International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2020): 7.803

Effect of Structured Teaching Programme on Knowledge, Attitude and Practice regarding Prevention and Control of Leptospirosis among National Rural Employment Guarantee Assurance (NREGA) Scheme Workers in Selected Panchayat of Pathanamthitta District

Jeena Kunjachan

Assistant Professor, Pushpagiri College of Nursing, Kerala University of Health Science (KUHS)

Abstract: ***Leptospirosis is an emerging infectious disease with a worldwide distribution. The present study assessed the effect of Structured Teaching Programme (STP) on knowledge, attitude and practice regarding prevention and control of leptospirosis among National Rural Employment Guarantee Assurance (NREGA) Scheme workers in selected wards of KaviyoorPanchayat in Pathanamthitta District. This study adopted Pre experimental one group pre test and posttest design. The investigator selected 60 NREGAS workers by convenience sampling. During the pre test, the investigator assessed the knowledge, attitude and practice regarding prevention and control of leptospirosis using a structured questionnaire. The study results revealed among 60 subjects nearly half number of the subjects (43.0%) were above 50 years and more than half (60%) had high school education. Half of them (55%) had family income below Rs 4000 and 58% subjects were wearing personal protective devices during the work. During pretest only 32 % of NREGAS workers had good knowledge, 24% had good attitude, and 75% had good practice scores towards the prevention and control of leptospirosis. After the intervention 92% of samples attained good knowledge, majority (80%) of them developed good attitude and all of them reported good practice. The effect of STP on knowledge, attitude and practice was computed by paired t test and computed t value obtained was 9.03, 9.51, 8.57respectively which is greater than table value. Hence the research hypothesis was accepted at0.05 level of significance. The study results showed significant association between pre test attitude scores and experience and the same with pretest practice scores and education. The study concluded that STP is one of the effective teaching method of improve the knowledge, attittude and practice.***

Keywords: Structured teaching programme: knowledge, attitude, practice: NREGAS workers: leptospirosis

1. Introduction

Leptospirosis is an emerging zoonotic disease worldwide distribution and is linked to climate changes, urban slum communities, and occupation. The clinical symptoms range from mild to lethal. Leptospirosis is under reported in many countries because of difficult clinical diagnosis and the lack of diagnostic laboratory services. Rats are the principal sources of human infection. Dogs, cats, livestock and wild animals are other important animal reservoirs. Once infected, animal excrete spirochetes in the urine for an extended period of time. The majority of the human cases worldwide result from occupational exposure to contaminated water or soil.1

The disease is found throughout the world, and is estimated to affect one million people in a year and cause 60, 000 deaths. South and South – East Asia are the most affected regions with 200, 000 cases and 14, 000 deaths in each region [2.] According to WHO, the incidences ranges of leptospirosis from approximately 0.1 – 1 per 1, 00, 000 per year[3]. In India, the incidence of Leptospirosis reported 0.1-1.0 million cases per year. Kerala has reported Leptospirosis cases from all districts and this disease is the leading cause of mortality, among the infectious diseases. Based on the Integrated Disease Surveillance Project 2015, In Kerala 1098 leptospirosis cases and 43 deaths are reported.4 [(5)]

2. Need and Significance

Leptospirosis is mostly an occupational disease, occurring among agricultural workers.1 Exposure to leptospires can result from activities that facilitate contact between a susceptible host and the infection reservoir or infected substances. Such activities include washing or bathing in rivers, walking in flooded areas, and cleaning sewers or drains that are known to host substantial rat populations. Leptospirosis is a public health threat and chance of exposure is high due to lack of knowledge regarding the illness and poor working condition. It is necessary to increase the awareness regarding prevention and control of leptospirosis among the people who are doing the various kind of agricultural work especially workers under the NREGA scheme.

National Rural Employment Guarantee Act 2005 is an Indian labor law and social security measure that aims to guarantee the right to work whose adult members volunteer to do unskilled manual work. The investigator felt the need for educating this working group regarding the occupational risk.

3. Purpose of this Study

The study aims to create awareness among NREGAS workers about prevention and control of leptospirosis.

4. Statement of the problem

Effect of Structured Teaching Programme on knowledge, attitude and practice regarding prevention and control of leptospirosis among National Rural Employment Guarantee Assurance (NREGA) Scheme workers in selected Panchayat of Pathanamthitta District

5. Objective of the study

a) Determine the effect of structured teaching programme on prevention and control of leptospirosis by comparing the Pre test and Post test knowledge, attitude and self reported practice scores.
b) Find the association between pre-test knowledge, attitude and practice score with selected demographic variables.

6. Hypothesis

H1:-There will be a significant difference between Pre-test and Post test knowledge, attitude, practice scores of NREGA scheme workers on prevention and control of leptospirosis.
H2:-There will be a significant association between NREGAS workers Pre test knowledge, attitude and practice with selected demographic variables.

7. Methodology

- Research approach**:** This study uses quantitative approach to evaluate the effect of planned teaching programme regarding prevention and control of leptospirosis among NREGAS workers.
- Research design**:** The research design selected for this study was Pre-experimental one group pre-test and post-test design.

Research Variables

- **Independent variable:** Structured Teaching Programme on prevention and control of leptospirosis.
- **Dependent variable:** Knowledge, attitude and practice of NREGAS workers.
- **Socio Demographic variables:** In this study socio demographic variables of NREGAS workers includes age, education, religion, marital status, family income, experience, use of Personal Protective Equipment's, health problems and source of information.
- **Setting of the study:** The study is conducted in Kaviyoor Panchayat, Pathanamthitta district.
- **Population:** Population for the present study was NREGA workers registered under the Panchayath.
- **Sample:** The sample for present study were 60 NREGAS workers from different wards of KaviyoorPanchayath.
- **Sampling technique:** Sampling technique used in this study was convenience sampling technique

Sampling criteria

Inclusion criteria
- People who are doing unskilled manual works under NREGA scheme

Exclusion criteria
- People who are not working in NREGAS.
- Males working in NREGAS
- Those who have attended education programme on leptospirosis.
- People who are not willing to participate in the study.

Tools and Technique
Tools are devices or instruments utilized to collect data.

Development of tool
The development of tool was based on review of literature on related studies, non research literature and internet support. Expert opinion and suggestions were taken from concerned people in developing an appropriate tool. Later the tool was translated to Malayalam and retranslated in to English.

Description of the tool
Tool-1 Structured questionnaire which consist of the following sections
Section A: Demographic data of NREGAS workers
Section B: Structured questionnaire on knowledge regarding prevention and control of leptospirosis

Tool-3: **Self reported practice check list onprevention and control of leptospirosis**

Technique: In this study, the technique used to collect the data was self rating and interview technique.

8. Analysis and Interpretation

Section 1: Sample characteristics
Section 2: Effect of structured teaching programme among NREGAS workers
Section 3: Association between pre-test knowledge, attitude and practice score with selected demographic variables.

Section 1: Sample characteristics
This section shows that out of 60 subjects, nearly half number of subjects 26 (43.0%) were above 50 years. Hlf of them 31 (52 %) were Hindus and more than half 36 (60 %) had high school education. Majority of them 45 (75%) were married and half of them 33 (55%) had family income below Rs 4000. Less than half had 27 (45%) 2-4 years of experiences and more than half of them are wearing personal protective divices 35 (58%). Half of the subjects 30 (50%) were getting information from health professionals.

Section 2: Effect of Structured Teaching Programme
n= 60

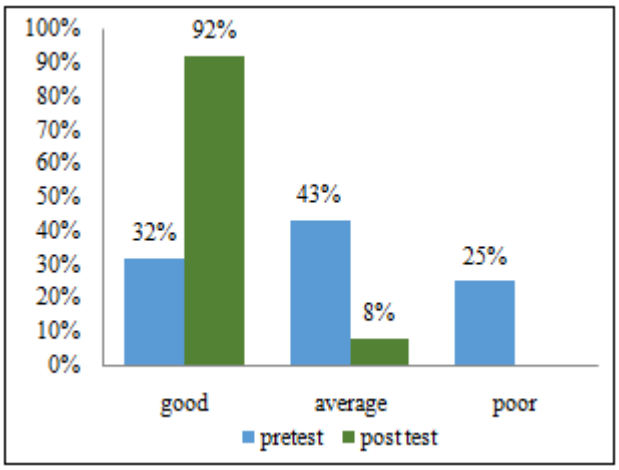

Figure 1: Comparison between Pretest and Post test knowledge score of NREGAS workers

Table 1: Effectiveness of STP on knowledge regarding prevention and control of leptospirosis among NREGAS workers, n= 60

Knowledge	Mean score			SD	MD	t – value	Score (f)
	Poor	Average	Good				
Pre test	15	26	19	12.25	3.716	5..61	9.03
Post test	0	5	55	17.88	2.81		

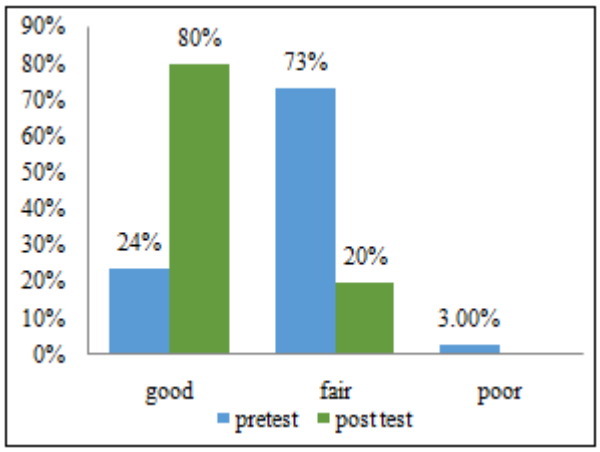

Figure 2: Comparison between Pre test and Post test attitude score of NREGAS workers

Table 2: Effectiveness of STP on attitude regarding prevention and control leptospirosis among NREGAS workers, n= 60

Attitude Score	Mean score			SD	MD	t – value	Score (f)
	Poor	Average	Good				
Pre test	2	44	14	30.36	5.13	9.1	9.51
Post test	0	12	48	39.46	5.48		

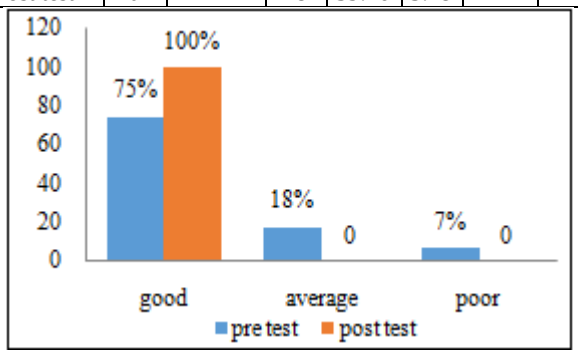

Figure 3: Comparison between Pre test and Post testself reported practice score of NREGAS workers

Table 3: Effectiveness of STP on practice regarding prevention and control of leptospirosis among NREGAS workers, n=60

Practice score (f)	Mean score			SD	MD	t – value	Score (f)
	Poor	Average	Good				
Pre test	15	26	19	12.25	3.716	5..61	9.03
Post test	0	5	55	17.88	2.81		

Section 3: Association between Pre-test knowledge, attitude and practice score of NREGAS workers with selected demographic variables.

There was significant association between NREGAS workers Pre test attitude scores and experience (χ^2 = 12.506, p<0.05) and Pre test practice score of education (χ^2 = 11.27, p<0.05) at degree of freedom 1.

9. Result

The result of the study were grouped under the following sections

Section 1: Sample characteristics
Out of 60 subjects, nearly half number of the subjects26 (43.0%) were above 50 years. Half of them 31 (52%) were Hindus and more than half 36 (60 %) had high school education. Majority of them45 (75%) were married and half of them33 (55 %) had family income below Rs.4000. Less than half had27 (45 %) 2-4 years of experience and more than half of them are wearing personal protective devices 35 (58%). Half of the subjects 30 (50%) were getting information from health professional.

Section 2: **Effect of structured teaching programme**

- In the pre-test, 25% of samples had poor knowledge, 43 %had average knowledge and 32% had good knowledge regarding prevention and control of leptospirosis. In the post test 92 % had good knowledge.
- The mean post test knowledge score on prevention and control of leptospirosis was 17.88 which was more than pre test knowledge score 12.25. The mean difference was 5.63. The calculated t-value was 9.03 (table value 2.02). There was statistically significant gain in knowledge score after the STP (p<0.05). Hence research hypothesis H1 regarding knowledge was accepted.
- In the pre test only 24 % of the NREGA scheme workers had good attitude, 73 % of the NREGA scheme workers had fair attitude and 3 % the NREGA scheme workers had poor attitude towards the prevention and control of leptospirosis. In the post test 80 % of the NREGA scheme workers had good attitude and 20% of the NREGA scheme workers had fair attitude towards the prevention and control of leptospirosis.
- The mean post test attitude score regarding prevention and control of leptospirosis was 39.46 which was more than pre test knowledge score 30.36. The mean difference was 9.16. The calculated t-value was 9.51 (table value 2.02). There was statistically significant gain in attitude score after the STP (p<0.05). Hence research hypothesis H1 regarding attitude was accepted.
- Regarding self reported practice score in the pre test, 75% of the samples followed the proper step in prevention and control of leptospirosis. In the post test all

of them followed the proper step in prevention and control of leptospirosis.

- The mean post test practice score regarding prevention and control of leptospirosis was 9.3 which was more than pre test knowledge score 7.55. The mean difference was 1.75. The calculated t-value was 8.57 (table value 2.02). There was statistically significant gain in practice score after the STP ($p<0.05$). . Hence research hypothesis H1 was accepted.

Section 3: **Association between Pre-test knowledge, attitude and practice score with selected demographic variables**.

There wassignificant association between NREGAS workers Pre test attitude scores and experience ($\chi^2 = 12.506$, $p<0.05$) and Pre test practice score of education ($\chi^2 = 11.27$, $p<0.05$) at degree of freedom 1.

10. Discussion

Present study found that 42 % of samples not using protective devices. This was supported by the study conducted in Thailand in which direct contact with contaminated mud, having wound in skin, cracked foot and uprooted foot nails creating an opportunity for direct entry of spirochetes. Occupations such as agriculture have high chances of getting injury to body part while working, which again increases the chances of entry of the microorganism.5 (42)

In the present study in the pre-test, 25% of samples had poor knowledge, 43 % had average knowledge and 32 % had good knowledge and only 24 % of the NREGA scheme workers had good attitude, 73 % of the NREGA scheme workers had fair attitude . Majority (75 %) of the samples followed the proper step in prevention and control of leptospirosis. This was supported by a cross sectional study conducted to assess the knowledge, attitude and practice on leptospirosis among 106 municipal workers in Tiruchirapalli, Tamilnadu. Majority of workers had poor knowledge (87.2%) and unsatisfactory practice score (64.5%), but showed 64.9% of satisfactory attitude score [6] (43)

11. Conclusion

The effectiveness of STP was evaluated by post test knowledge, attitude and practice score. There was significant association between NREGAS workers Pre test attitude scores and experience ($\chi^2 = 12.506$, $p<0.05$) and Pre test practice score of education ($\chi^2 = 11.27$, $p<0.05$) at degree of freedom 1. The STP was effective in enhancing the knowledge, develop right attitude and agree to practice of subjects irrespectives of the sample characteristics regarding prevention and control of leptospirosis. Hence there is an immense need for implementation of appropriate teaching programme on prevention and control of leptospirosis for NREGAS workers to reduce the incidence of leptospirosis.

12. Recommendations

- Similar study can be replicated in a larger sample in a diffrent setting to generalize the findings.
- Case control study canbe conducted to identify the risk factors. .
- Studies can be conducted in the hospital setting to assess the test knowledge, attitude and practice regarding prevention and control of leptospirosis

13. Nursing implications

- Community health nurse in primary health centre scan conduct in service education to ASHA workers and Anganwadi workers regarding importance of prevention and control of leptospirosis with the help of appropriate the AV—aids.
- Public health nurse can think about the measures that can be adopted in the working site to motivate the workers to practice prevention and control of leptospirosis
- In – service education programme can be conducted through the work shop or seminar to update the knowledge of staff nurses / community health nurses regarding importance of prevention and control of leptospirosis
- Public health nurse should work with Panchayat to use to maximum available resources to prevention and control of leptospirosis for workers and also to develop public relation.

References

[1] Park K. Preventive and social medicine.19th ed. Jabalpur: Banarsidas Bhanot; 2016.
[2] D Souza R. Leptospirosis. Health Action. October 2015; vol.28
[3] Human Leptospirosis: Guidance for diagnosis, surveillance and control. WHO Library Cataloguing in publication data 2003; (Last accessed on 2012 Sep 21]
[4] 4 S Sivakumar. Leptospirosis.2013; available from https: //www.research gate. net/publication/ 260750253-leptospirosis-Indian data
[5] Integrated Disease Surveillance project. Available on http: //dhs. Kerala. govt. in/ docs/transfer/addlph/cdata2015. pdf
[6] Saha. incidence of leptospirosis in india: a cross sectional study. European journal of pharmaceutical and medical research.2016; , 3 (7): 502-504.

Author Profile

Ms. Jeena Kunjachan did MSc in Community Health Nursing. She is an assistant professor in Pushpagiri college of nursing, Pushpagiri Medical Soceity, Thiruvalla, Kerala, India. Her educational qualifications includes Bsc Nursing (2011) from Aswini college of Nursing, Dr. NTR university, Guntur, AP and Msc Nursing (2017) from TMM College of Nursing from, Kerala University of Health sciences, kerala, India