A STUDY TO ASSESS THE KNOWLEDGE REGARDING THE HAZARDS OF SEEMAI KARUVELAM TREES AMONG RURAL PEOPLE IN SELECTED VILLAGE AT NAMAKKAL DISTRICT

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Abstract: The title of the study was "A STUDY TO ASSESS THE KNOWLEDGE REGARDING THE HAZARDS OF SEEMAI KARUVELAM TREES AMONG RURAL PEOPLE IN SELECTED VILLAGE AT NAMAKKAL DISTRICT."

The objective of the study were to assess the knowledge of rural people regarding hazards of seemai karuvelam tree,to find the association between the post test of hazards of seemai karuvelam and selected socio demographic variables.

The research approach adopted for this study was Qualitative research approach,Descriptive Non-experimental research design was used. The sample size was 30 were selected for the study by using stratified random sampling method in selected community area.A semi structured questionnaire tool was developed to collect the data from the sample.Collected data was analyzed by using descriptive and inferential statistics in learning of frequencies, percentage, mean,standard deviation and chi-square test.

The finding of the study revealed that there is adequate knowledge regarding hazards of seemai karuvelam tree among rural people. Post-test shows that there is significant asscoiation between the level of knowledge regarding the hazards of seemai karuvelam with the socio-demographic variables. So, the research hypothesis is accepted.

In this present study it shows that the distribution of subject according to the classification, in the pretest 23(76.6%) rural people have inadequate knowledge regarding the hazards of seemai karuvelam 7(23%) rural people have moderate knowledge regarding the hazards of seemai karuvelam and in posttest 5(16.6%) rural people have moderate knowledge regarding the hazards of seemai karuvelam and 25(83.3%) rural people have adequate knowledge regarding the hazards of seemai karuvelam.

In pretest the mean value was 4.1 and standard deviation value was 2.9. In posttest the mean value is 15.6 and standard deviation value was 2.4. The calculated t value was 17.41 and the p value with the significance of 0.05 level was a significance of0.05 level was 2.05, it was noted that the calculated value is greater than the p level value, there was a significant difference between the pretest and posttest level of knowledge regarding the hazards of seemai karuvelam tree among rural people.So, the research hypothesis is accepted.

Keywords: knowledge, Hazards, Seemai karuvelam Trees, Rural people.

INTRODUCTION:

Seemai kauvelam was introduced in India from the United states during 1877 in the state of Andhra Pradesh. In Gujarath species was first planted in morbi during 1930s and known as "Morbi baval".

ABBAS ET AL (2020) seemai Karuvelam (Prosopis juliflora) is native to south - west United states north - west Mexico and it is invasive in many tropical and tropical regions, including North Africa and the Arab Gulf region.

The seemai karuvelam tree or prosopis juliflora as its known biological is a species native toWest Africa. It is one of the most widespread hyper accumuating plants. It is a phreatophytic perennial tree/shrubspecies, a member of the Fabaceae family and representative species of the sonoran desertecosystem. The karuvelam species is biological nightmare. Its absorbs more than four litersof water to obtain one kilogram of biomass.

The roots of this tree can destroy soil nutrients and poison ground water. Since not produce enough oxygen it produces only carbon dioxide in quantities no birds find a shelter in these trees. Its leaves, seeds or any other parts of the tree are of no use to human beings and animals.

Seemai karuvelam turned to be one of the most problematic tree globally, particularly in the rangelands, croplands forests and threatens the pastoral livelihoods and ecosystems. It absorbs more ground water which causes scarcity of water. International Union for Conservation of Nature(IUCN) has considered seemai karuvelam as one of the worst 100 invasive alien species.

STATEMENT OF THE PROBLEM:

A STUDY TO ASSESS THE KNOWLEDGE REGARDING THE HAZARDS OF SEEMAI KARUVELAM TREES AMONG RURAL PEOPLE IN SELECTED VILLAGE AT NAMAKKAL DISTRICT

OBJECTIVES:

- To assess the knowledge regarding hazards of seemai karuvelam tree rural people
- To find the association between the post- test of hazards of seemai karuvelam and selected socio demographic variables.

HYPOTHESIS

There is no significant difference between the knowledge and hazards of semai karuvelam among rural people.

There is significant difference between mean knowledge and hazards of semai karuvelam among rural people.

METHODOLOGY

RESEARCH APPROACH

A Qualitative - Descriptive approach was used in this study as the study was aimed to assess the level of knowledge regarding hazards of seemai karuvelam trees the rural people.

RESEARCH DESIGN

Non experimental descriptive research design was used to assess the level of knowledge regarding hazards ofseemai karuvelam trees among people in the rural population.

SETTINGS OF THE STUDY

The study was conducted among adult people Manickampalayam Village, this location is situated 15 kilometre away from Vivekanndha college of Nursing, manickampalayam, has the population of 1000 which 90 were adults belongs to rural peoples in the village.

SAMPLE SIZE

The sample of the present study consisted of 30 adult who fulfilled the criteria.

SAMPLING TECHNIQUE

Sample who fulfilled the eligibility criteria were selected using Non-Probability Sampling-Simple Random Sampling Technique.

DESCRIPTION OF THE RESEARCH TOOL

The tool used in this study was a Structured Interview Schedule and tool was organized in 3 parts.

PART : I Demographic characteristics

The tool was used to gather personal information of people such as age, gender, religion, type of family, education, occupation, income, marital status, health status and residential status.

PART : II Semi - structured Questionnaire to assess the knowledge of hazards seemai karuvelam

Semi Structured questionnaire to assess the level of knowledge on seemai karuvelam.The tool consist of 20 questions each correct answer carries 1 mark. The total score of the tool is 20. The score is converted in to percentage.

SCORING PROCEDURE

TOTAL ITEMS	TOTAL SCORE	LEVEL OF KNOWLEDGE
20 NOS	0-6	INADEQUATE
	7-13	MODERATE
	14-20	ADEQUATE

DEVELOPMENT OF THE TOOL

The tool was prepared on the basis of the objectives of the study, after an intense search of related literature and the guidance of the experts in the field of Community Health Nursing simplicity of languages, organization and clarity of statement were the factors kept in mind while preparing the tool.The demographic data and structured Questionnaire regarding (Knowledge questions on hazards of seemai karuvelam) were revised several times by consultation with experts until it reached the final stage.The tool was then drafted in English and translated into Tamil.

ETHICAL CONSIDERATION

Formal permission was obtained from concerned authority, Panchayat President of the community areas. The nature, purpose of the study was explained and obtained the verbal consent from the samples. Privacy and comfort of the sample was maintained throughout the study.The people were given their own pereference in choosing the time , without forcing or compelling them and without interfering with their regular activities. Adequate explanation was given whenever they asked questions. Records were made for each sample.

PILOT STUDY

The pilot study was conducted to find the feasibility of the study for one week. The main study will be conducted in manickampalyam areas at Namakkal District pilot study will be conducted fro 06.02.2023 to 10.02.2023.The data will be collected with the structured questionnaire. Using the same approach the investigator interview all the rural people nd 10 sample will be taken for the piolt study data collection, 5 for knowledge of seemai karuvelam tree and 5 for knowledge of hazards of seemai karuvelam in Manickampalam.

DATA COLLECTION METHOD

The main study was conducted in Manickampalayam selected rural community ares at Namakkal Region. Prior permissionwas obtained from the panchayat office in the respective community areas. The investigator visit the people and explain to them the purpose of the study. The respondents was assured the anonymity and confidentiality of the information collect from them. After obtaining their willingness and time availability. The data was collected with the structured Questionnaire.Using the same approach the investigator interview all the rural people. 30 sample was taken for the main data collection 15 for knowledge of seemai karuvelam and 15 for knowledge of hazards of seemai karuvelam from Manikampalayam.

DATA ANALAYSIS

FREQUENCY AND PERCENTAGE DISTRIBUTION OF PRE- TEST AND POST-TEST LEVEL OF KNOWLEDGE REGARDING THE HAZARDS OF SEEEMAIKARUVELAM AMONG RURAL PEOPLE

LEVEL OF KNOWLEDGE	PRE - TEST		POST - TEST	
	FREQUENCY	PERCENTAGE	FREQUENCY	PERCENTAGE
Inadequate Knowledge	23	76.6%	0	0
Moderate Knowledge	7	23.3%	5	16.6%
Adequate Knowledge	0	0	25	83.35

EVALUATE THE LEVEL OF KNOWLEDGE REGARDING THE HAZARDS OF SEEMAI KARUVELAM AMONG RURAL PEOPLE

S.NO	KNOLEDGE	MEAN	MEAN DIFFERENCE	STANDARD DEVIATION	T-TEST	
					TABLE VALUE	CALCULATED VALUE
1	LEVEL OF KNOWLEDGE REGARDING THE HAZARDS OF SEEMAIKARUVELAM	15.4	11.5	2.4303	2.05	17.41

SECTION -3

INFERENTIAL STATISTICS ESPECIALLY CHI SQUARE TEST TO ASSESS THE ASSOCIATION BETWEEN THE SOCIO DEMOGRAPIC VARIABLES AND KNOWLEDGE REGARDING THE HAZARDS OF SEEMAI KARUVELAM

S.NO	DEMOGRAPHIC VARIABLES	IN ADEQUATE	MODERATE	ADEQUATE	CALCULATED VALUE	P VALUE
1	**Age in years**				**3.54**	**9.49 DF=4 NS**
	18-25 years	0	3	8		
	26-35 years	0	0	11		
	36-45 years 8	0	2	6		
2	**Gender**				**18.75**	**5.99 DF=2**
	Male	0	2	14		

	Female	0	3	11		**S**
3	**Religion**				**0**	**9.49 DF=4 NS**
	Hindu	0	4	20		
	Christian	0	1	5		
	Muslim	0	0	0		
4	**Type of family**				**0.085**	**9.49 DF=4 NS**
	Nuclear	0	3	15		
	Joint	0	1	5		
	Extended	0	0	0		
5	**Education**				**0.584**	**5.99 DF=2 NS**
	Illiterate	0	2	7		
	Literate	0	3	18		
6	**Occupation**				**0.282**	**9.49 DF=4 NS**
	Employed	0	2	8		
	Unemployed	0	2	13		
	Business	0	1	4		
7	**Income**				**0.24**	**9.49 DF=4 NS**
	High Income	0	0	0		
	Middle Income	0	3	12		
	Low Income	0	2	13		
8	**Marital Status**				**0.026**	**9.49 DF=4 NS**
	Married	0	3	16		
	Divorced / Separated	0	0	0		
	Unmarried	0	2	9		
9	**Health Status**				**1.04**	**5.99 DF=2 NS**
	Healthy	0	3	20		
	Unhealthy	0	2	5		
10	**Residential status**				**1.07**	**9.49 DF=4 NS**
	Own	0	2	12		
	Rent	0	3	10		
	Lease	0	0	3		

CLINICAL VARIABLES
DISCUSSION

S.No	Clinical Variables	In Adequate	Moderate	Adequate	Calculated Value	P Value
1	**What the environmental hazards of seemaikaruvelam**				**2.515**	**12.59 DF=6 NS**
	It decrease air quality	0	1	1		
	It increase soil erosion	0	1	6		
	It reduce water availability	0	0	1		
	All the above	0	3	17		
2	**How does the presence of seemaikaruvelam trees affect local system**				**15.38**	**12.59 DF=6 NS**
	It Increase biodiversity	0	1	3		
	It decrease biodiversity	0	0	18		
	It has no effect on biodiversity	0	1	3		
	It can both increase and decrease biodiversity	0	3	1		
3	**What potential health risk are associated consuming products of seemaikaruvelam**				**0.193**	**12.59 DF=6 NS**
	Allergic reactions	0	5	24		

	Liver diseases	0	0	0		
	Cardiovascular disease	0	0	1		
	All the above	0	0	0		
4	**How can seemaikaruvelam contribute to global warming**				**5.93**	**12.59 DF=6 NS**
	By absorbing carbondioxide	0	1	0		
	By releasing carbon dioxide	0	1	3		
	By reducing air pollution	0	0	2		
	By increasing water availability	0	3	20		
5	**What is the impact of seemaikaruvelam trees**				**3.23**	**12.59 DF=6 NS**
	Increase growth	0	2	2		
	Absorb underground water	0	3	20		
	Increase water production	0	0	0		
	Fertilizer for field	0	0	3		
6	**What are the causes of throns of seemaikaruvelam trees**				**0.967**	**12.59 DF=6 NS**
	Itching	0	0	1		
	Skin Infection	0	1	2		
	Blindness	0	0	1		
	All the above	0	4	21		
7	**What are the effect of seemaikaruvelam trees in eyes**				**9.33**	**12.59 DF=6 NS**
	Increase vision	0	2	2		
	Conjunctivitis	0	1	0		
	Blindness	0	2	22		
	Cataract	0	0	1		
8	**What are the causes pf seemaikaruvelam trees in agriculture**				**2.87**	**12.59 DF=6 NS**
	Spoil land	0	0	2		
	Reduce Productivity	0	2	3		
	Air pollution	0	0	2		
	All the above	0	3	18		
9	**What are the common known causes of seemaikaruvelam trees**				**2.69**	**12.59 DF=6 NS**
	Reduce Rainfall	0	3	20		
	Medicine for health	0	3	2		
	Improve growth of hair	0	2	3		
	Increase vision	0	0	0		
10	**What do you know about karuvelam**				**3.05**	**12.59 DF=6 NS**
	Good for health	0	1	1		
	Good for land	0	1	2		
	Adverse effect for land and health	0	3	20		
	Both A and B	0	0	2		
11	**What is the health risks of seemaikaruvelam in animals**				**15.15**	**12.59 DF=6 NS**
	Stomach pain	0	0	2		
	Death	0	1	1		
	Teeth Problem	0	0	1		
	All the above	0	4	21		
12	**How much water absorbs by seemaikaruvelam trees**				**9.68**	**12.59 DF=6 S**
	4 liters/ 1 kg of biomass	0	1	15		
	8 liters/ 1 kg biomass	0	0	5		

	10 liters/ 1 kg biomass	0	2	2		
	All the above	0	2	3		
13	**What are the products it emits in the atmosphere**				**5.38**	**12.59 DF=6 NS**
	Less oxygen and more carbon dioxide	0	1	2		
	Only Carbon dioxide	0	2	2		
	Oxygen and toxins	0	2	20		
	Only oxygen	0	0	1		
14	**Why it is very harmful for our environment**				**13.26**	**12.59 DF=6 S**
	It sucks too much of ground water	0	2	21		
	It produce the ground water	0	2	0		
	Develop ground water source	0	1	2		
	It makes the water poisonous	0	0	2		
15	**Which place is mostly affected by seemaikaruvelam trees in TamilNadu**				**1.003**	**12.59 DF=6 NS**
	Namakkal	0	1	2		
	Madurai	0	0	2		
	Ramanathapuram	0	4	21		
	Villupuram	0	0	0		
16	**Who are all affected by seemaikaruvelam trees related to occupation**				**11.38**	**12.59 DF=6 NS**
	Industrial worker	0	1	1		
	Farmer	0	3	23		
	Urban area people	0	0	1		
	All of the above	0	1	0		
17	**What are the effects of seemaikaruvelam trees**				**5.33**	**12.59 DF=6 NS**
	Ground water absorption	0	4	22		
	Conservation of ground water	0	1	0		
	Prevention of water pollution	0	0	2		
	Conservation of soil fertility	0	0	1		
18	**What is the effects of seemaikaruvelam tree on nearby plants**				**1.14**	**12.59 DF=6 NS**
	Prevents the growth	0	3	18		
	Does not prevent growth	0	0	2		
	Allows more growth	0	0	0		
	All the above	0	2	5		
19	**How does the seemaikaruvelam tree absorb ground water**				**5.26**	**12.59 DF=6 NS**
	Root	0	4	23		
	Leaf	0	0	0		
	Stem	0	0	2		
	Branch	0	1	0		
20	**What is the trouble faced by farmers due to seemaikaruvelam**				**8.35**	**12.59 DF=6 NS**
	Reduce soil fertility	0	1	20		
	Water availability	0	2	2		
	Increase soil fertility	0	1	1		
	Increase nutritional value	0	1	2		

Analysis of the demographic revealed that majority 11(36.7%) were in the age group 18-25 years and 11(36.7%0 were in the age group 26-35 years,16 (53.3%) were male, 24(80%) were Hindus, 18(60%) were Nuclear Family,21(70%) were Literate, 15(50%) were Unemployed, 15(50%) were middle Income and 15(50%) were low income, 19(63.3%) were married, 23(76.7%) were Healthy and 14(46.4%) were own Residential status.

To assess the knowledge regarding hazards of seemai karuvelam tree among rural people

In this present study it was shown that distribution of subject according to the classification in the pre-test 23(76.6%0 rural people have in adequate knowledge 7(23.3%) rural people have moderate knowledge 0(0%) rural people have adequate knowledge regarding the hazards of seemai karuvelam trees and in the post- test 0(050 rural people have inadequate knowledge 5(16.6%) rural people have moderate knowledge and 25(83.35) rural people have adequate knowledge regarding the hazards of seemai karuvelam tree. So the research hypothesis is accepted.

The findings were supported by S.Chandrasekaran (2020) who stated there are about 205 of rural people had inadequate knowledge about the hazards of seemai karuvelam trees. 38% of samples had moderate knowledge regarding the hazards of seemai karuvelam trees and 40% of rural people had adequate knowledge regarding the hazards of seemai karuvelam trees.

To find the association between the post-test of hazards of seemai karuvelam and selected socio demographic variables

The findings of the revealed that association between the post- test level of knowledge regarding hazards of seemai karuvelam trees among rural people and socio demographic variables. Post-test shows that there is significant association between the level of knowledge regarding the hazards of seemai karuvelam with socio demographic variables among rural people. So, the research Hypothesis is accepted.

These findings were supported by Sharma (20190. There was association found between the level of knowledge and selected demographic variables of rural people (Age, Religion and Type of family, Education, Occupation, Income, Marital status, Health status and Residential status).

CONCLUSION

The Present study was used to assess the knowledge regarding the hazards of seemai karuvelam among rural people. The result revealed that there is adequate knowledge regarding the hazards of seemai karuvelam tree among rural people. There is a significant association between the post test knowledge with the socio demographic variable regarding the hazards of seemai karuvelam tree among the rural people.

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