



A study to evaluate the effectiveness of Self-Instructional module on Knowledge Regarding first aid management of snake bite among the farmers of selected village.

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ABSTRACT

Introduction : Snakebite envenoming is a serious and life-threatening medical condition that predominantly affects people living in rural communities across Africa, Asia, and Latin America. As our climate changes, there is a growing concern that negative human-snake interactions will increase. Our ability to prevent and manage snakebite requires effective antivenomous as well as knowledge regarding the prevention and management of snakebite among healthcare workers and affected communities across the globe.

Aim : to evaluate the effectiveness of Self -Instructional module on Knowledge Regarding first aid management of snake bite among the farmers of selected village.

Materials and Method : Quantitative research approach with pre-experimental (one group pre-test posttest) research design was used. Simple random sampling technique was used to select the Sample, Sample size was 60 farmers who residing at selected village. Sample were the farmers residing at selected village who met the inclusion criteria, variables was Independent variable: Self- instructional module for farmers regarding first aid management of Snake bite, Dependent variable: Knowledge of farmers regarding first aid management of Snake bite. A proforma was prepared to collect the data. Descriptive and inferential statistics were used to analyse the data according to objectives.

Result : Effectiveness of self-instructional module on knowledge regarding first aid management of snake bite among farmers. In Pre Test, the mean score is 9.76 with a standard deviation of 4.29, resulting in a mean percentage of 48.8%. While Post Test the mean score is 14.65 with a standard deviation of 3.73, resulting in a mean percentage of 73.25%. The calculated paired t-test value ($t = 6.70$) is greater than the table value (2.00) and p value is less than 0.001 which is highly significant at 0.05 level of significance. This indicates a significant improvement from the pre-test to the post-test, as evidenced by the paired t-test result. Hence, the null hypothesis is rejected and the research hypothesis is accepted. This indicates that the self-instructional module was effective in improving knowledge regarding first aid management of snake bite among farmers.

Conclusion : The findings of the present study indicated Effectiveness of the self-instructional module on knowledge regarding first aid management of snake bite among the farmers of selected village. This notable improvement in knowledge is supported by the paired ttest result of 6.70 is greater than table value 2.00 and p value is less than 0.001 which was highly significant, indicating that the difference between the pre-test and post-test scores is statistically significant. Thus, the results suggest a marked improvement in both x knowledge after the intervention.

Keywords : Assess, snake bite, Effect,

INTRODUCTION

Snakebite envenoming is a serious and life-threatening medical condition that predominantly affects people living in rural communities across Africa, Asia, and Latin America. As our climate changes, there is a growing concern that negative human-snake interactions will increase. Our ability to prevent and manage snakebite requires effective antivenomous as well as knowledge regarding the prevention and management of snakebite among healthcare workers and affected communities across the globe. This systematic review aims to assess existing levels of knowledge regarding snakebite prevention and management in both healthcare workers and affected communities.¹

Snakebite envenoming remains a public health threat in many tropical countries. While community knowledge of local snakes and snakebite first-aid and prevention are needed to reduce snakebite incidence and improve the outcomes for snakebite patients, it is poor in many communities. We assessed community health workers and community members regarding their knowledge on local snakes, snakebite first-aid and prevention in Nano district.²

Snakebite is a neglected tropical disease that leads to more than 120,000 deaths every year. In 2021, World Health Organization (WHO) launched a strategy to decrease its global burden by 2030. There is a range of issues around different interventions for the management of snakebite. Decisions around these interventions should be informed by evidence from systematic reviews.³ Snakebite envenoming causes considerable morbidity and mortality in northern Nigeria. The clinician's knowledge of snakebite impacts outcome. We assessed clinicians' knowledge of snakebite envenoming to highlight knowledge and practice gaps for possible intervention to improve snakebite outcomes.⁴ A comparison of hospital-registered deaths in one district of Sri Lanka to data from the Registrar-General's office on deaths demonstrated that 62.5% of deaths from snakebite envenoming were not reported in hospital data.⁵

Due to not attending healthcare facilities by a large proportion of the affected individuals and relying on traditional remedies instead. Some countries have a more than 70% rate of under-reporting, particularly in poorly equipped rural regions.⁶ The mortality from snakebites is due to the lack of awareness about the proper management of victims. Proper first aid in managing snakebite victims is one of the effective ways to decrease mortality.⁷

A combination of strategic and risk-based placement of antivenoms, suitable healthcare staff training, availability of affordable, safe and effective antivenoms and equipment, along with the promotion of responsible health-seeking behaviours, can lead better outcomes for snakebite patients and a considerable reduction in the impact of snakebite-related morbidity and mortality. However, the combination of poor geographical access to and inadequate health

Aim

The aim of the present study was to evaluate the effectiveness of Self -Instructional module on Knowledge Regarding first aid management of snake bite among the farmers of selected village.

Objectives

The objectives of the present study were to assess the knowledge regarding management of snake bite among the farmers of selected village, to evaluate the effectiveness of the self-instructional module regarding management of snake bite among the farmers of selected village, to find the association between pre test knowledge score with selected demographic variables.

METHODOLOGY

Quantitative research approach was used for present study, using a pre- experimental one group pre test and post test design to evaluate the effectiveness of Self -Instructional module on Knowledge Regarding first aid management of snake bite among the farmers of selected village. A total of 60 farmers were included in the study using a purposive sampling technique. Data were collected using a structured knowledge questionnaire consisting of items related to selected socio-demographic characteristics and knowledge regarding snake bite. A pre-test was conducted to assess the baseline knowledge of the farmers , followed by implementation of the self instructional module on first aid management of snake bite using appropriate teaching methods and audiovisual aids. After the intervention, a post-test was conducted using the same structured knowledge questionnaire to assess the change in knowledge.

The collected data were organized, tabulated, and analyzed using descriptive and inferential statistics. Frequency and percentage were used to describe the socio-demographic characteristics and levels of knowledge, while mean and standard deviation were used to summarize the knowledge scores. The paired *t*-test was used to determine the difference between pre-test and post-test knowledge scores and to assess the effectiveness of the self instructional module . The chi-square test was used to determine the association between the pre-test knowledge level and selected socio-demographic variables. A *p* value of less than 0.05 was considered statistically significant. Necessary permission was obtained from the concerned authority before conducting the study, and confidentiality and privacy of the participants were maintained throughout the research process.

RESULT

A total of 60 farmers participated in the study. The findings were organized and presented according to the objectives of the study.

Socio-demographic characteristics

Table 1 shows the distribution of farmers according to selected socio demographic characteristic. the maximum respondent 27 (45%) belong to the 21-30 years age group, 20 (33.33%) belongs to 31-40 years of age, followed 13 (21.67%) respondent belongs to 45-50years of age group, regarding gender distribution of farmers, the maximum respondent 32 (53.33%) were male and 28 (46.67 %) were female participant in study. Regarding education level distribution of farmers, the maximum respondent 22 (36.67%) were graduate or degree completed and 15 (25%) were with higher secondary education and 14 (23.33%) were completed secondary level of education, 8 (13.33%) were completed primary education and 2 (3.33%) were illiterate, regarding distribution of previous knowledge about first aid management of snake bite among farmers show that, the maximum respondent 39 (65%) doesn't not have previous knowledge and 21 (35%) have previous knowledge about first management of snake bite among farmers. Regarding distribution of history of snake bite of snake bite among farmers show that, the maximum respondent 56 (93.33%) doesn't not have history of snake bite and 4 (6.67%) have history of snake bite among farmers.

S.N	Demographic variables	Category	Frequency	Percentage
1.	Age in years	20-30 years	27	45
		31-40 years	20	33.33
		41-50 years	13	21.67
2.	Gender	Male	32	53.33
		Female	28	46.67
3.	Educational status	Illiterate	2	3.33
		Primary education	8	13.33
		Secondary education	14	23.33
		Higher secondary	15	25
		Graduate or degree	22	36.67
4	Previous knowledge about first aid management of snake bite	Yes	21	35
		No	39	65
5	Do you have history of snake bite	Yes	4	6.67
		No	56	93.33
6.	Source of information	TV/mass media	19	31.67
		Health worker	10	16.67
		School	15	25
		Family	16	26.67

Table no. 2 depicts that pre test knowledge regarding first aid management of snake bite among farmers shows the maximum of respondents 37 (61.67%) were had average knowledge, followed by 16 (26.67%) farmers were had poor knowledge and 7 (11.67%) farmers were had good knowledge regarding first aid management of snake bite.

Sr. No	Criterion	Range of score	No. of respondent	Percentage
1	Poor Knowledge	0 to 07	16	26.67
2	Average Knowledge	08 to 14	37	61.67
3	Good Knowledge	15 to 20	7	11.67

Pre test level of knowledge

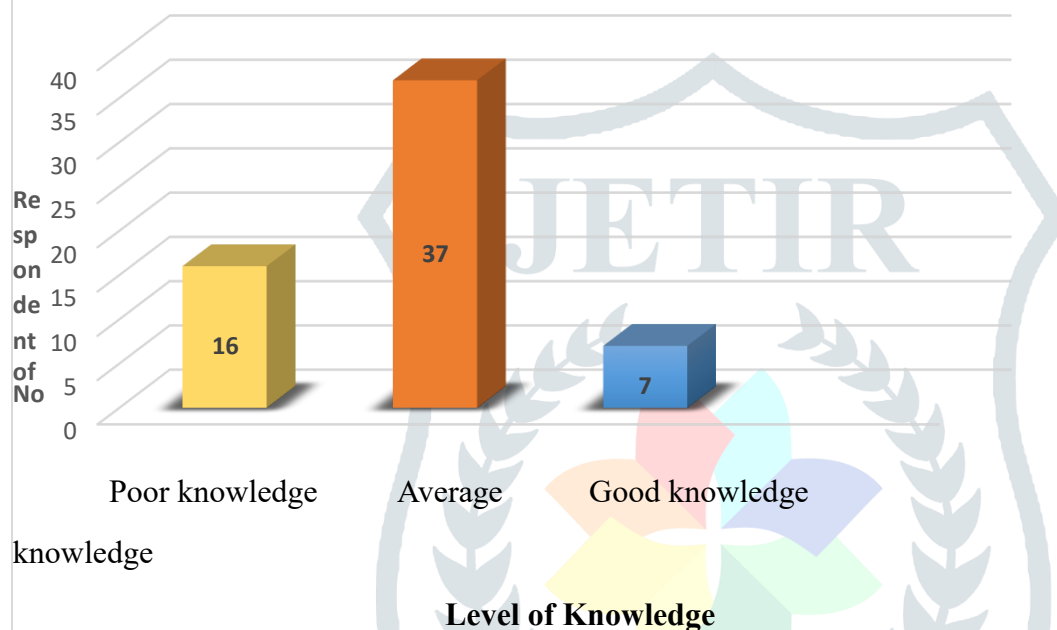


Table depicts that post test knowledge regarding first aid management of snake bite among farmers shows the majority of respondents i.e 36 (60%) have good knowledge followed by 22 (36.67%) farmers were had average knowledge and 2 (3.33%) farmers were had poor knowledge regarding first aid management of snake bite.

Sr. No	Criterion	Range of score	No. of respondent	Percentage
1	Poor Knowledge	0 to 07	2	3.33
2	Average Knowledge	08 to 14	22	36.67
3	Good Knowledge	15 to 20	36	60

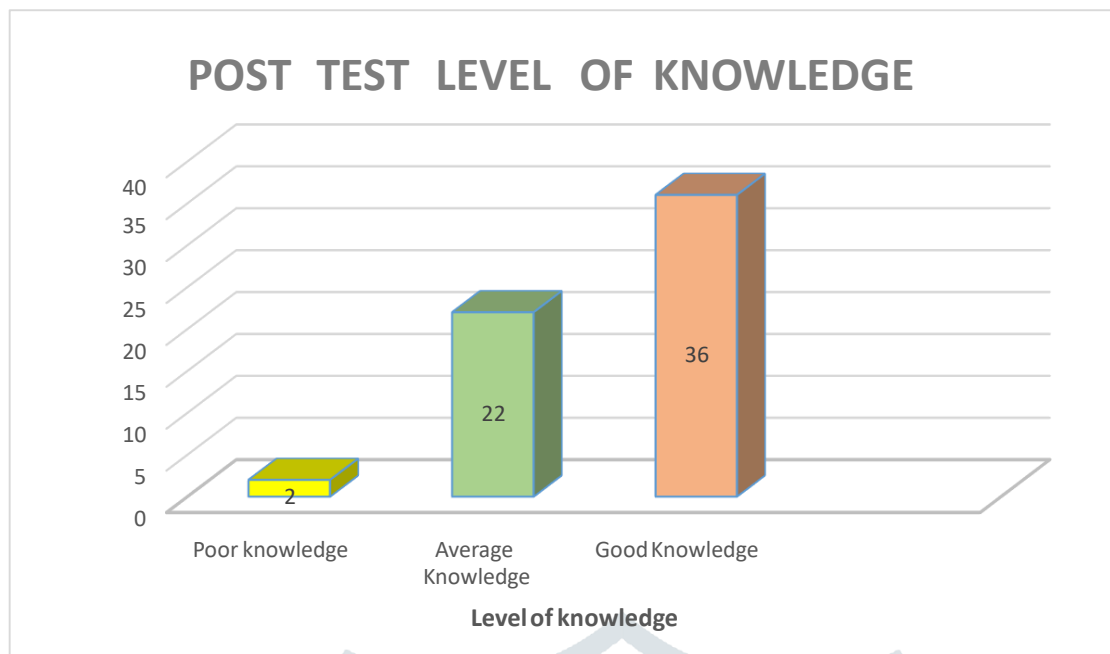


Table shows effectiveness of self-instructional module on knowledge regarding first aid management of snake bite among farmers. In Pre Test, the mean score is 9.76 with a standard deviation of 4.29, resulting in a mean percentage of 48.8%. While Post Test the mean score is

14.65 with a standard deviation of 3.73, resulting in a mean percentage of 73.25%.

The calculated paired t-test value ($t = 6.70$) is greater than the table value (2.00) and p value is less than 0.001 which is highly significant at 0.05 level of significance. This indicates a significant improvement from the pre-test to the post-test, as evidenced by the paired t-test result. Hence, the null hypothesis is rejected and the research hypothesis is accepted. This indicates that the self-instructional module was effective in improving knowledge regarding first aid management of snake bite among farmers.

Sr. No	Group	Mean	Standard deviation	Mean %	paired t test	Table Value
1	Pre test	9.76	4.29	48.8	6.70	2.00
2	Post test	14.65	3.73	73.25		

* significance level of 0.05.

The chi-square test was applied to determine the association between pre-test level of knowledge regarding first aid management of snake bite among farmers and selected demographic variables. The findings revealed that there was a statistically significant association between pre-test level of knowledge and educational status ($p = 0.013$) and source of information ($p = 0.0335$), as the p-values were less than the level of significance ($p < 0.05$). Hence, the null hypothesis was rejected for these variables and the research hypothesis was accepted. However, there was no statistically significant association found between pre-test level of knowledge and age ($p = 0.943$), gender ($p = 0.941$), previous knowledge ($p = 0.059$), and history of snake bite ($p = 0.686$), as the p-values were greater than 0.05. Therefore, the null hypothesis was accepted for these variables and the research hypothesis was rejected.

The study concludes that there is a significant association between pre-test level of knowledge regarding first aid management of snake bite among farmers and educational status as well as source of information. This indicates that these factors influence the knowledge level of farmers. However, no significant association was found with age, gender, previous knowledge, and history of snake bite. Therefore, it can be inferred that improving education and providing reliable sources of information can enhance the knowledge of farmers regarding first aid management of snake bite.

Sr o	Socio demographic variables	Category	Pre test levels of knowledge			Total	Chi square value	Df	P value
			Poor	Average	Good				
			F	F	F				
		20-30 yrs	7	16	4	27			
		31-40 years	6	12	2	20			
		41- 50	3	9	1	13			0.943

1	Age in years	ars					0.759	4	Not gnificant
2.	Gender	Male	8	20	4	32	0.119	2	0.941 Not gnificant
		Female	8	17	3	28			
3	Educational status	Illiterate	2	0	0	2	19.341	8	0.013 Significan
		Primary	4	4	0	8			
		Secondary	4	9	1	14			
		Higher condary	5	8	2	15			
		Graduate	1	16	4	22			
4		Yes	2	17	2	21			

	Previous wledge a about rst aid a anagement of Snake bite	No	14	20	5	39	5.636	2	0.059 Significan
5.	Do you have story o of ake bite	Yes	1	2	1	4	0.75212	2	0.686 Not significant
		No	15	35	6	56			
6.	Source formation of	TV/mass edia	10	5	4	19	13.672	6	0.0335 Significan
		Health orker	2	6	2	10			
		School	3	12	0	15			
		Family & iends	1	14	1	16			

DISCUSSION

Effectiveness of self-instructional module on knowledge regarding first aid management of snake bite among farmers. In Pre Test, the mean score is 9.76 with a standard deviation of 4.29, resulting in a mean percentage of 48.8%. While Post Test the mean score is 14.65 with a standard deviation of 3.73, resulting in a mean percentage of 73.25%. The calculated paired t-test value ($t = 6.70$) is greater than the table value (2.00) and p value is less than 0.001 which was highly significant at 0.05 level of significance. This indicates a significant improvement from the pre-test to the post-test, as evidenced by the paired t-test result. Hence, the null hypothesis is rejected and the research hypothesis is accepted. This indicates that the self-instructional module was effective in improving knowledge regarding first aid management of snake bite among farmers.

Pradeepsingh NB, Naik S, Ager S, Naik V, Machado s. (2024) A retrospective study was conducted to evaluate the effectiveness of self-instructional module on knowledge regarding first aid management of snake bite among selected PU college students at Ankola, Uttara Kannada District, Karnataka. Researcher adopted quantitative approach with a one group pretest post-test design. In this study, sample consists of 50 PU college students of selected colleges of Uttara Kannada District. Researcher used purposive sampling method used is, which a type of non-probability sampling. Result found that Pre-test knowledge score was distributed with the mean of 11.74, median 12.5, mode 13, standard deviation 1.86. The post-test knowledge score was distributed with the mean of 11.74, median 12.5, mode 13, standard deviation 1.86. Mean post- test knowledge scores of the sample is significantly higher than the mean pre-test knowledge scores that 't' table value 't' = 1.671 and the calculated value 't' = 21.67, $p < 0.05$ which shows that calculated value is greater than the table value. Hence there is significant gain in knowledge among selected PU college students in Ankola, Uttara Kannada district. Conclusion indicating that there was significant gain in knowledge regarding snake bite through self-instructional module.⁸

The findings of the present study indicated Effectiveness of the self-instructional module on knowledge regarding first aid management of snake bite among the farmers of selected village. This notable improvement in knowledge is supported by the paired t-test result of 6.70 is greater than table value 2.00 and p value is less than 0.001 which was

highly significant, indicating that the difference between the pre-test and post-test scores is statistically significant. Thus, the results suggest a marked improvement in both knowledge after the intervention.

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