



A STUDY TO ASSESS THE EFFECTIVENESS OF VIDEO ASSISTED TEACHING PROGRAMME ON KNOWLEDGE REGARDING LEPTOSPIROSIS AMONG PEOPLE AT PALLITHOTTAM IN KOLLAM DISTRICT

Jyothi Lakshmi J.^{*1} and Mary Daphne², Mery Piously², Mobin Thomas², Nancy Augustine² and Neelima T.²

¹Assistant Professor, Department of Community Health Nursing, Bishop Benziger College of Nursing.

²BSc. Nursing Students, Bishop Benziger College of Nursing.

***Corresponding Author: Jyothi Lakshmi J.**

Assistant Professor, Department of Community Health Nursing, Bishop Benziger College of Nursing.

Article Received on 11/05/2023

Article Revised on 01/06/2023

Article Accepted on 22/06/2023

ABSTRACT

The research project undertaken was “A study to assess the effectiveness of video assisted teaching programme on knowledge regarding leptospirosis among people at Pallithottam in Kollam district”. The objectives of the study were to assess the knowledge regarding leptospirosis, effectiveness of video assisted teaching programme on leptospirosis among people at Pallithottam in Kollam district and to find out the association between pretest knowledge scores on leptospirosis among people at Pallithottam in Kollam district with selected demographic variables (age, gender, education, occupation, type of family, marital status, monthly income, previous knowledge on leptospirosis). The study was conducted among 60 people. In order to assess the effectiveness of video assisted teaching programme, the study sample was selected using simple random sampling technique. The tool used for data collection is self structured knowledge questionnaire. The data analysis of the study were based on the objectives of the study using descriptive and inferential statistics. The findings of the present study revealed that there was significant difference between pre-test and post-test knowledge scores on leptospirosis among people at Pallithottam in Kollam district and there was significant association between pre-test knowledge scores on knowledge on leptospirosis among people at Pallithottam in Kollam district and selected demographic variables such as age, gender, education, occupation, type of family, marital status, monthly income, previous knowledge on leptospirosis. Based on the findings, the researchers had drawn implications which were vital concerns in the field of nursing practice, nursing administration, nursing education and also for the future development.

KEYWORDS: Assess; video assisted teaching programme; knowledge; Structured knowledge questionnaire; leptospirosis.

INTRODUCTION

Leptospirosis occurs worldwide but is endemic mainly in countries with humid subtropical and tropical climates. Estimates indicate that there are more than 500,000 cases of leptospirosis each year worldwide. Leptospirosis is a disease of epidemic potential, especially after heavy rainfall or flooding. Cases have been reported in most countries of the Americas and outbreaks have been reported in Brazil, Nicaragua, Guyana and several other Latin American countries. The majority of reported cases have severe manifestations, for which mortality is greater than 10%. The number of human cases is not known precisely due to under- or misdiagnosis. Outbreaks can be associated with floods and hurricanes. Leptospirosis can also be an occupational hazard for people who work outdoors or with animals, such as rice and sugar-cane field workers, farmers, sewer workers, veterinarians, dairy workers, and military personnel. It is also a recreational hazard to those who swim or wade in

contaminated water. Leptospirosis is a problem of human and veterinary public health. The numerous *Leptospira* strains can establish infections within a variety of animal hosts that includes rodents, livestock, and other domestic animals while humans serve as incidental hosts. Wild and domestic animals in the carrier state may shed leptospires intermittently for many years or even a lifetime.

Outbreaks of leptospirosis have been increasing in India for the past three decades. The positivity rate for the disease is notable in the southern part of India at 25.6%, followed by 8.3%, 3.5%, 3.1%, and 3.3% in northern, western, eastern and central India, respectively. Moreover, factors like rapid urbanisation, climate change, poor sanitation and improper waste management have resulted in increased reporting of leptospirosis outbreaks in the past few years. Despite this, the disease remained highly under-reported in India, primarily due to

its endemic nature, lack of diagnostic modules, lack of awareness among the treating clinicians, and paucity of literature available on the burden and varied clinical manifestations of this disease in India.

From the month of January till July 2018 (before the flood), 28 deaths were reported due to leptospirosis in Kerala. Kerala suffered unusually heavy rainfall and faced a catastrophic flood in August and September 2018, in which around 500 people died. The aftermath of the flood brings several epidemics. The Directorate of Health Services delivered an action plan for the prevention and control of communicable diseases and informed the public regarding the symptoms and appropriate treatment of such diseases with the help of volunteers. Despite that, there was a major threat of outbreak of leptospirosis in Kerala after this floods and the highest number of leptospirosis cases was reported from Kozhikode district of Kerala which was affected most by the flood. It was reported that leptospirosis, and dengue fever has killed more than 70 people in shorter time span. As of September 11, 2018, the Integrated Disease Surveillance Project (IDSP) data revealed that there were 2598 suspected leptospirosis cases with 95 suspected deaths, whereas the confirmed cases stood at 1318 with a confirmed death rate of 53 (4.0%). On the other hand, statistics from the Kerala State Health Department reported 570 confirmed cases and 18 (3.2%) confirmed deaths; however the suspected cases were 1107 with 33 suspected deaths since 1 September 2018.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of video assisted teaching programme on knowledge regarding leptospirosis among people at Pallithottam in Kollam district.

OBJECTIVES

1. To assess the knowledge regarding leptospirosis among people at Pallithottam in Kollam district.
2. To assess the effectiveness of video assisted teaching programme on leptospirosis among people at Pallithottam in Kollam district.
3. To find out the association between pretest knowledge scores on leptospirosis with selected socio-demographic variables.

HYPOTHESIS

All hypothesis will be tested at 0.05 level of significance

- **H₁:** There will be significant difference between the mean pretest and posttest knowledge scores regarding Leptospirosis among people in experimental group after administering video assisted teaching programme.
- **H₂:** There will be significant difference between the mean pretest and posttest knowledge score regarding Leptospirosis among people in control group.
- **H₃:** There will be significant association between pretest knowledge score and selected demographic variables regarding Leptospirosis among people.

Research approach	: Quantitative research
Research design	: True experimental pretest posttest control group research design.
Variables	Demographic variables: In this study the demographic variables were age, gender, type of family, marital status, educational status, occupation, monthly income, previous knowledge on leptospirosis.
Setting of the study	The setting area were Century nagar and Donbosco nagar in Pallithottam.
Population	: Population for the present study were people residing at century nagar and donbosco nagar.
Sample	: people at Pallithottam who fulfilled the inclusion criteria.
Sample Size	: were 60 people residing at Pallithottam in Kollam district.
Sampling Technique	: Simple random sampling technique.

RESULT AND DISCUSSION

Table 1: Frequency and percentage distribution of selected demographic variables of samples.

(N =60)

Sl no	Demographic variables	Experimental group		Control group	
		Frequency	Percentage	Frequency	Percentage
1.	Age in years				
	18-28yrs	12	40%	9	30%
	29-59yrs	8	26.6%	13	43.3%
	Above 60	10	33.3%	8	26.6%
2.	Gender				
	Male	17	56.6%	16	53.3%
	Female	13	43.3%	14	46.6%
3.	Type of family				
	Nuclear	21	70%	3	10%
	Joint	9	30%	27	90%
4.	Marital status				

	Married	15	50%	24	50%
	Unmarried	14	46.6%	5	16.6%
	Separated/Divorced	1	3.3%	1	3.3%
5.	Educational status				
	Illiterate	2	6.6%	2	6.6%
	10 th	17	56.6%	17	56.6%
	Plus 2	9	30%	6	20%
	Graduate	2	6.6%	5	16.6%
6.	Occupation				
	Private	3	10%	12	40%
	Government	1	3.3%	2	6.6%
	Unemployed	1	3.3%	4	13.3%
	Others	25	83.3%	12	40%
7.	Monthly income				
	Less than 10000	9	30%	15	50%
	11000-15000	16	53.3%	4	13.3%
	16000-20000	3	10%	8	26.6%
	Above 20000	2	6.6%	2	6.6%
8.	Previous knowledge				
	Yes	22	73.3%	10	33.3%
	No	8	26.6%	20	66.6%

Table 2: Frequency and percentage distribution of pretest and posttest knowledge scores among in experimental group.

Group	Grading	Frequency		Percentage	
		Pretest	Posttest	Pretest	Posttest
EXPERIMENTAL GROUP	Poor	12	6	40%	20%
	Average	15	20	50%	66.6%
	Good	3	4	10%	13.4%

The data in table 2 shows that 40% has poor knowledge, 50% has average knowledge and 10% has good knowledge in pretest. In post test 20% has poor

knowledge, 66.6% has average knowledge and 13.4% has good knowledge among experimental group.

Table3: Frequency and percentage distribution of pre test and post test knowledge scores among control group.

Group	Grading	Frequency		Percentage	
		Pretest	Posttest	Pretest	Posttest
CONTROL GROUP	Poor	13	14	43.4%	46.6%
	Average	15	15	50%	50%
	Good	2	1	6.6%	3.4%

The data in table 3 shows that 43.4% has poor knowledge, 50% has average knowledge and 6.6% has good knowledge in pretest. In post test 46.6% has poor

knowledge, 50% has average knowledge and 3.4% has good knowledge among control group

Table 4: Mean, standard deviation, mean difference and paired 't' test value of pretest and posttest knowledge scores among people in experimental group.

Test	Mean	Standard Deviation	Mean Difference	Paired 't' Value
Pretest	9.96	4.6	9.74	8.74
Posttest	19.7	4.01		

$t_{(58)}=2.00$, significant at 0.05 level of significance.

Data in the table 4 shows, Mean of pretest is 9.96 and post test is 19.7, standard deviation of pretest is 4.6 and post test is 4.01, mean difference of pre test and post test

is 9.74 and the paired 't' test value of pretest and posttest knowledge scores is 8.74 in experimental group.

Table 5: Mean, standard deviation, mean difference and paired 't' test value of pretest and posttest knowledge scores in control group.

Test	Mean	Standard Deviation	Mean Difference	Paired 't' Value
Pretest	9.83	4.48	0.2	3.24
Posttest	9.63	2.67		

$t_{(58)}=2.00$, non significant at 0.05 level of significance.

Data in the table 5 shows, Mean of pretest is 9.83 and post test is 9.63, standard deviation of pretest is 4.48 and post test is 2.67, mean difference of pre test and post test

is 0.2 and the paired 't' test value of pretest and posttest knowledge scores is 3.24 in control group.

Table 6: Association between pretest knowledge scores and selected demographic variables.

Variables	knowledge			df	Chi square value	Table value	Significance
	Poor	Average	Good				
1. Age in years							
18 -28 years	3	7	2				
29 -59 years	1	6	1	4	10.71	2.776	NS
Above 60 years	8	2	0				
2. Gender							
Male	11	5	1				
Female	1	10	2	2	13.27	4.303	S
3. Type of Family							
Nuclear	10	8	3				
Joint	2	7	0	2	4.56	4.303	NS
4. Marital status							
Married	10	5	0				
Unmarried	1	10	3	4	13.3	2.776	NS
Separated/Divorced	1	0	0				
5. Educational status							
Illiterate	1	1	0				
10 th	8	7	2	6	2.24	2.447	N S
Plus 2	2	6	1				
Graduate	1	1	0				
6. Occupation							
Private	6	5	1				
Government	0	2	0				
Unemployed	4	0	0	6	10.51	2.447	NS
Others	2	9	2				
7. Monthly income							
<10000	9	6	0				
11000-15000	2	2	1	6	10.86	2.447	NS
16000-20000	1	6	1				
>20000	0	1	1				
8. Previous Knowledge							
Yes	2	7	1	2	2.7	4.303	NS
No	10	8	2				

Table 6: The association was computed by using chi square test. The calculated chi-square value for age is 10.71, the calculated chi-square value for gender is 13.27. The calculated chi-square value for type of family is 4, the calculated chi-square value for marital status is 13.3. The calculated chi-square value for educational status is 2.24. The calculated chi-square value for occupation is 10.51. The calculated chi-square value for monthly income is 10.86. The calculated chi-square value for

previous knowledge regarding leptospirosis is 2.7. It was inferred that the present study showed significant association between knowledge and demographic variables like gender and no significant association between knowledge and demographic variables like age, type of family, marital status, education and previous knowledge regarding leptospirosis at 0.05 level of significance.

DISCUSSION

The present study was conducted to evaluate the effectiveness of video assisted teaching programme on knowledge regarding leptospirosis among people at Pallihottam in Kollam district. In order to achieve the objectives of the study, true experimental pretest post test control group research design was adopted. The sample was selected by simple random sampling technique. The samples comprised of 60 people residing at Pallihottam in Kollam district.

The findings are discussed based on the study objectives:

1. To assess the knowledge regarding leptospirosis among people at Pallihottam in Kollam district.
2. To assess the effectiveness of video assisted teaching programme on leptospirosis among people at Pallihottam in Kollam district.
3. To find out the association between pretest knowledge scores on leptospirosis with selected socio-demographic variables.

HYPOTHESIS

All hypotheses were tested at 0.05 level of significance.

- **H₁:** There will be significant difference between the mean pretest and posttest knowledge scores regarding Leptospirosis among people in experimental group after administering video assisted teaching programme.
- **H₂:** There will be significant difference between the pre test and posttest knowledge score regarding Leptospirosis among people in control group.
- **H₃:** There will be significant association between pretest knowledge score with selected demographic variables regarding Leptospirosis.

RESULT

The results were computed under sections 1, 2, 3 and 4

1. Description of knowledge regarding leptospirosis in experimental group

The findings of the study revealed that the pre-test knowledge score had a mean value of 9.96 and the post-test knowledge score had a mean value of 19.7.

2. Description of knowledge regarding leptospirosis in control group

The findings of the study revealed that the pre-test knowledge score had a mean value of 9.83 and the post-test knowledge score had a mean value of 9.63.

3. Effectiveness of video assisted teaching programme on knowledge regarding leptospirosis

The mean pre-test knowledge score in experimental group among people residing in Pallihottam in Kollam district is 9.96 and the mean post-test knowledge score in experimental group among people residing at Pallihottam in Kollam district is 19.7. It indicates the effectiveness of video assisted teaching programme on knowledge regarding leptospirosis. Hence, the hypothesis, H₁ which states that there would be

significant difference between the mean pretest and posttest knowledge scores regarding Leptospirosis among people in experimental group after video assisted teaching programme is accepted.

The calculated paired 't' value is 8.74 and the tabulated t value is 2.00. The calculated t value is greater than the tabulated t value at 0.05 level of significance. This implies that the video assisted teaching programme was effective in measuring the knowledge regarding leptospirosis. Hence the hypothesis, H₁ which states that there would be significant difference between the mean pretest and posttest knowledge scores regarding Leptospirosis among people in experimental group after video assisted teaching programme is accepted.

4. Association between pre-test knowledge scores with the demographic variables

The association between the pre-test knowledge scores with selected demographic variables were computed by chi-square test. The calculated chi-square value for age is 10.71, the calculated chi-square value for gender is 13.27. The calculated chi-square value for type of family is 4, the calculated chi-square value for marital status is 13.3. The calculated chi-square value for educational status is 2.24. The calculated chi-square value for occupation is 10.51. The calculated chi-square value for monthly income is 10.86. The calculated chi-square value for previous knowledge regarding leptospirosis is 2.7. It was inferred that the present study showed significant association between knowledge and demographic variable like gender and no significant association between knowledge and demographic variables like age, type of family, marital status, education and previous knowledge regarding leptospirosis at 0.05 level of significance. Hence, the research hypothesis, H₃ which states that there would be significant difference between the pretest knowledge score and selected demographic variables regarding leptospirosis among people is accepted.

CONCLUSION

It was analysed that there is significant difference in the pre-test knowledge scores (9.96) and post-test knowledge scores (19.7) using paired t-test. So the video assisted teaching was effective. Statistical analysis was done to determine the association between knowledge with selected demographic variables using chi-square test. There is no significant association between knowledge with demographic variables like age, type of family, marital status, educational status, occupation, monthly income and previous knowledge regarding leptospirosis. And there is a significant association between knowledge with demographic variable like gender.

REFERENCE

1. Bharti AR, Nally JE, Ricaldi JN, Matthias MA, Diaz MM, Lovett MA, et al. Leptospirosis: A zoonotic disease of global importance. *Lancet Infect Dis.*, 2003; 3: 757–71.

2. Smythe LD. Leptospirosis worldwide, 1999. *Wkly Epidemiol Rec.*, 2001; 76: 109–16.
3. Sasaki DM, Pang L, Minette HP, Wakida CK. Active surveillance and risk factors for leptospirosis in Hawaii. *Am J Trop Med Hyg.*, 1993; 48: 35–43.
4. Katz AR, Effler PV. “Probable” versus “Confirmed” leptospirosis” An epidemiologic and clinical comparison utilizing a surveillance case classification. *Ann Epidemiol*, 2003; 13: 196–203.
5. Vinetz JM, Glass GE, Flexner CE, Mueller P, Kaslow DC. Sporadic urban leptospirosis. *Ann Intern Med.*, 1996; 125: 794–8.
6. Thiermann AB, Frank RR. Human leptospirosis in Detroit and the role of rats as chronic carriers. *Int J Zoonoses*, 1980; 7: 62–72.
7. Pate GE, Hogan MC, FitzSimon N, Mellotte GJ. A review of the epidemiology of leptospirosis in the Republic of Ireland. *Ir Med J.*, 2000; 93: 114–7.
8. Jansen A, Schneberg I, Frank C, Alpers K, Schneider T, Stark K. Leptospirosis in Germany, 1962–2003. *Emerging Infect Dis.*, 2005; 11: 1048–54.
9. Ashford DA, Kaiser RM, Spiegel RA, Perkins BA, Weyant RS, Bragg SL, et al. Asymptomatic infection and risk factors for leptospirosis in Nicaragua. *Am J Trop Med Hyg.*, 2000; 63: 249–54.
10. Sehgal SC, Murhekar MV, Sugunan AP. Outbreak of leptospirosis with pulmonary involvement in north Andaman. *Indian J Med Res.*, 1995; 102: 9–12.