

# Periodic Research

## Gain in Knowledge and Change in Attitude of Rural Women Regarding Value Added Tomato Products Training

### Abstract

The present study was conducted in the Hisar district of Haryana state. Thirty rural women from each village. viz. Sadalpur from Adampur block, Tokas from Hisar-I block and Dhani Prem Nagar from Barwala block of Hisar district were selected randomly. On the basis of the preference of rural women, three products, i.e. tomato chutney, tomato ketchup and tomato soup were selected. Prior to imparting training, respondents' knowledge and attitude were assessed and after imparting training, post-exposure knowledge and attitude were analyzed. The impact of training was assessed through impact assessment index. Gain in knowledge and change in attitude was determined by using mean score and paired t-test. The results indicated that sufficient gain in knowledge and change in attitude was observed in all the sub-components of selected value added tomato products in all the three villages. Thus, it can be inferred that training exposure had increased the knowledge of rural women and had been instrumental in changing their attitude to a significant level regarding selected products. The impact assessment of training regarding value-added tomato products in selected villages of Hisar district is indicative of the fact that women respondents on receiving training succeeded in gaining knowledge and change in attitude to the extent of moderate level. There should be follow-up action after imparting training to sustain the learnt behavior, as systematic monitoring and evaluation will go a long way to determine the success of training.

**Keywords:** Training, Women, Tomato, Impact Assessment

### Introduction

Tomatoes contain a lot of vitamins A and C, mostly because of beta-carotene, and these vitamins act as an anti-oxidant, working to neutralize the harmful free radicals in blood stream that cause cell damage. Tomatoes also have plenty of chromium that helps diabetics to keep their blood sugar level under control. Potassium and vitamin B in tomato help to lower blood pressure and high cholesterol levels. Various studies have shown that the presence of lycopene in tomatoes, the red fruit, helps to lessen the chances of cancer. Lycopene is considered a natural miracle anti-oxidant that helps to stop the growth of cancer cell and interestingly enough, cooked tomatoes produce more lycopene than do raw tomatoes. With fast emerging sophisticated innovations and technologies in every field, training is increasingly becoming a potent instrument that can help people bring about improvement in their prevailing conditions and ways of making a living (Anita, 2006). Training aims at helping individuals reach their maximum potential by way of increased knowledge, changed attitude and improved skills enabling them to perform their jobs according to established standards. Training is meaningful only if it is need-based and brings about attitudinal changes in trainees to establish their own enterprise. Training is a vital tool to attain, sustain and accelerate the pace of development (Yadav and Verma, 1998). The present study was undertaken to assess the impact of training on trainees' gain in knowledge, skill and change in attitude of women regarding value added products from tomato.

### Methodology

The study was undertaken in Hisar district of Haryana state. From Hisar district three blocks, i.e. Adampur, Hisar- I and Barwala were selected randomly. From each block, one village, viz. Sadalpur village from Adampur block, Tokas village from Hisar-I block and Dhani Prem Nagar from Barwala block was selected purposively. From each village, 30 rural women constituted the sample for the present study. A list of value added

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tomato products was prepared and opinion of the rural women was sought regarding training on value added tomato products according to their preferences in either yes or No. Three products, i.e. tomato chutney, tomato ketchup (sauce) and tomato soup were selected on the basis of their preference. Before imparting training, their knowledge and attitude regarding value added tomato products was assessed by pre-tested interview schedule. Training was subsequently imparted to them on selected products. After that, post-exposure data was collected and gain in knowledge and change in attitude was assessed by Impact Assessment Index using mean scores and paired 't' test. For assessing the impact, indices were prepared and results thus obtained were categorized as follows: Low (<33%) impact, moderate (33-66%) impact and high (>66%) impact.

### Results and Discussion

Data presented in Table 1 illustrates preferences of respondents for value added tomato products. It is clear that tomato chutney, tomato ketchup (sauce) and tomato soup got 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> rank, respectively. The respondents showed least

preference in training on tomato puree, drying of tomato because the tomato is available through out the year in the village itself. They were not interested to learn preparation of stuffed tomato because its preparation is little costlier. **Table-1**

**Preferences of Rural Women Regarding Value Added Products from Tomato for Training**  
N=90

S.No.	Products	Preferences		Ranks
		Yes	No	
1.	Tomato chutney	80	10	I
2.	Tomato ketchup (Sauce)	70	20	II
3.	Tomato Puree	40	50	IV
4.	Drying of Tomato	22	68	V
5.	Tomato Soup	56	34	III
6.	Stuffed Tomato	18	62	VI

Therefore, these three products, i.e. tomato chutney, tomato ketchup (sauce) and tomato soup were selected for imparting training to rural women in all the three selected villages, viz., Sadalpur, Tokas and Dhani Prem Nagar.

**Table-2**  
**Gain in Knowledge of Rural Women Regarding Selected Value Added Products from Tomato in Sadalpur Village of Hisar District**

Sr. No.	Component	Pre-exposure (mean score)	Post-exposure (mean score)	't' value
1.	Importance of tomato products	2.46	9.78	21.02*
2.	Method of blanching tomato	0.02	2.72	16.75*
3.	Ingredients required in preparation of tomato chutney	1.18	7.89	18.25*
4.	Steps in preparation of tomato chutney	0.00	6.95	20.59*
5.	Precautions in preparation of tomato chutney	0.02	2.98	15.76*
6.	Ingredients required in preparation of tomato ketchup	0.00	8.60	21.56*
7.	Steps in preparation of tomato ketchup	0.05	9.18	19.79*
8.	Precaution in preparation of tomato ketchup	0.00	2.72	12.61*
9.	Ingredients required in preparation of tomato soup	0.56	4.32	19.12*
10.	Steps in preparation of tomato soup	0.02	3.78	22.13*
11.	Precautions in preparation of tomato soup	0.00	1.86	18.96*
12.	Overall	0.39	5.53	18.58*

\*Significant at 5% level of significance

The data presented in Table 2 clearly depict that sufficient gain in knowledge regarding value added tomato products was recorded for all the sub-components and overall assessment in knowledge showed a drastic increase in level of knowledge after

exposure through training in village Sadalpur. The findings are in agreement with Rani *et al.* (1994) who reported that the training had created a desirable change in the knowledge of trainees.

**Table-3**  
**Gain in Knowledge of Rural Women Regarding Value Added Products from Tomato in Village Tokas Officer District N=30**

Sr. No.	Component	Pre-exposure (mean score)	Post-exposure (mean score)	't' Value
1.	Importance of tomato products	3.16	9.28	18.26*
2.	Method of blanching tomato	0.65	2.78	14.59*
3.	Ingredients required in preparation of tomato chutney	2.56	7.92	16.26*
4.	Steps in preparation of tomato chutney	0.05	6.75	19.76*
5.	Precautions in preparation of tomato chutney	0.00	2.87	13.69*
6.	Ingredients required in preparation of tomato ketchup	1.13	7.69	18.89*
7.	Steps in preparation of tomato ketchup	1.02	8.69	18.51*
8.	Precautions in preparation of tomato ketchup	0.00	2.59	11.89*
9.	Ingredients required in preparation of tomato soup	1.32	4.63	17.67*

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10.	Steps in preparation of tomato soup	0.87	3.58	21.29*
11.	Precautions in preparation of tomato soup	0.00	1.90	20.76*
12.	Overall	0.98	5.33	15.73*

\*Significant at 5% level of significance

Table 3 reveals significant difference between pre-exposure and post exposure means score and overall knowledge for value added tomato products and sufficient gain in knowledge was observed in all the sub-component of selected products in village Tokas of Hisar district.

The data presented in Table- 4 clearly indicate that there was a significant difference between pre-exposure, post-exposure mean scores and overall knowledge for value added tomato products and

sufficient gain in knowledge was observed in all the sub-components of selected value added tomato products in village Dhani Prem Nagar of Hisar district.

Thus, it can be inferred that exposure through training had increased the knowledge of rural women to significant level regarding selected tomato products training. Findings are in congruence with Sonal and Fulzele (1986) who reported that training programmers were very effective to improve the knowledge and skill of trainees.

**Table-4**  
**Gain In Knowledge of Rural Women Regarding Value Added Products from Tomato in Dhani Prem Nagar Village of Hisar District**  
 N=30

Sr. No.	Component	Pre-exposure (mean score)	Post-exposure (mean score)	't' Value
1.	Importance of tomato products	2.98	8.79	17.69*
2.	Method of blanching tomato	0.26	2.68	15.65*
3.	Ingredients required in preparation of tomato chutney	1.89	7.53	18.25*
4.	Steps in preparation of tomato chutney	0.86	6.89	19.29*
5.	Precautions in preparation of tomato chutney	0.00	2.76	12.98*
6.	Ingredients required in preparation of tomato ketchup	1.62	7.52	19.29*
7.	Steps in preparation of tomato ketchup	1.76	8.19	17.28*
8.	Precautions in preparation of tomato ketchup	0.00	2.12	10.56*
9.	Ingredients required in preparation of tomato soup	0.98	4.52	16.52*
10.	Steps in preparation of tomato soup	0.36	3.76	22.62*
11.	Precautions in preparation of tomato soup	0.00	1.39	16.36*
12.	Overall	0.97	5.10	12.89*

\* Significant at 5% level of significance

Change in attitude of rural women regarding selected value added tomato products in village Sadalpur, Tokas and Dhani Prem Nagar and in pooled samples were assessed through pre- and post-exposure mean scores and paired't' test. It is evident from Table 5 that respondents succeeded in changing their attitude at post-exposure level in all the villages and in pooled sample. It can be concluded that respondents had changed their attitude after exposure through training. Sharma and Khan (2001)

also observed that the trained group possessed significantly higher levels of knowledge, adoption and gain in income than the respondents from untrained group. Riar and Singh (2011) also found that there was significant increase in knowledge levels of trainees as a result of undergoing the training. There should be follow-up action after imparting training to sustain the learnt behavior, as systematic monitoring and evaluation will go a long way to determine the success of training.

**Table-5**  
**Change in Attitude of Rural Women Regarding Value Added Tomato Products in Selected Villages of Hisar District**

Sr. No.	Village	Pre-exposure (mean score)	Post-exposure (mean score)	't' Value
1.	Sadalpur (N=30)	12.26	25.89	8.39*
2.	Tokas (N=30)	10.56	24.36	7.59*
3.	Dhani Prem Nagar N=30)	15.42	26.29	7.26*
4.	Overall (N=90)	12.75	25.51	8.16*

\*Significant at 5% level of significance

For determining the actual impact of training, indices were prepared and results obtained are presented in Table 6. The impact assessment of training on rural women of selected villages in Hisar district speaks of the fact that calculated impact was found to be

47.04% which is of moderate level as it was more than 33% but less than 66%. Thus, it supports the finding that women respondents after training succeeded in gain in knowledge and change their attitude to the extent of moderate level.

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**Table-6**  
**Impact Assessment Index of Training on Gain In Knowledge And Change in Attitude of Rural Women of Hisar District Regarding Selected Value Added Tomato Products N=90**

<b>Knowledge / Attitude</b>	<b>High (3)</b>	<b>Medium (2)</b>	<b>Low (1)</b>	<b>Total</b>
Highly Favorable (3)	2 2x3x3=18	14 14x2x3=84	7 7x1x3=21	23
Favorable (2)	16 16x3x2=96	20 20x2x2=80	8 8x1x2=16	44
Not Favorable (1)	10 10x3x1=30	8 8x2x1=16	5 5x1x1=5	23
<b>Total</b>	<b>28</b>	<b>42</b>	<b>20</b>	<b>90</b>

Percentage impact = 47.04 %

### Conclusions

Respondents preferred tomato chutney, tomato ketchup and tomato soup among the various products of tomato and hence were selected to impart training to rural women in selected villages. Overall assessment of knowledge showed a drastic increase in knowledge of rural women after exposure through training. Motivational and educational campaign should be organized for adoption of value added tomato products as an income generating activity. Repeated exposure should be given to rural women for higher adoption. Provision of advanced training of long duration should separately be made for those interested in starting their own enterprise. Successful entrepreneurs be invited during training to share personal experiences with the trainees to motivate them to start their own enterprise after receiving training.

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