

Impact of vocational training courses on food preservation conducted by Krishi Vigyan Kendras of Punjab

■ Gagandeep Kaur and Kanwaljit Kaur

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■ **ABSTRACT :** The study was conducted to assess the impact of vocational training courses on food preservation conducted by Krishi Vigyan Kendras of Punjab. Nine Krishi Vigyan Kendras *i.e.* Amritsar, Bathinda, Hoshiarpur, Patiala, Fatehgarh Sahib, Mukatsar Sahib, Jalandhar, Moga and Ludhiana were selected to conduct the study. These Krishi Vigyan Kendras had organized twenty three short duration courses on food preservation from year 2011 to 2013. Out of 582 women trainees who had attended these vocational training courses of Krishi Vigyan Kendras, 179 trainees constituted the sample of study. Data were collected through self structured interview schedule. Impact of vocational training was assessed in terms of its adoption status, extent of adoption and level of use of training. Training on *Pappad and Vadian*, chawanparash and preserves/*Murabha* had achieved the highest adoption status. Lowest adoption status was observed in sun drying of vegetable, pickle making and preparation of squashes. Adoption status of majority of practices in terms of its use at household level was high. But practices related to recommended quantity of food preservative were either not adopted or discontinued. Extent of adoption of different practices on food preservation training course was also observed high. Only one per cent of trainees had established an enterprise after receiving training and two per cent were using training for income generation purpose. Major constraint for non-establishment of an enterprise was weak financial position. It can be concluded that awareness regarding financial assistance provided by the government to start an enterprise should be created to trainees.

■ **KEY WORDS:** Vocational training, Adoption status, Impact, Extent of adoption

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See end of the paper for authors' affiliations

Gagandeep Kaur
Department of Extension
Education and Communication
Management, Punjab Agricultural
University, Ludhiana (Punjab)
India
Email: gagandeep.buttar@yahoo
.com

Fruits and vegetables are the important food items as they make the meal attractive and nutritive. Nutrients provided by them are essential for the maintenance of health and prevention of diseases from the point of view of agriculturists, fruits and vegetables

are of great importance due to the high economic returns from their cultivation. Production of fruits and vegetables in our country stands on the second rank in the world.

The spoilage of vegetables can be prevented during the glut season by converting them into new categories

of processed products. With increasing urbanization, rise in middle class purchasing power, change in food habits, there is increasing demand for factory-made jams, jellies, fruit beverages, dehydrated food, pickle etc. in the domestic market. Moreover, there is considerable demand for some of these products in foreign markets eg. mangoes, fruit juices, pickles etc. Despite all of this, at present the fruit and vegetable preservation industry is able to utilize less than one per cent of the total production for conversion into products. Therefore, there is ample scope for food preservation and value addition to fruits and vegetables. A wide variety of products can be made from fruits and vegetables.

Food preservation can be defined as the science which deals with the process of prevention of spoilage of food and helps it to be stored in a fit condition for future use. Throughout the man's history, certainly since the beginning of civilization, the preservation of food material has played a vital role in avoiding widespread starvation and it continues to do so till date, even in industrially developed world. Food supply has to keep pace with the needs of the population. There is always lack of food in developing countries like India because of demand of increasing population. Therefore, it is essential to adopt different food preservation techniques to prevent wastage and spoilage of food.

Food preservation helps in increasing shelf-life of food, thus, increasing its supply. By preserving these foods, spoilage can be avoided. It can be saved for future use at the time of scarcity, natural drought etc. Beside this preparation of meals becomes easier. Availability of food can be increased throughout the year and wastage can also be minimized. In this way preservation of food also help in stabilizing the prices of food by making the availability of seasonal foods throughout the year so it helps to improve the nutrition of people.

■ RESEARCH METHODS

The study was conducted at purposively selected nine Krishi Vigyan Kendras of Punjab state namely Amritsar, Hoshiarpur, Fatehgarh sahib, Jalandhar, Moga, Patiala, Mukatsar Sahib, Ludhiana and Bathinda. To assess the impact of any programme there should be minimum gap of four years between training conducted and its assessment. Therefore, all vocational training

courses of minimum five to ten days duration organized by the Krishi Vigyan Kendras from year 2011-2013 were selected to assess the impact of these training courses. The list of 582 women trainees who had attended the selected vocational training courses organized during the year 2011-2013 was procured from selected Krishi Vigyan Kendras. Twenty trainees from each KVK except Fatehgarh Sahib Krishi Vigyan Kendras were selected for study. Whereas only 19 trainees were selected from Fatehgarh Sahib Krishi Vigyan Kendras due to non availability of the contact details of the trainees from respective KVK. So total 179 trainees comprised the sample for the study. A self-structured interview schedule was prepared to attain the data from the women trainees. The interview schedule was pre-tested on twenty non-sampled respondents of Krishi Vigyan Kendra Sangrur and Moga, Punjab. The data were analysed with the help of frequency, percentage and mean scores.

Impact:

It refers to the adoption status of the practices, extent of adoption of practices and level of use of training under respective training course.

Adoption status:

It refers to the position of trained respondent regarding adoption, non-adoption and discontinuance of practices. Two, one and zero scores were assigned to adoption, discontinuance and non-adoption status, respectively. Mean scores were calculated on the basis of assigned scores by using following formula:

$$\text{Mean score of each practice of training} = \frac{\text{Total scores of } n_i^{\text{th}} \text{ practice}}{\text{Number of trainees of } n_i^{\text{th}} \text{ training course}}$$

$$\text{Mean score of each training} = \frac{\text{Sum of mean scores of all practices of } n_i^{\text{th}} \text{ training course}}{\text{Number of practices of } n_i^{\text{th}} \text{ training course}}$$

Extent of adoption:

It refers to the total number of recommended practices/technologies adopted by the trained women under specific training course. It was measured into three categories *i.e.* low, medium and high. One score was allotted to each adopted practice. Minimum and maximum scores were determined on basis of number of practices imparted under a training course. The score range of

each training was different because number of practices was not same for the all training course.

Level of use of training:

It refers to the level of use of training received by the respondent from Krishi Vigyan Kendras. It was measured under three categories *i.e.* at household level, for income generation and for establishing an enterprise.

RESEARCH FINDINGS AND DISCUSSION

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Adoption status of different vocational training courses:

Mean score of the training course indicated its adoption status. The data in Table 1 revealed that the highest adoption status was achieved by *Pappad and Vadian*, *Chawanparash* and *preserves/Murabha* making training course with 2.00, 1.90 and 1.90 mean scores, respectively followed by sun drying of vegetable (1.81) and pickle making (1.79). Further, lowest mean

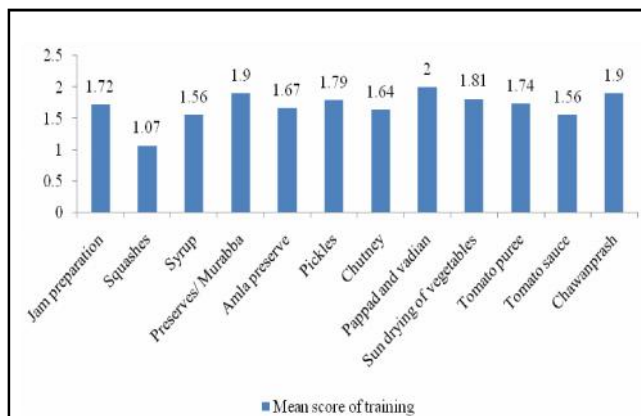


Fig. 1 : Distribution of the respondents according to their adoption status of different vocational training courses

score (1.07) was observed for squashes making training course (Arora, 2015; Doddahanumaiah, 2005; Gupta, 2017 and Gupta *et al.*, 2005).

Extent of adoption of practices/technologies of different vocational courses:

It refers to the total numbers of practices/ technologies adopted by trained women under particular training course. One score was given to each adopted practice. The data in Table 2. revealed that cent percent trainees had high extent of adoption of practices of preserves, pickle, *Pappad and Vadian*, sun drying of vegetables and *Chawanparash*

Table 1: Adoption status of different vocational training courses			
Vocational training course	No. of practices imparted under each training course	Total of mean scores of all practices of each training course	Mean score of training (0-2)
<i>Pappad and Vadian</i>	7	14	2.00
Preserves/Murabba	9	17.1	1.90
<i>Chawanparash</i>	12	22.84	1.90
Sun drying of vegetables	8	14.54	1.81
Pickles	9	16.17	1.79
Tomato puree	8	13.99	1.74
Jam preparation	11	18.94	1.72
<i>Amla</i> preserve	11	18.44	1.67
<i>Chutney</i>	9	14.81	1.64
Syrup	7	10.96	1.56
Tomato sauce	7	10.94	1.56
Squashes	11	11.82	1.07

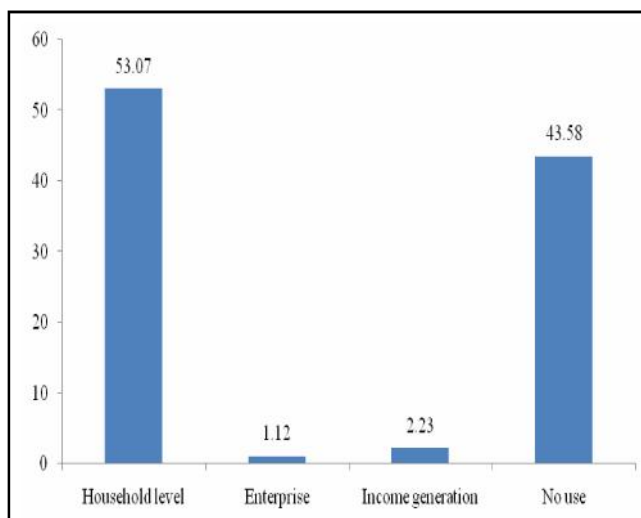


Fig. 2 : Distribution of the trainees according to their level of use

Table 2 : Extent of adoption of practices/technologies of different vocational training courses

Extent of adoption	
Jam preparation (n ₁ =44)	f (%)
Low (1-4)	-
Medium (5-8)	16(36.36)
High (9-12)	28(63.63)
Squashes (n₂=45)	
Low (1-4)	-
Medium (5-8)	44(97.77)
High (9-12)	1(2.22)
Syrup (n₃=43)	
Low (1-2)	-
Medium (3-4)	15(34.88)
High (5-7)	28(65.11)
Preserves/Murabbas (n₄=37)	
Low (1-3)	-
Medium (4-6)	-
High (7-9)	37(100)
Preserves/Amla (n₅=49)	
Low (1-4)	-
Medium (5-8)	29(59.18)
High (9-12)	20(40.81)
Pickles (n₆=63)	
Low (1-3)	-
Medium (4-6)	-
High (7-9)	63(100)
Chutney (n₇=52)	
Low (1-3)	-
Medium (4-6)	21(40.38)
High (7-9)	31(59.61)
Pappad and vadian (n₈=8)	
Low (1-2)	-
Medium (3-5)	-
High (6-7)	8(100)
Sun drying of vegetables (n₉=11)	
Low (1-3)	-
Medium (4-6)	-
High (7-9)	11(100)
Tomato puree (n₁₁=37)	
Low (1-3)	-
Medium (4-6)	24(64.86)
High (7-9)	13(35.13)
Tomato sauce (n₁₂=39)	
Low (1-2)	-
Medium (3-5)	17(43.58)
High (6-7)	22(56.41)
Chawanparash (n₁₃=13)	
Low (1-4)	-
Medium (5-8)	-
High (9-12)	13(100)

making training course, followed by syrup (65.11), jam preparation (63.63) and chutney making (59.61) (Hasamani and Kadliveera, 2017; Junjadiya, 2018 and Kumar, 2018).

Level of use of training courses conducted by Krishi Vigyan Kendras :

The data presented in Table 3 indicated the level of use of training. It was surprising to notice that 53.07 per cent of the trainees used the received training only at household level whereas 43.58 per cent of the trainees didn't utilize the respective training at all any level. Only two trainees were using the received training for establishing an enterprise and four trainees used it for income generation. The findings are similar with the results of Kaur (2018). She conducted the study to see impact of vocational training courses of Krishi Vigyan Kendras in Punjab. She reported that fifty per cent trainees used received training only at household level and thirty per cent of trainees did not utilize the respective training at any level. Similar work related to the present investigation was also conducted by Kaur (1998 and 2018); Kumbhare and Khonde, 2009; Nazir *et al.*, 2012; Rudra *et al.*, 2004 and Nisha, 2017).

Conclusion and suggestion:

Extent of adoption of different practices on food preservation training course was high. Adoption status of majority of practices in terms of its use at household level was high. But practices related to recommended quantity of food preservative were either not adopted or discontinued. So there is need to create awareness regarding adverse affects of use of non-recommended quantity of preservative.

Pappad and Vadian, Chawanparash and preserves/*Murabha* making training courses had achieved the highest adoption status. Lowest adoption status was observed in sun drying of vegetable pickle making and preparation of squash making training course. So there is a need to create the awareness regarding scope of adoption of practices of these trainings.

Only one per cent of the trainees had established an enterprise. Major constraint for non-establishment of an enterprise was weak financial position. So it is suggested that Krishi Vigyan Kendras officials should

Table 3 : Distribution of respondents according to level of use of the training received from KVK (n=179)

Level of use	Krishi Vigyan Kendras									Total f (%)
	Amritsar (n ₁ =20) f (%)	Bathinda (n ₂ =20) f (%)	Fatehgarh sahib (n ₃ =19) f (%)	Hoshiarpur (n ₄ =20) f (%)	Jalandhar (n ₅ =20) f (%)	Ludhiana (n ₆ =20) f (%)	Moga (n ₇ =20) f (%)	Mukatsar Sahib (n ₈ =20) f (%)	Patiala (n ₉ =20) f (%)	
Household level	9 (45)	12 (60)	19 (100)	7 (35)	11 (55)	8 (40)	12 (60)	10 (50)	7 (35)	95 (53.07)
Establish enterprise	-	-	1 (5.26)	-	-	-	-	-	1 (5)	2 (1.12)
Income generation	-	2 (10)	-	2 (10)	-	-	-	-	-	4 (2.23)
No use	11 (55)	8 (40)	-	12 (60)	9 (45)	9 (45)	8 (40)	9 (45)	12 (60)	78 (43.58)

motivate the trainees to establish their enterprise by creating awareness regarding financial assistance provided by the government to start an enterprise.

Authors' affiliations:

Kanwaljit Kaur, Department of Extension Education and Communication Management, Punjab Agricultural University, Ludhiana (Punjab) India

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