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EFFECTIVENESS OF MEDIA PACKAGE FOR CREATING AWARENESS AMONG RURAL WOMEN REGARDING USE OF TULSI PLANT

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ABSTRACT

To check the effectiveness of developed media package on Tulsi plant, a sample of 130 rural women from 13 villages of Ludhiana district was purposively selected. The data were collected in April and May 2024 from Ludhiana district. The observed data were analyzed with the help of percentage, mean score and paired t-test. The media package containing printed material, WhatsApp messages and video clips on Tulsi plant was developed and validated by 30 Subject Matter Specialists. Effectiveness of media package was measured in terms of mean change in health benefit, its nutritive value and usage into different forms for curing various ailments and awareness level of the respondents after the exposure of the media package. Interview schedule was constructed to collect data on status of growing Tulsi plant and to measure awareness related to health benefits of Tulsi, its nutritive value and usage of Tulsi plant into different forms for curing various ailments. Data were collected into two phases. Before exposure to media package data regarding status of growing and awareness level of Tulsi plant was collected. Printed materials related to Tulsi plant were distributed to the respondents. WhatsApp message and video clips were sent to the rural women through online platform. After 25 days post awareness data were collected. Results of the study showed significant change between pre and post awareness mean score regarding all the parameters of Tulsi plant. So, the prepared media package is proved to be effective to motivate people for growing and creating awareness about Tulsi plant. This media package can be used by Extension Personnel for their wider outreach.

Keywords: *media package, tulsi plant, awareness level, printed material, whatsapp message*

INTRODUCTION

Tulsi, also known as Holy Basil, is a plant of profound cultural, religious, and medicinal significance, particularly in India. it is a small shrub characterized by aromatic leaves that range in colour from green to purple. Native to the Indian subcontinent, Tulsi has spread to other tropical regions through cultivation. Tulsi is highly valued in Ayurvedic medicine for its medicinal properties. It is used to treat a wide range of diseases including respiratory disorders, skin diseases, gastrointestinal issues, and stress. The plant contains essential oils and phytochemicals with antimicrobial and antioxidant properties, making it a versatile herb in traditional healing practices. In modern times, Tulsi is not only used in traditional remedies but also finds application in culinary preparations, herbal teas, and dietary supplements. Its leaves are used fresh or dried in cooking and teas, while extracts and essential oils are utilized in supplements and cosmetics for their health and therapeutic benefits. Tulsi serves as valuable nutritional source of overall body health. Generally, people do not know the medicinal use and benefits of herbal medicine. So, there is need to create awareness of all benefits of Tulsi plant to general public. For creating awareness to large number of people, there is shortage of human resources. To meet the above challenge there is need to develop mass media. Keeping this in view, media package was developed. Media package was operationalized as package which included booklet, WhatsApp messages and video clips contained information on health benefits of Tulsi plant, its nutritive value and how to use Tulsi plant into different form i.e. in form of juice, paste, gel and pulp.

OBJECTIVES

(1) To assess the status of rural women for growing and use of Tulsi plant

(2) To measure the effectiveness of developed media package in terms of creating awareness among rural women related to use of Tulsi plant for health care

METHODOLOGY

The present study was conducted in the 13 villages of Ludhiana district of Punjab State on the basis of experimental research design. For the convenience of the researcher, a sample of 130 rural women from 13 villages in the Ludhiana district was purposefully chosen in order to assess the efficacy of the media package. Ten women respondents were selected from each village. The selection of the respondents was based on their access to android, smart phones or any other more advanced handset with internet availability. They should be regular users of WhatsApp, you tube or Facebook. Prepared media package on Tulsi plant was validated by 30 Subject Matter Specialists of various Departments for its relevance, completeness and correctness. Interview schedule was constructed to collect data on status of growing Tulsi plant and to measure awareness related to health benefits of Tulsi plant, its nutritive value and usage of Tulsi plant into different forms. Data were collected into two phases by using interview schedule before and after the exposure to the media package. After the first phase of data collection the media package was exposed to the respondents. The printed booklet was distributed. WhatsApp messages were sent next day to the rural women which included messages related to introduction, health benefits and usage of Tulsi plant into different forms. Messages were transformed into text messages, messages with pictures. Video clip with pictures, sound and text was delivered through online platform. After the dissemination of information through developed media package, a gap of a minimum of 25 days was observed to assess the change in awareness level of the respondents. During the second phase, data were collected by using the same interview schedule. To check the effectiveness of media package pre and post awareness score were compared. The awareness scores were judged on a three-point rating scale like aware, somewhat aware and not aware. These responses were assigned weightage of three, two and one scores respectively. So mean score range was between 1.00 to 3.00. Data were analyzed with the help of percentage, mean score and paired t-test through Statistix 10 data analysis software.

RESULTS AND DISCUSSION

Status of growing and use of Tulsi plant

The status of growing Tulsi plant included place of growing plants at household or commercial level. These plants can easily grow in pots, gardens and farm land which is a common practice. The source of getting the plants or seeds for growing was also included and uses of this plant for curing different ailments before exposure of the media package.

Table 1: Distribution of respondents according to their status of growing and use of Tulsi plant

(n=130)

Status and Use	Frequency	Percentage
Status		
Place of growing Tulsi		
Pots	75	57.69
Open land in a house	27	20.77
Adjoining land	07	05.38
Source of getting plants/seeds		
Relatives	44	33.85
Friends	21	16.15
Neighbours	27	20.77
Private seed shop	02	01.54
Private nurseries	10	07.69
Private sellers	05	03.85
Use of Tulsi		
Fever	52	40.00
Headache	26	20.00
Respiratory problems	64	49.23
Heart problems	16	12.31
Diabetes	11	08.46
Blood pressure	17	13.08

Table 1 shows data regarding distribution of respondents according to their status of growing and use of Tulsi plant. Majority of the respondents (57.69 %) had grown Tulsi plant in pots, whereas 20.77 % of the respondents had planted Tulsi on open land in their hoses. Nearly one-third (33.85%) of the respondents obtained the seed/plant of Tulsi from relatives followed 20.77 % and 16.15 % who acquired seed/plant from neighbours and friends, respectively. Approximately half (49.23 %) of the respondents used Tulsi for cure of respiratory problems followed by 40 % who used it to cure fever. Further, Tulsi had also been used by respondents to some extent in case of headache (20.00 %), blood pressure (13.08 %) and heart problems (12.31 %). The findings regarding use of the medicinal plants to treat various ailments are in line with the results of research studies conducted by Muthu *et al* (2006), Sidhu *et al* (2011) Bisht *et al* (2013), Prakash (2014), Dogra *et al* (2015), Jaiswal *et al* (2016) and Kaur *et al* (2020). Creating more awareness is paramount to bringing change in cultivation of medicinal plants for their use in cure and treatment of various ailments. The findings are in line with the results of research studies conducted by Jyoti (2015) and Sharma (2015). They analysed that majority of rural women had used medicinal plants to a low extent. Tulsi plant was grown by respondents at household level, they were not cultivating on commercial level. The probable reasons for this could be constraint of land, lack of marketing and they have been uneconomical because of unavailability of minimum support price and remunerative prices. More than half of the respondents have grown Tulsi plants in pots

followed by planting in open land in a house. The most important sources of Tulsi plants or seeds were relatives, neighbours and friends. The respondents were not purchasing seed or plants from Punjab Agricultural University as all of them were rural women. Probably they were not fully aware of the availability of seeds or plants from PAU. Moreover, the accessibility of seeds or plants in the neighbourhood and from relatives was more convenient.

Effectiveness of developed media package in terms of creating awareness related to Tulsi plant

Effectiveness of developed media package of Tulsi plant was measured as a mean change in health benefit of Tulsi, its nutritive value and usage into different forms for curing various ailments.

Table 2: Change in the awareness regarding the health benefits of Tulsi plant before and after the intervention

(n=130)

Sr. No.	Health benefits of Tulsi	Before the intervention (Mean score)	After the intervention (Mean score)	Mean change
1	**Antioxidant**	1.36	2.46	1.10
2	**Controls diabetes**	1.32	2.38	1.07
3	**Maintain blood pressure**	1.37	2.29	0.92
4	**Prevents heart attack**	1.41	2.05	0.65
5	**Reduces fever (Dengue, Malaria etc)**	1.48	2.58	1.10
6	**Prevents cancer**	1.18	2.04	0.85
7	**Cure asthma**	1.47	2.42	0.95
8	**Respiratory problems (Cough, Cold)**	1.59	2.48	0.88
9	**Treats headache**	1.41	2.23	0.82
10	**Curbs mental stress**	1.26	2.02	0.76
	Average mean	**1.39**	**2.30**	**0.91**

*Mean range (1-3)

To apprehend the awareness regarding health benefits of Tulsi plant among respondents, observations were taken and provided in Table 2. The data exhibited that the mean score associated with benefits of Tulsi improved from 1.39 to 2.30 showing a change of 0.91. Higher change in mean score was apparent for its use as an antioxidant (1.10), for reducing fever (1.10) and for maintaining blood pressure (0.92). Before intervention mean scores regarding benefits of Tulsi revealed that it was beneficial for respiratory problems and it reduces fever. As per change in mean awareness associated with benefits of Tulsi improved much for its use as an antioxidant, for controlling diabetes and for maintaining blood pressure. The findings are steady with the results of research studies conducted by Monga *et al* (2017). He reported that Tulsi is a valuable medicinal plant which has number of pharmacological and physicochemical properties. Before the intervention awareness mean scores regarding health benefits of Tulsi revealed that it was beneficial for respiratory problems and it reduces fever. As per change in mean awareness associated with the health benefits of Tulsi improved much for its use as an antioxidant, for controlling diabetes and for maintaining blood pressure. The findings are in line with the results of research studies conducted by Monga *et al* (2017). He reported that Tulsi is a valuable medicinal plant which has number of pharmacological and physicochemical properties.

Table 3: Change in the awareness regarding the nutritive value of Tulsi plant before and after the intervention

(n=130)

Nutritive value of Tulsi	Before the intervention (Mean score)	After the intervention (Mean score)	Mean change
Vitamin C	1.03	2.42	1.39
Vitamin E	1.00	2.29	1.29
Calcium	1.00	2.35	1.35
Magnesium	1.00	1.31	0.31
Manganese	1.00	1.24	0.24
Phosphorus	1.00	1.26	0.26
Potassium	1.00	1.19	0.19
choline	1.02	1.32	0.30
Average mean	**1.01**	**1.67**	**0.66**

*Mean range (1-3)

Information concerning the awareness of respondents regarding nutritive value of Tulsi plant have been given in Table 3. The data exhibited improvement in awareness of respondents pertaining to nutritive value in case of Tulsi from 1.01 to 1.67 displaying a shift of 0.66 in mean score after intervention. As for as vitamins and minerals are concerned the change for awareness was more pronounced for vitamin C (1.39), vitamin E (1.29) and calcium (1.35). selected medicinal plants**.** The findings regarding nutritional properties are consistent with the results of research study conducted by Tiwari *et al.* (2012) and Sah *et al* (2018). Before the intervention awareness about nutritive value of Tulsi plant revealed almost equal mean scores. The change in awareness was more noticeable in case of Vitamin C, Calcium and Vitamin E as the respondents were less aware about their nutritive value before the intervention.

Table 4: Change in the awareness regarding the usage into different forms of Tulsi plant for curing various ailments.

(n=130)

Different forms of Tulsi	Before the intervention (Mean score)	After the intervention (Mean score)	Mean change
Juice of Tulsi leaves			
Respiratory problems (cold and cough)	1.00	2.60	1.60
Fever	1.00	2.38	1.38
Headache	1.00	1.31	0.31
Vomiting	1.00	1.32	0.32
Nose infection	1.00	1.32	0..32
Tulsi leaves paste			
Itching rashes	1.00	2.40	1.40
wounds	1.00	1.41	0.41
Fungal infection	1.00	2.81	0.81
Stomach pain	1.00	1.42	0.42
Tulsi leaves			
Cold	1.97	2.29	0.32
Bleeding from nose	1.00	1.35	0.35
Ear infection	1.00	1.38	0.38
Eye problems	1.00	1.33	0.33
Bad breath	1.88	2.54	0.66
Stomach pain	1.00	1.42	0.42
Constipation	1.00	2.42	1.42
Average mean	**1.12**	**1.86**	**0.74**

*Mean range (1-3)

Information belonging to awareness concerning the usage of various forms of Tulsi plant have been given in Table 4. Tulsi has been used in three ways such as juice of Tulsi, Tulsi leaves and Tulsi leaves paste. Overall awareness about use of different forms has increased by 0.74 after intervention. Awareness has been improved for juice of Tulsi against respiratory problems (1.60) and fever (1.38), Tulsi leaves paste for itching rashes (1.40) and Tulsi leaves for constipation (1.42). Before intervention usage of different forms of Tulsi for curing various ailments indicated that awareness was more pronounced in case of Tulsi leaves for cold and bad breath. Study findings are supported by Sah *et al* (2018). He reviewed various study and concluded that Tulsi leaves are suitable for consumption as tea. Overall awareness about use of different forms of Tulsi such as juice of Tulsi, Tulsi leaves and Tulsi leaves paste has increased after intervention. Mean change of awareness was maximum for respiratory problems in case of Tulsi leaves juice, Tulsi leaves paste for itching and rashes and for constipation in case of Tulsi leaves. The findings related to respiratory problems are line with study conducted by Monga *et al* (2017) and Upadhyay (2017). The findings indicated that Tulsi was used to treat bronchitis. Before the intervention usage into different forms of Tulsi for curing various ailments indicated that awareness was more pronounced in case of Tulsi leaves for cold and bad breath. Study findings are supported by Sah *et al* (2018). He reviewed various study and concluded that Tulsi leaves served as valuable nutritional sources. Overall awareness about use into different forms of Tulsi such as juice of Tulsi, Tulsi leaves and Tulsi leaves paste has increased after the intervention. Mean change of awareness was maximum for curing respiratory problems in case of Tulsi leaves juice, Tulsi leaves paste for itching and rashes and for constipation in case of Tulsi leaves. The findings related to respiratory problems are line with study conducted by Monga *et al* (2017) and Upadhyay (2017). The findings indicated that Tulsi was used to treat bronchitis.

Table 5: Distribution of the respondents according to their level of awareness regarding Tulsi plant (n=130)

Level of awareness	Before the intervention f (%)	After the intervention f (%)	(%) change
Health benefits			
Low (10-16)	120 (92.31)	09 (6.92)	-85.39
Medium (17-23)	10 (7.69)	114 (87.69)	80.00
High (24-30)	-	07 (5.38)	05.38
Nutritive value			
Low (8-13)	130 (100.00)	69 (53.08)	-46.92
Medium (14-19)	-	61 (46.92)	46.92
High (20-24)	-	-	-
Usage into different forms of Tulsi for curing various ailments			
Low (16-26)	130 (100.00)	12 (9.23)	-90.77
Medium (27-37)	-	118 (90.77)	90.77
High (38-48)	-	-	-

Data concerning regarding level of awareness of Tulsi plant have been provided in Table 5. In case of health benefits the level of awareness was low (92.31 %) and medium (7.69 %) before intervention which got changed to medium (87.69 %) and high (5.38 %) levels after intervention indicating a change of 80.00 % in favour of medium level. The awareness level regarding nutritive value of Tulsi was low (100.00 %) before the intervention and awareness level of Tulsi plant after intervention showed change to medium level (46.92 %). In Tulsi the low (100.00%) level of awareness regarding the usage into different forms of Tulsi plant for curing various ailments showed a change to medium (90.77 %) level after intervention. Awareness level for health benefits of Tulsi plant was low before the intervention. However, it was converted to medium level after the intervention. The findings related to awareness of health benefits of Tulsi plant are consistent with the results of research studies conducted by Jyoti (2015) and Sharma (2015). Low level of awareness for nutritive value was displayed for Tulsi plant before the intervention. The awareness level of almost half of the respondents showed considerable shift to medium level after the intervention. The findings of the study are consistent with the results of research studies conducted by Singh (2022) and Jadav (2022). They studied level of awareness regarding nutritive value. The level of awareness among respondents regarding usage into different forms of Tulsi plant for curing various ailments was low before the intervention. On the whole low level of awareness changed after the intervention to medium level. The findings of the study regarding level of awareness are consistent with the results of research studies conducted by Jatav *et al* (2023). He studied level of awareness regarding Agri-enterprises.

Table 6: Distribution of respondents according to the overall awareness regarding Tulsi plant (n=130)

Parameters of Tulsi	Before the intervention (Mean score)	After the intervention (Mean score)	Mean change
Health benefits of Tulsi	1.39	2.30	0.91
Nutritive value of Tulsi	1.01	1.67	0.66
Usage into different forms of Tulsi for curing various ailments	1.12	1.86	0.74

*Mean range (1-3)

Significant at 1% level of significance

The data related to overall awareness regarding Tulsi plant have been provided in Table 6. The data disclosed significant change in awareness. The mean change in awareness was highest in case of health benefits after intervention (0.91) and lowest in case of nutritive value (0.66). From t value it could be inferred that the difference in the mean score obtained from pre and post exposure was significantly indicating that the respondents had gained awareness regarding Tulsi. Thus, it could be concluded that the use of developed media package was effective. Thus, it could be concluded that the use of developed media package was effective. The study findings are supported by Chaudhari *et al* (2021), Kaur *et al* (2022) Kaur and Kaur (2023), Tadavi et al. (2024), Rathwa et al. (2024), Panasara et al. (2023), Pratik and Vinaya (2022), Patel et al. (2023). They concluded that whatsapp messages and video clips were effective for

imparting the knowledge to rural women of Ludhiana district of Punjab. During first phase of data collection respondents had low level of awareness regarding all parameters of Tulsi plant. But after exposure it was changed upto medium level, the reason for medium level of awareness may be that it is difficult to memorize all things. So, significant mean change was seen between pre and post awareness data. Prepared media package is proved to be effective to motivate people for growing and creating awareness about Tulsi plant.

CONCLUSION

Not even a single respondent was growing Tulsi plant at commercial level. None of the respondents was purchasing nursery from P.A.U, Ludhiana for growing of Tulsi plant at household level. It is suggested that there is further need of extension work for promotion and popularization of Tulsi plants for economic benefits of the farmers of Punjab. Significant change between pre and post awareness mean score of Tulsi plant for all parameters i.e. its health benefits, nutritive value and its usage into different forms of selected medicinal plants for curing various ailments was observed. Awareness level of the respondents had also increased after the exposure of media package. So, prepared media package is proved to be effective to motivate people for growing and creating awareness about medicinal plants. This media package can be used by Extension Personnel for their wider outreach.

RECOMMENDATIONS

(1) Effectiveness of prepared media package can be assessed on large size sample.

(2) Effectiveness of different component of multimedia package can be assessed separately. Comparison among booklet, WhatsApp messages and video clips can be tested.

(3) The effectiveness of media package for dissemination of technologies or practices can be tested similarly.

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CONFLICT OF INTEREST

All authors declare that they have no conflict of interest.

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