



EFFECTIVENESS OF PLANNED TEACHING ON KNOWLEDGE REGARDING LEPTOSPIROSIS AMONG FARMERS

Nursing

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ABSTRACT

Background: Leptospirosis is a zoonotic disease of animals that can be transmitted to humans. Leptospira bacteria have been found in dogs, rats, livestock, mice, voles, rabbits, hedgehogs, skunks, possums, frogs, fish, snakes, and certain birds and insects. Infected animals will pass the bacteria in their urine for months, or even years leptospirosis is a zoonotic disease with worldwide distribution. It affects both humans and animals and is emerging as an important public health problem in many developing countries.

Objectives: 1) To assess the knowledge regarding leptospirosis among farmers. 2) To assess the effectiveness of planned teaching on knowledge regarding leptospirosis. 3) To associate knowledge score with selected demographic variable.

Methods and Materials: This study was based on one group pre test post test design with 100 samples (100 farmers), selected from rural community by using non probability convenience sampling technique.

Results: In this study non probability convenience sample of 100 subjects was drawn from the study population, who were taken from selected rural area of wardha district. In the assessment of knowledge of farmers after giving intervention findings shows that 90(90%) had "Excellent Knowledge", 10(10%) had "Good Knowledge" and nobody had average and poor knowledge. There was not significant association of knowledge score of farmers with selected demographic variables such as age, education, year of working experience, type of family, source of information and religion of farmers.

KEYWORDS:

knowledge, leptospirosis, farmers)

Leptospirosis is a zoonotic disease of animals that can be transmitted to humans. Leptospira bacteria have been found in dogs, rats, livestock, mice, voles, rabbits, hedgehogs, skunks, possums, frogs, fish, snakes, and certain birds and insects. Infected animals will pass the bacteria in their urine for months, or even years leptospirosis is a zoonotic disease with worldwide distribution. It affects both humans and animals and is emerging as an important public health problem in many developing countries.¹

The some sources of human infection are rats, dogs, cats, livestock and wild animal. Once infected, animal excrete spirochetes in the urine for an extended period of time. Leptospire survival outside the human host is dependent on the moisture content, temperature and pH of the soil and water into which they are shed. The majority of the human cases worldwide result from occupational exposure to rat contaminated water or soil. Occupational groups with a high incidence of Leptospirosis include agriculture workers, person who live or work in rat infested environment, individuals involved in animal and husbandry or veterinary medicine, and laboratory workers.²

In rural areas, leptospirosis is reported as an occupational disease among agricultural and animal workers. It is also recognized among the health constraints of workers engaged in integrated animal-fish farming systems.³

India is a developing country, about 72-74% of the people live in rural areas. The main source of income is agriculture; several millions of them are either marginal farmers or work on hired labour and struggle for bare necessities of life. It is said that nearly 11% of the total wild animal population is in India. It is usually observed that, animals are house under the same roof as human being. Therefore all possibilities exist for the various diseases to be transmitted by the animals to man.⁴

HYPOTHESIS

- **H1-** The mean post-test knowledge scores of the farmers regarding leptospirosis will be significantly higher than the mean pre-test knowledge scores.
- **H2-** There will be significant association between the mean post-test knowledge scores and the selected socio-demographic variable.

Methodology

In this study one group pre test and post test research design was used. The study was conducted in the selected rural area of Wardha district. The population of the study was all the farmers of rural area of Wardha District. Population is distinguished as target and accessible population. Samples were farmers who were fulfilling the inclusion and exclusion criteria and the sample size was 100 farmers. The

sampling technique used was non-probability convenience sampling technique. The study was approved by the institutional ethical committee and the study was conducted in accordance with the ethical guidelines prescribed by central ethics committee on human research. The inclusion criteria of the study was farmers who are willing to participate, participants who are able to understand & read Marathi language, participants who are available at the time of data collection, participants between the age of 20 to 50 years. The exclusion criteria was those who are not willing to participate in the study.

Results

Section I: Distribution of demographic variables

Table 1: Percentage wise distribution of farmers according to their demographic characteristics. n=100

Demographic Variables	No. of farmers	Percentage (%)
Age(in years)		
21-30 years	12	12
31-40 years	36	36
41-50 years	45	45
51-60 years	07	07
Educational Status		
Primary	27	27
Secondary	54	54
Graduate	14	14
Postgraduate	05	05
Year of working experience		
1 to 5 years	41	41
6 to 10 years	39	39
11 to 15 years	13	13
Above 15 years	07	07
Type of family		
Nuclear	48	48
Joint	52	52
Source of Information		
Media	73	73
Relatives	15	15
Neighbors	05	05
Health professional	07	07
Religion		
Hindu	66	66
Muslim	09	09
Christian	01	01
Others	24	24

In this study majority of the subjects i.e 45% in the age group of 41-50 years, 36% in the age range of 31-40 years, 12% of them were belonging to the age of 21-30 years and only 7% were belonging to the age group of 51-60 years respectively.

According to their educational status shows that 54% upto secondary standard, 27% educated upto primary standard, 14% upto graduation and 5% were educated upto post graduation.

According to their year of working experience 41% of them had 1 to 5 years of experience, 39% had 6 to 10 years of experience, 13% had 11 to 10 years of experience and 7% had above 15 years of experience.

According to their type of family shows that 48% of them were belonging to nuclear families and 52% in joint families.

According to their religion shows that 73% had source of information from media, 15% had from relatives, 7% had from health profession and 5% had from friends.

According to their religion shows that 66% were hindu, 09% were muslim, 1% was Christian and 24% were others.

Section-II Post test knowledge score on leptospirosis among farmers

Table 2: Post test assessment of knowledge of farmers regarding leptospirosis

Level of knowledge score	Score Range	Percentage score	Post Test Knowledge Score	
			Frequency	Percentage
Poor	1-5	0-25%	0	0
Average	6-10	26-50%	0	0
Good	11-15	51-75%	10	10
Excellent	16-20	76-100%	90	90
Mean $\pm$ SD			17.65 $\pm$ 1.95	
Mean Percentage Score			88.25%	
Range			11 – 20	

The above table no 3 shows the frequency and percentage wise distribution of farmers according to post test level of knowledge regarding leptospirosis. The levels of knowledge were seen into 4 categories, poor, average, good and excellent. 10% of the agriculture workers had good and 90% had excellent level of knowledge score. Mean knowledge score was 17.65 $\pm$ 1.95 with a percentage score of 88.25%.

Section III: Effectiveness of planned teaching on knowledge regarding leptospirosis among the farmers.

Table 3: Significance of difference between knowledge scores in pre and post test of farmers in relation to leptospirosis n=100

Overall	Mean	SD	Mean Percentage	t-value	p-value
Pre Test	6.58	3.20	32.90	30.44	0.0001*HS p<0.05
Post Test	17.65	1.95	88.25		

Pretest and post test knowledge scores of farmers regarding leptospirosis. Mean, standard deviation and mean percentage score values are compared and student's paired test is applied at 5% level of significance. The statistical Student's paired t test implies that the difference in the pre test and post test knowledge score found to be 30.44 statistically significant at 0.05% level. Hence it is statistically interpreted that structured teaching plane on knowledge regarding Leptospirosis was effective. Thus H1 is accepted.

Section-IV: Association of knowledge score of farmers in relation to demographic variable

There was no significant association of knowledge score of farmers with selected demographic variables such as age, education, year of working experience, type of family, source of information and religion of farmers.

Discussion

The present study conducted among farmers by using self structured questionnaire to assess the effectiveness of planned teaching on knowledge regarding leptospirosis. In pre test knowledge score 42% of

the farmers had poor, 48% had average and 10% had good level of knowledge score. After giving planned teaching post test knowledge score was increased 10% of the farmers had good and 90% had excellent level of knowledge score.

A similar study can be conducted among Agricultural Workers about more than half (68%) had low knowledge followed by average knowledge (33%) and none had high knowledge in pre test and majority of the Agricultural Workers had low knowledge (48 %) followed by average knowledge (42%) and (10%) had high knowledge in post test. It is very important point here that none had high knowledge before giving the structured teaching programme and improved in high and average knowledge after structured teaching programme.⁵

A similar study was conducted on knowledge of health risks of Leptospirosis before and after health teaching module in Tamil Nadu. Study was undertaken in 24 randomly selected multi-purpose health workers in Tamilnadu. The results showed that the pre test mean score, 19 percent was increased to 54 per cent after post test (health education). The study concluded health education module was effective to improve the knowledge of health risks of climate change.⁶

In the present study there is no significant association of demographic variables with post test knowledge score such as age, education, year of working experience, type of family, source of information and religion. Hence the hypothesis H² is not accepted.

RECOMMENDATIONS:

1. A similar study can be replicated on large scale to generalize the findings.
2. A similar study can be conducted to find the attitude of Agricultural Workers about Prevention of Leptospirosis.
3. A descriptive study can be conducted among the Agricultural Workers.
4. A similar study can be replicated with experimental and control group.
5. A comparative study has to be conducted to evaluate two different teaching methods.

CONCLUSION

The main aim of the study was effectiveness of planned teaching on knowledge regarding leptospirosis among farmers. The conclusion drawn on the basis of findings of the study that the administration of planned teaching helped the farmers to understand regarding leptospirosis. There was substantial improvement in the knowledge scores after the administration of the planned teaching.

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