



## ASSESSMENT OF EFFECTIVENESS OF SELF INSTRUCTIONAL MODULE ON KNOWLEDGE REGARDING FIRSTAID OF SNAKEBITE AMONG FARMERS

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### ABSTRACT

**Background:** In Maharashtra, common poisonous snakes are Cobra, Russell's Viper, Saw Scaled Viper, and Krait. World mortality from snake bite is estimated as 50,000 to 1,00,000 annually (McNamee 2001) and the greatest number of reported snake bite death occurring in Indian subcontinent is 10,000 to 15,000 annually. World Health Organization (WHO 1963) reports 40,000 annual deaths in tropical countries. Largest number of deaths reported in India are from Bengal, Uttar Pradesh (UP), Tamil Nadu, Bihar, and Maharashtra. It is a fact that in spite of heavy morbidity and mortality, very little attention is paid by the clinicians to this occupational hazard.

**Objectives of the problem:** To assess the knowledge regarding First Aid of snake bite among farmer. To assess the effectiveness of self instruction module regarding First Aid of snake bite among farmer. To association the finding with selected demographic variables.

**Materials and Method:** This study was based on Pre experimental one group pre test post test research design. In this study, 50 farmers are included. This study is conducted at different rural area of Wardha district. The sampling technique used in this study was non probability purposive sampling technique. Data was collected by using structured questionnaires.

**Results:** In pre test 1(2%) of the farmer were having poor knowledge, 30(60%) of them had average and 19(38%) had good level of knowledge score. The minimum score in pretest was 6 and the maximum score was 18, the mean score for the pretest was  $11.86 \pm 2.983$  with a mean percentage score of 39.53% whereas in posttest 25(50%) of the farmer were having very good knowledge and only 25(50%) of them had excellent level of knowledge score. The minimum score in posttest was 20 and the maximum score was 29, the mean score for the posttest was  $24.30 \pm 1.901$  with a mean percentage score of 81%. Studies shows comparison of pretest and post test knowledge scores Mean, standard deviation and mean difference values are compared and student's paired 't' test is applied at 5% level of significance. Hence it is statistically interpreted that Self Instructional Module on overall knowledge regarding management of First aid of Snakebite Among Farmers who attended was effective. Thus the  $H_0$  is accepted.

**Conclusion:** The result of this study shows that Farmers had excellent knowledge in the post test. To find the effectiveness of self instructional module 't' test was applied and t value was calculated, post test score was significantly higher at 0.05 level than that of pre test score. Thus it was concluded that SIM on First aid of Snakebite was found effective as a teaching strategy.

**KEYWORDS :** Self Instructional Module, Knowledge, management of, First aid of Snakebite Farmers

### INTRODUCTION:

poisonous snakes are Cobra, Russell's Viper, Saw Scaled Viper, and Krait. World mortality from snake bite is estimated as 50,000 to 1,00,000 annually (McNamee 2001) and the greatest num "The secret of national health lies in the homes of the people"

In Maharashtra, common ber of reported snake bite death occurring in Indian subcontinent is 10,000 to 15,000 annually. World Health Organization (WHO 1963) reports 40,000 annual deaths in tropical countries. Largest number of deaths reported in India are from Bengal, Uttar Pradesh (UP), Tamil Nadu, Bihar, and Maharashtra. It is a fact that inspite of heavy morbidity and mortality, very little attention is paid by the clinicians to this occupational hazard.<sup>1</sup>

Snakes are distributed all over the world except in Antarctic, New Zealand and Ireland is more prevalent in temperate and tropical countries There are about 3000species of snakes in the world known to date, out of which 300 species are poisonous to man. Only one percent of snakebites are poisonous snakes. The most prevalent poisonous snakes are the coral snake and pit vipers, which include rattlesnake, copperheads and cotton mouth moccasins. In India most poisonous snake are viper, krait snake, saw scaled viper and king cobra(in local language it is called as kaalingasarpa) The snakebite problem is generally considered as a rural problem since most of the snakebites are encountered in rural areas and this has been linked with environmental and occupational conditions.<sup>2</sup>

Snakebite is an important and serious medical problem in many parts of India. However, reliable data for the morbidity

and mortality are not available since there is no proper reporting system. Moreover, the records of the large number of cases do not come to official statistics as people seek traditional methods of treatment. Snake venom consists of primarily of proteins with a broad range of physiologic effects. Mortality and morbidity of snake bite is due to involvement of multi organ systems, especially the neurologic, cardiovascular, and respiratory systems, because of its neurotoxic and hematotoxic and cardio toxic effects.<sup>3</sup>

First aid care is an emergency care and treatment of an injured person before complete medical and surgical treatment can be secured.<sup>4</sup>First aid is a most important branch of medical science, one in which a lay man has a useful and rewarding play. It requires progressive acquisition of knowledge. An organized worldwide effort came in 1877, though First aid was being practiced from ancient time. It was the famous Surgeon GeneralEsmarch (1823-1908), who first conceived the idea of "first aid".<sup>1</sup> In case of snake bite the first aid care is very essential care to prevent morbidity and mortality due to complications. By implementing first aid care immediate after the snake bite we can improve the survival rate.<sup>4</sup>

### HYPOTHESIS:

$H_0$ : There will be no significant difference between pre-test and post-test knowledge score regarding. management of First aid of Snakebite Among Farmers

$H_1$ : There will be significant difference between pre-test and post-test knowledge score regarding management of First aid of Snakebite Among Farmers

**MATERIALS AND METHOD**

This study was based on Pre experimental one group pre test post test research design. In this study, 50 farmer workers are included. Inclusion Criteria :1. Farmer who are willing to participate. 2. Farmer who can read or write Marathi Exclusion Criteria 1) farmer who attend the training programme on minor ailments of preschool children Development of tools: A structured questionnaire was used. Questionnaire method used to assess the knowledge regarding management of selected minor ailments of preschool children. It consists of two sections. Section I was consist of demographic characteristics regarding Anganwadi workers. Section II was Structured knowledge questionnaire The tool was established in consultation with guide and nine experts. Suggestions of the experts were considered and changes were made accordingly. The reliability co-efficient was calculated. The Questionnaires is said to be reliable if the co-efficient is more than 0.8. The reliability co-efficient 'r' of the questionnaire was 0.86, which was more than 0.8. Hence the questionnaire was found to be reliable. The data were collected for period of approximately 20 days. Samples were selected by non-probability purposive sampling, which were available during the study. Prior to collection of the data, permission was obtained from the authority persons. And the informed consent from the entire participants was taken before starting the study. Data was collected by using questionnaires. The investigator introduced herself and obtained consent from women who were willing to participate. Purpose and important of research study was explained before collection of data.

**RESULTS:**

**Table No. 1: Percentage wise distribution with of First aid of Snakebite Among Farmers regards to selected demographic variables.**

n = 50

Demographic variable	No. of subject	Percentage (%)
<b>Age(years)</b>		
30-35	5	10%
36-41	10	20%
42-47	18	36%
47 above	17	34%
<b>Education</b>		
primary	15	30%
Higher	24	48%
Under graduation	9	18%
Graduate and above	2	4%
<b>Residence</b>		
Urban	24	48%
Rural	26	52%

Table no. 1 shows that:

- Distribution of farmer according to their age reveals that 5(10%) in 30-35years, 10(20%) in 36-41 years, 18(36%) in 42-47years, 17 (34%) in 47 above years.
- Distribution of farmer according to their education of sample reveals that primary is 15(30%), higher is 24(48%) and under graduation are 9(18%) ,graduate and above 2(4%)
- Distribution according to their residence reveals that 24(48%) was from urban area and 26(52%) was from rural area.

**Table no.2: Pretest knowledge regarding management of First aid of Snakebite Among Farmers**

n = 50

Level of knowledge score	Score range	Percentage score	Pre Test	
			Frequency	Percentage
Poor	0-6	0-20%	1	2%
Average	67-12	21-40%	30	60%
Good	13-18	41-60%	19	38%

Very good	19-24	61-80%	0	0%
Excellent	25-30	81-100%	0	0%
Minimum score	6			
Maximum score	18			
Mean score	11.86 ± 2.2983			
Mean %	39.53%			

- Pre-test result shows that 1(2%) of farmer were having poor level of knowledge score, 30(60%) of them had average level of knowledge score, 19(38%) of them had good level of knowledge score. The minimum score was 6 and the maximum score was 18, the mean score was 11.86 ± 2.2983 with a mean percentage score of 39.53%

**Table no. 3: Posttest knowledge first aid of snakebite among farmers**

n = 50

Level of knowledge score	Score range	Percentage score	Post Test	
			Frequency	Percentage
Poor	0-6	0-20%	0	0%
average	67-12	21-40%	0	0%
good	13-18	41-60%	0	0%
Very good	19-24	61-80%	25	50%
excellent	25-30	81-100%	25	50%
Minimum score	20			
Maximum score	29			
Mean score	24.30 ± 1.961			
Mean %	81%			

- Post-test shows that, 25(25%) of them had very good level of knowledge score and 25(25%) is excellent level of knowledge score The minimum score was 20 and the maximum score was 29, the mean score was 24.30 ± 1.961 with a mean percentage score of 81%

**Table no. 4. Percentage wise distribution of effectiveness of self-instructional module on knowledge regarding first aid of snakebite among farmers**

n = 50

Tests	Mean	SD	t'-value	Degree of freedom	p-value	Significant
Pre Test	11.86	2.983	25.649	49	0.000	S, p<0.05
Post Test	24.30	1.961				

Table no. 4.shows that there is a significant difference between pretest and post test knowledge scores interpreting effective self-instructional module on knowledge first aid of snakebite among farmers Mean value of pre test is 11.86and post test is 24.30 and standard deviation values of pre test is 25.649 and post-test is 1.961. The calculated t-value is 25.649 and p-value is 0.000. Hence it is statistically interpreted that the self-instructional module on knowledge regarding knowledge regarding first aid of snakebite among farmers was effective. Thus the H<sub>1</sub> is accepted and H<sub>0</sub> is rejected in this study

**DISCUSSION:**

A retrospective study was done on snake bite incidence in Belgaum, Karnataka.. The fatal cases of snake bite antipsied during the period from 01-01-2004 to 31-12-2009 were analyzed at the Department of Forensic Medicine & Toxicology, J.N. Medical College, Belgaum, and Karnataka. In age wise distribution, maximum number of victims were in the age group 41-50 years (23 cases; 33.8%), followed by 21-30 years (13 cases; 25%) and 31-40 years (16 cases; 23.5%). Rural population (48 cases; 70.6%) had significantly higher incidence rates than the urban population (20 cases; 29.4%). Increased attention should be dedicated to snake bite

envenoming and on the management of snake bite victim to decrease the incidence as well as death rate.<sup>5</sup>

A descriptive study conducted on estimation of total snake bite admission in an emergency department estimated that 9873 snake bites were treated in US emergency department each year between 2001 and 2004. Approximately 32 patients were known to be bitten by venomous species. Over all more than one quarter victims were hospitalized (95%). They concluded that snake bite cause nearly 10,000 visit to emergency department for treatment every year.<sup>6</sup>

This finding is supported by a similar study done by Kishore (2002) which demonstrated an increase in post test knowledge level (54%) from pre test knowledge level (38%).<sup>10</sup>

#### **NURSING IMPLICATION:**

The finding of this has definitive implication in nursing practice, nursing education, nursing administration.

#### **NURSING PRACTICE:**

Nurses should enhance their professional knowledge. The finding of the study can be used to bring about the awareness among the farmer regarding first aid management of snakebites can be useful for the future generation in the improvement of knowledge.

#### **NURSING SERVICES:**

The most important role of nurse is to provide awareness to the farmer on first aid of snake bite. This study will help the nurse for promotion of health physical and mental, it also help the nurses to keep update knowledge regarding snake bite and its prevention.

#### **NURSING EDUCATION:**

In the nursing curriculum student nurse can use the instrument for the study for collecting information regarding first aid of snakebite among farmers during their community posting.

#### **NURSING RESEARCH:**

The researcher can use finding of the study as base line data to conduct large international research to assess the knowledge regarding first aid of snakebite.

#### **RECOMMENDATIONS:**

- A large scale study among farmer can carry out to generalize the finding.
- A study to assess the attitude and knowledge of farmer about management of first aid on snake bite
- A comparative study to assess the awareness to prevent snake bite

#### **CONCLUSION:**

The following conclusion can be drawn from the study findings, which are supported by the evidence from the literature.

- The Anganwadi workers have average knowledge regarding first aid on snake bite. There was a significant increase in the knowledge of the subject after the administration self instructional module. The paired 't' test computed for pre test knowledge and post test knowledge score which is indicate a highly significant difference in the knowledge scores among the farmer. Thus it is concluded that the self instructional module on management of first aid of snakebite among farmers was effective in improving the knowledge.

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