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Sensitizing rural community on the usage of medicinal plants through training

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Abstract
In sustainable human health management, medicinal plants have played a vital role which has led to the growing interest in alternative therapies and therapeutic use of plants. This is because; it is very cheap in comparison to the synthetic industrial forms of medication. The use of these plants is increasing worldwide. They are used in several conditions to augment and maintain human health. The present study was carried out in two selected villages of Hisar district of Haryana state. Three days training was conducted in each village in order to create awareness about the importance and usage of medicinal plants among the rural women. The impact of the training was assessed in terms of gain in knowledge and adoption of medicinal. The study highlighted the facts that training conducted on awareness of medicinal plants was quiet effective in changing the knowledge of rural women. In both the villages women understands the importance of medicinal plants and how to use them for dealing minor health problems at domestic level.

Introduction
People have been using medicinal plants as a source of medications for thousands of years. Indeed, early man was completely reliant on plants for all of his medical requirements, including treatment, prevention, and various forms of medication, and has been using plants as pharmaceuticals for millennia. For the past 3000 years, a huge variety of plants have been employed in health care techniques such as Traditional Medicine in China, India, and Africa, with the majority of them containing therapeutic properties as determined by Western criteria. Traditional medicine (including herbal medications) is now described by the World Health Organization as therapeutic approaches that have existed for hundreds of years before the invention and spread of modern medicine and are still in use. Due to the abundance of thousands of medicinal plants in various ecological environments throughout the country, India is regarded as the "Emporium of Medicinal Plants." Traditional medicines that predominantly use medicinal plant extracts for therapy are known as herbal pharmaceuticals. These pharmaceuticals are created from renewable raw materials using environmentally friendly procedures, bringing economic success to the people who grow these raw materials. Growing interest in herbs and their ability to provide therapeutic and economic benefits is part of a trend toward more environmentally friendly economy and lifestyles. Keeping the above mentioned facts the present study was carried out with the following objectives;
- To create awareness regarding different medicinal plants and their usage
- To assess the impact of training in terms of gain in knowledge and adoption

Methodology
The present study was conducted in Hisar district of Haryana state. Three days training was organised on promotion of medicinal plants in two villages viz; Gorchhi and Bichpari of block Hisar-II and Barwala respectively. The sample comprised of 60 rural women, 30 from each village. Training was conducted through expert lectures from the Medicinal, Aromatic and under-utilized Plants of Forage Section. At the end handouts on the benefits of various medicinal plants were distributed among the beneficiaries for further recapitalisation.

Results Achieved
Table -1 shows the socio-economic profile of the respondents of village Gorchi and Bicchparri. In case of village Gorchi half of the respondents i.e. 53.33percent were belonged to 28-37 years of age, belonged to general category, educated upto middle level and were earning

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their livelihood through agriculture. On the other hand in village Bichparri 40.0 percent of the respondents belonged to 28-37 years of age and educated upto matric level. Half of the respondents i.e. 50.0 percent belonged to general category and earn their livelihood through agriculture. Whereas all the respondents (100%) were happily married.

Table 1: Socio Economic Profile of the respondents

Variables	Village Gorchi (n1-30)		Village Bichparri (n2-30)	
	Frequency	Percentage	Frequency	Percentage
Age				
18-27 years	10	33.33	12	40.00
28-37 years	16	53.33	10	33.33
38 and above	04	13.33	08	26.66
Caste				
SC/ST	08	26.66	07	23.33
BC	06	20.00	08	26.66
General	16	53.33	15	50.00
Education				
Illiterate	00	00.0	00	00.0
Primary	04	13.33	06	20.00
Middle	12	40.0	10	33.33
Matriculation	10	33.33	12	40.00
Higher Secondary	04	13.33	02	06.66
Graduate	00	00.0	00	00.0
Marital Status				
Married	30	100.0	30	100
Unmarried	00	00.0	00	00.0
Widow	00	00.0	00	00.0
Family Occupation				
Labour	11	36.66	10	33.33
Agriculture	17	56.66	16	53.33
Dairy and allied	00	00.0	00	00.0
Caste Occupation	00	00.0	02	06.66
Service	02	06.66	02	06.66

Table 2: Pre and post exposure knowledge gain of the respondents regarding medicinal Plants. village - Gorchi (n-30)

Sr. No	Medicinal plants	Pre Score data f (% age)	Post Score data f (% age)	Gain in Knowledge f (% age)
1	*Aloe vera*	02 (6.67)	27 (90.0)	25 (83.3)
2	Lemon Grass	00 (0.00)	23 (76.6)	23 (76.6)
3	Cumin seed (Jeera)	05 (16.6)	30 (100)	25 (83.3)
4	Cardamum (Elachi)	05 (16.6)	30 (100)	25 (83.3)
5	Neem	07 (23.3)	30 (100)	23 (76.6)
6	Holi Basil (Tulsi)	11 (36.6)	28 (93.3)	17 (56.6)
7	Ginger	07 (23.3)	30 (100)	23 (76.6)
8	Garlic	05 (16.6)	28 (93.3)	23 (76.6)
9	Mint	04 (13.3)	28 (93.3)	24 (80.0)
10	Caram Seeds (Ajwain)	06 (20.0)	30 (100)	24 (80.0)
11	Turmeric (Haldi)	06 (20.0)	30 (100)	24 (80.0)
12	Sadabahar	00 (0.00)	24 (80.0)	24 (80.0)
13	Stevia	00 (0.00)	23 (76.6)	23 (76.6)
14	Shataver	00 (0.00)	22 (73.3)	22 (73.3)
15	Fenugreek (Methi)	08 (26.6)	30 (100)	22 (73.3)

The data depicted in table-2 reveals that maximum i.e. 83.3 percent knowledge gain was observed in *Aloe vera*, Cumin seeds and Cardamom, followed by 80.0 percent gain was observed in Sadabhar, Caram seeds, Turmaric and Mint, 76.6 percent gain was observed in Stevia, Lemon grass, Neem, Ginger and Garlic, 73.3 percent was observed in Shatraver, Fennugreek and the least i.e. 56.6 percent knowledge gain was observed in Holi basil. The reason being tulsi is very popular in Indian homes since immoral being used in temple for poojas and at home in tea for its soothing fragrance.

Overall comparison of pre and post knowledge gain of respondents

Aspect	Pre Exposure Mean	Post Exposure Mean	Mean Difference	't' value
	1.86	12.76	10.9	19.78*

Significant at *p <.05 level of significance

Table 3: Pre and post exposure knowledge gain of the respondents regarding medicinal Plants. Village Bichparri (n-30)

Sr. No	Medicinal plants	Pre Score data f (% age)	Post Score data f (%age)	Gain in Knowledge f (% age)
1	*Aloe vera*	03 (10.0)	28 (93.3)	25 (83.3)
2	Lemon Grass	00 (0.00)	22 (73.3)	22 (73.3)
3	Cumin seed (Jeera)	03 (10.0)	28 (93.3)	25 (83.3)
4	Cardamum (Elachi)	07 (23.3)	30 (100)	23 (76.6)
5	Neem	09 (30.0)	30 (100)	21 (70.0)
6	Holi Basil (Tulsi)	09 (30.0)	28 (93.3)	19 (63.3)
7	Ginger	08 (26.7)	30 (100)	22 (73.3)
8	Garlic	05 (16.6)	28 (93.3)	23 (76.6)
9	Mint	04 (13.3)	28 (93.3)	24 (80.0)
10	Caram Seeds (Ajwain)	06 (53.3)	30 (100)	24 (80.0)
11	Turmeric (Haldi)	08 (26.6)	30 (100)	22 (73.3)
12	Sadabahar	00 (0.00)	23 (76.6)	23 (76.6)
13	Stevia	00 (0.00)	21 (83.3)	21 (70.0)
14	Shataver	00 (0.00)	22 (73.3)	22 (73.3)
15	Fenugreek(Methi)	07 (23.3)	30 (100)	23 (76.6)

Overall comparison of pre and post knowledge gain of respondents

Aspect	Pre exposure Mean	Post exposure Mean	Mean Difference	't' value
	2.20	13.76	11.56	15.83*

Significant at *p <.05 level of significance

The data in table - 3 reveals that maximum gain i.e. 83.3 percent was observed in *Aloe vera* and Cumin seeds, followed by 80.0 percent gain was observed in Mint and Caram seeds, 76.6 percent was observed in Sadabahar, cardamom, garlic, and Fennugreek, 73.3 pecent was observed in Shataver, Lemon grass, Turmeric and Ginger, 70.0 percent was observed in Neem, and Stevia. However the least i.e. 63.3 percent knowledge gain was observed Holi basil. The t-value calculated was significant at 5 percent level in both the villages hence we can conclude that the four days training programme on promotion of medicinal plants was quiet successful in changing the knowledge of rural women. In both the villages women understands the importance of medicinal plants and how to use them for dealing minor health problems at domestic level. For e.g. - Slight fever and cold, throat infection, headache, stomach ache, superficial wounds, burns and blisters, etc. The results are in consonance with the findings of Mahish, *et al* (2016), Alsubaie, *et al* (2017) and Arumugam N (2019) [3, 5, 2].

Table 5: Perception of trainees about utility and coverage of subject matter under training (n - 60)

S. No.	Training Aspect	Utility					Coverage					TEI %age
		Very useful (3)	Useful (2)	Not Useful (1)	Mean Score	Rank	WC (3)	MC (2)	NC (1)	Mean Score	Rank	
1	Identification of the plant	38 (114)	22 (44.0)	00 (00)	2.6	II	36 (108)	24 (48)	00 (00)	2.60	I	80.0
2	Part of the plant to be used.	36 (108)	24 (48.0)	00 (00)	2.6	II	34 (102)	26 (52)	00 (00)	2.56	II	85.0
3	Method of consumption	39 (117)	21 (42.0)	00 (00)	2.65	I	33 (99)	27 (54)	00 (00)	2.55	III	82.5
4	Cure/use for the type of ailment	39 (117)	21 (42.0)	00 (00)	2.65	I	34 (102)	26 (52)	00 (00)	2.56	II	82.5
5	Total TEI											82.5

*Score presented in brackets shows – WMS (Weighted Mean Scores) Training Effectiveness Index (TEI) = 82.50 percent
**WC - Well Covered, MC - Moderately Covered and NC - Not Covered

Table 5: Symbolic Adoption Level of Medicinal Plants by the respondents (n-60)

S. No.	Adoption level	Frequency	Percentage
1	Further dissemination of messages	27	45.0%
2	Adoption at household level	47	78.3%

Perception of trainees about utility and coverage of subject matter has been furnished in Table

The data reveals regarding the utility of the training, respondents gave Ist rank to Method of consumption and Cure/use for the type of ailment where as IInd rank goes to Identification of the plant and Part of the plant to be used. Regarding coverage of subject matter Ist rank was given to Identification of the plant, IInd rank was given to part of the plant to be used, whereas IIIrd rank goes to Method of consumption and IV rank goes to Cure/use for the type of ailment. The Training Effectiveness Index (TEI) was also worked out which came out as 82.50 percent. This shows that the training imparted to rural women was quiet effective one.

The data presented in table-5 shows that 78.3 percent respondents adopted medicinal plants for curing minor health problems viz; slight fever and cold, throat infection, headache, stomach ache, superficial wounds, burns and blisters, etc. at domestic front. Whereas 45.0 percent respondents further disseminate the plants saplings of *Aloe vera*, Sadabhar and Tulsi to their friends, relatives and neighbourhood. In this way they are playing active role in promoting medicinal plants further in the community.

Conclusion
On the basis of results, it can be concluded that training conducted on awareness of medicinal plants was quiet effective in changing the knowledge of rural women. In both the villages women understands the importance of medicinal plants and how to use them for dealing minor health problems at domestic level. Henceforth there is an immediate need for scientific study to be conducted in order to provide accurate and reliable information to boost customer confidence. Efforts must also be made to enhance public awareness of the occurrence of various medicinal plants, as well as their therapeutic effects.

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