.05 level of significance.

In short significant association was found between knowledge regarding West Nile Fever and demographic variables like age, religion, education. No significant association was found between knowledge regarding West Nile feverand demographic variables like gender, marital status, occupation, economic status, presence of pets athome and previous knowledgeregarding West Nile fever.

Results

The present study revealed that 54 % had poor knowledge, 46% had average knowledge and no one had good knowledge regarding West Nile Fever. There was significant association found between knowledge regarding West Nile Fever and demographic variables like age, religion, education. No significant association was found between knowledge regarding West Nile feverand demographic variables like gender, marital status, occupation, economic status, presence of pets at home and previous knowledgeregarding West Nile fever

Discussion

The present study was conducted to assess the knowledge regarding West Nile fever among adults in selected areas at Pallithottam, Kollam. In order to achieve the objectives of the study Non-experimental descriptive design was adopted. The samples were selected by the non-probability convenience sampling. The sample consisted of 100 adults who met the inclusion criteria. The findings of the study had been discussed in relation to objectives and other similar studies.

Assess the knowledge regarding West Nile Fever among adults.

The present study revealed that 54 % had poor knowledge, 46% had average knowledge and no one had good knowledge regarding West Nile Fever. There was significant association found between knowledge regarding West Nile Fever and demographic variables like age, religion, education. No significant association was found between knowledge regarding West Nile feverand demographic variables like gender, marital status, occupation, economic status, presence of pets at home and previous knowledgeregarding West Nile fever The study was very relevant because so far no previous studies have been done in this area to assess knowledge regarding West Nile Fever. Therefore, mosquito borne diseases were included as a supporting context for this study.

The above findings are supported by a cross sectional study conducted among migrant labours regarding knowledge, attitude, and practice regarding mosquito borne diseases atPonnekara in Ernakulam District, Kerala. The 179 samples were selected using convenience sampling technique. The study findings shows that 58.4% of the migrant labours had poor knowledge. 25.2% has moderate knowledge and 16.4% has adequate knowledge regarding mosquito borne diseases 4.

To find out the association between knowledge regarding West Nile fever among adults with selected demographic variables.

There was significant association found between knowledge regarding West Nile Fever and demographic variables like age, religion, education. No significant association was found between knowledge regarding West Nile feverand demographic variables like gender, marital status, occupation, economic status, presence of pets at home and previous knowledgeregarding West Nile fever.

The above findings were supported by a descriptive study conducted among residents of Bengaluru regarding knowledge on mosquito borne diseases and its prevention among residents of Bengaluru, India. The 60 samples were selected using convince sampling technique. There was no significant association between knowledge and selected demographic variables.

Conclusion

The present study was aimed to assess the knowledge regarding West Nile fever among adults in selected areas at Pallithottam, Kollam. The present study revealed that 54 % had poor knowledge, 46% had average knowledge and no one had good knowledge regarding West Nile Fever. There was significant association found between knowledge regarding West Nile Fever and demographic variables like age, religion, education. No significant association was found between knowledge regarding West Nile feverand demographic variables like gender, marital status, occupation, economic status, presence of pets at home and previous knowledgeregarding West Nile fever. The Government of Kerala has already started their efforts to prevent the spread of mosquito borne diseases by implementing the National Vector

Borne DiseasesControl Program at the community level

Conflict of Interest

The authors declare no conflict of interest in this study.

Souce of Funding

The present study was self-funded by the authors, who covered all expenses related to the study without external financial support.

Ethical Clearance

The proposal of the study was submitted to the Institutional Ethics Committee for ethical clearance. After getting the approval, the concerned authorities were contacted, explained about the purpose of the study and permission was obtained. Informed consent was obtained from all participants and confidentiality of the data of subjects was ensured.

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