*Indian Journal of Extension Education*
*Vol. 51, No. 3 & 4, 2015 (90-93)*

# Impact Assessment of Trainings on Rural Women for Value Added Pearl Millet Products

**Preeti Malik[1], SK Varma[2] and Vinita Jain[3]**

**ABSTRACT**

Pearl millet grains are very high in calories- precisely the reason they do wonders for growing children and pregnant women. Iron deficiency, which is widely prevalent in India, impairs children's physical growth, mental development, and learning capacity. Anemia is often induced by iron deficiency, and when severe it can increase women's risk of dying in childbirth. It is a significant source of dietary energy and nutritional security for poor farmers and consumers in several highly populated regions of India. Pearl millet with elevated iron levels can help reduce iron deficiency and to some extent, zinc deficiency, in regions of India where it is a staple food crop. Pearl millet is a gluten free grain and is the only grain that retains its alkaline properties after being cooked which is ideal for people with wheat allergies.

**Key wards:** Change in attitude, gain in knowledge, impact assessment and pearl millet products, skill acquisition.

## INTRODUCTION

Pearl millet can be used in developed of traditional foods and offer many opportunities for diversified utilization in value addition. Processing makes it possible to make variety of food products by adopting various technologies like baking, extrusion cooking etc. (Seetharam *et al*., 2001).

Alternatives uses of pearl millet would offer considerable opportunities in the context of poverty reduction and food security in India. To boost the consumption of pearl millet, it become necessary to develop some value added products which can be prepared at home scale as well as on commercial scale with the help of trainings. Rural women, the biggest beneficiaries may be given trainings for value added products of pearl millet so that they can form themselves into self-help groups to start their own enterprise. Therefore, the present study has been planned with the following objectives to organize trainings on value added products of pearl millet for selected women and assess its impact.

## METHODOLOGY

The present study was conducted in Hisar district of Haryana state. Two village from Hisar-II block were selected randomly i.e Balsamand and Bandaheri due to dry and arid zone suitable to grow pearl millet in the area. From the selected villages, a sample of 50 women from each village was drawn randomly. Thus, a total of 100 women respondents were selected randomly. Out of already selected women, a group of 20 women from each village interested to undertake training was selected. Thus a sample of 40 women from both the villages was imparted trainings on pearl millet products for 4 days duration each.

The selected women respondents, awareness on value added products of pearl millet was created by experts, motivational lectures and group discussions. Four days training was organized for 40 women of selected villages.

Impact was assessed in terms of knowledge gain, change in attitude and skill acquisition towards pearl millet products among respondents. The training was imparted for value added products of pearl millet like. laddoo, matar, namkeen sev, cake, suhali, pakora, *dhokla, mathi, sprouted chat etc.* through prepared structured interview schedule.

## RESULTS AND DISCUSSION

### Gain in knowledge of women respondents on value added pearl millet products

Pre exposure and post-exposure mean scores and 't' test was computed for all the sub-components of value added pearl millet products in pooled sample which are presented in Table 1.

[1]Scientist, Division of Agricultural Extension, ICAR-IARI, New Delhi, [2]Director (IT, Documentation & Publication),MANAGE, Hyderabad, 500030
[3]Senior Scientist, Division of Agricultural Extension, ICAR-IARI, New Delhi, [4]Scientist, Ag. Extension, Regional Station- Kalimpong, ICAR-IARI, New Delhi

Sufficient gain in knowledge regarding value added pearl millet products was recorded for sub-components of products *viz;* ingredients, precautions and method of preparation of pearl millet products as laddoo, matar, namkeen sev, cake, dhokla, sprouted chat, suhali, mathi and pakora. It may, therefore be concluded that women succeeded in acquiring knowledge after exposure to training on value added pearl millet products. It was statistically significant at 0.05 per cent level of significance.

**Table 1: Gain in knowledge of women respondents on value added pearl millet products**

**n=40**

| Components | Pre-Exposure (Mean Score) | Post-Exposure (Mean Score) | Gain in Knowledge (Mean Score) | t value |
|---|---|---|---|---|
| **Laddoo** | | | | |
| Ingredients | 1.60 | 4.72 | 3.12 | 17.95* |
| Method of preparation | 1.25 | 6.15 | 4.90 | 27.80* |
| Precautions | 1.05 | 2.00 | 0.95 | 19.00* |
| **Matar** | | | | |
| Ingredients | 1.35 | 4.72 | 3.37 | 21.38* |
| Method of preparation | 1.25 | 2.57 | 1.32 | 9.86* |
| Precautions | 1.02 | 2.25 | 1.23 | 7.69* |
| **Namkeen sev** | | | | |
| Ingredients | 1.22 | 4.95 | 3.73 | 19.92* |
| Method of preparation | 1.10 | 2.45 | 1.35 | 5.89* |
| Precautions | 1.05 | 2.80 | 1.75 | 17.60* |
| **Sprouted chat** | | | | |
| Ingredients | 1.00 | 2.90 | 1.90 | 10.08* |
| Method of preparation | 1.00 | 2.55 | 1.55 | 5.43* |
| Precautions | 1.02 | 1.60 | 0.58 | 4.81* |
| **Cake** | | | | |
| Ingredients | 1.00 | 3.65 | 2.65 | 15.43* |
| Method of preparation | 1.00 | 3.22 | 2.22 | 12.07* |
| Precautions | 1.02 | 1.55 | 0.53 | 4.76* |
| **Pakora** | | | | |
| Ingredients | 2.00 | 7.52 | 5.52 | 28.64* |
| Method of preparation | 1.40 | 3.90 | 2.50 | 14.69* |
| Precautions | 1.05 | 1.87 | 0.82 | 8.97* |
| **Dhokla** | | | | |
| Ingredients | 1.00 | 4.62 | 3.62 | 18.72* |
| Method of preparation | 1.00 | 4.62 | 3.62 | 18.72* |
| Precautions | 1.00 | 1.52 | 0.52 | 4.71* |
| **Mathi** | | | | |
| Ingredients | 1.60 | 4.40 | 2.80 | 16.87* |
| Method of preparation | 1.25 | 2.57 | 1.32 | 9.28* |
| Precautions | 1.05 | 1.97 | 0.92 | 18.02* |
| **Suhali** | | | | |
| Ingredients | 1.42 | 3.05 | 1.63 | 7.69* |
| Method of preparation | 1.05 | 2.90 | 1.85 | 18.17* |
| Precautions | 1.02 | 1.80 | 0.78 | 8.55* |

*Significant at 0.05 level of significance

## Change in attitude of women respondents for value added pearl millet Products

Change in attitude of rural women regarding value added pearl millet products in village Balsamand, Bandaheri was assessed through pre and post exposure mean score and't' test. Pre-exposure and post-exposure mean score and't' test were computed for all the sub component of the products of pearl millet and have been presented in Table 2.

It is evident from the Table 2 that respondents succeeded in changing their attitude at post exposure level in both the villages. It can be concluded that respondents had changed their attitude when exposed to training on value added pearl millet products.

**Table 2: Change in attitude of women respondents for value added pearl millet products**

| Name of Village | Pre-exposure (Mean Score) | Post-exposure (Mean Score) | Change in attitude (Mean Score) | t value |
|---|---|---|---|---|
| Balsamand (n = 20) | 24.50 | 38.60 | 18.04 | 10.09* |
| Bandaheri (n = 20) | 20.40 | 38.44 | 14.10 | 9.69* |
| Total (n = 40) | 25.95 | 48.22 | 22.27 | 37.29* |

*Significant at 0.05 level of significance

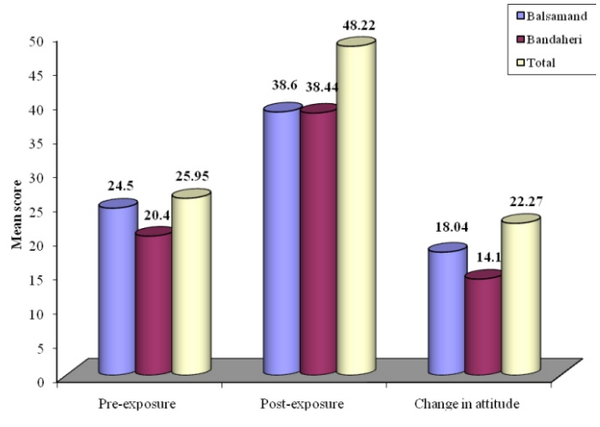


**Fig. 1: Change in attitude of women respondents for value added pearl millet products**

## Skill acquisition of women respondents for value added pearl millet products

Skill acquisition of women respondents for value added pearl millet products in village Balsamand and Bandaheri was assessed through pre and post exposure mean score skill acquisition of respondents for value added pearl millet products was calculated in frequency,

percentage and have been presented in Table 3. The data point out that most of the respondents (80%) were having low skill followed by medium (10%) and high skill (10%) at pre exposure stage in Balsamand village. After exposing them to training 45 per cent of the respondents acquired skills at medium level followed by low skill (30%) and high skill (25%) respectively.

In Bandaheri village, 85 per cent of the respondents were having low skill followed by medium (10%) and high skill (5%) at pre exposure stage. However, at post exposure of training half of the respondents (50%) were acquired medium level skills followed by low skill (40%) and high skill (10%). Thus it can be inferred that women acquired skill when exposed them to training.

**Table 3: Skill acquisition of women respondents for value added pearl millet products**

| Categories | Pre-Exposure | | Post-Exposure | |
|---|---|---|---|---|
| | f | % | f | % |
| **Balsamand village (n=20)** | | | | |
| Low | 16 | 80.0 | 06 | 30.0 |
| Medium | 02 | 10.0 | 09 | 45.0 |
| High | 02 | 10.0 | 05 | 25.0 |
| **Bandaheri village (n=20)** | | | | |
| Low | 17 | 85.0 | 08 | 40.0 |
| Medium | 02 | 10.0 | 10 | 50.0 |
| High | 01 | 05.0 | 02 | 10.0 |
| **Total (n=40)** | | | | |
| Low | 33 | 82.50 | 14 | 35.0 |
| Medium | 04 | 10.00 | 19 | 47.50 |
| High | 03 | 07.50 | 07 | 17.50 |

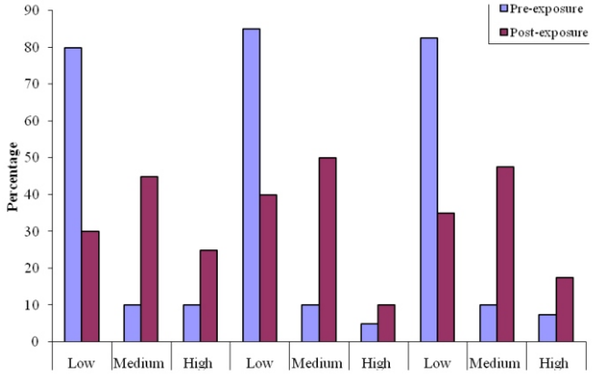


**Fig. 2: Skill acquisition of women respondents for value added pearl millet products**

**Impact assessment index of women respondents for value added products pearl millet**

Impact assessment index (IAI) of value added products of pearl millet is given in Table 4. It clearly indicates that the calculated impact was found to be 49.16 per cent which is of moderate level. Thus, it may be inferred that women respondents after exposure to training acquired knowledge and change their attitude to the extent which was less than 66 per cent but of moderate

**Table 4: Impact Assessment Index of women respondents for value added pearl millet products**

| Knowledge Attitude | High (3) | Medium (2) | Low (1) | Total n=40 |
|---|---|---|---|---|
| Highly favourable (3) | 4(3×3) 36 | 3(3×2) 18 | 2(3×1) 6 | 9 |
| Favourable (2) | 10(2×3) 60 | 7(2×2) 28 | 3(2×1) 6 | 20 |
| Not favourable (1) | 4(1×3) 12 | 4(1×2) 8 | 3(1×1) 3 | 11 |
| Total | 18 | 14 | 8 | 40 |

$$IAI = \frac{\sum fi \times ci}{N \times X \times Y} \times 100$$

$$= \frac{36+18+6+60+28+6+12+8+3}{40 \times 3 \times 3} \times 100$$

IAI = 49.16 % (Moderate)

**Relationship of socio-personal, economic and psychological variables with gain in knowledge and change in attitude of rural women on value added pearl millet products.**

In order to find out the relationship between socio-personal, economic and psychological variables with gain in knowledge and change in attitude of women respondents, Pearson's products correlation coefficient was applied.

**Table 5: Relationship of socio-personal, economic and psychological variables with gain in knowledge and change in attitude of rural women on value added pearl millet products**

**n=40**

| Variables | Knowledge 'r' value | Attitude 'r' value |
|---|---|---|
| Age | 0.07 | 0.22 |
| Education | 0.06 | 0.29 |
| Family size | -0.31* | 0.10 |
| Income | 0.01 | 0.10 |
| Land Holding | 0.30* | 0.21 |
| Risk orientation | 0.10 | 0.11 |
| Economic motivation | 0.19 | -0.10 |
| Change proneness | 0.05 | 0.03 |

*Significant at 0.05 level of significance

The results are presented in Table 5 reveled that land holding (0.30*) was found to be positively and significantly correlated with gain in knowledge for value added pearl millet products whereas, caste (-0.31*) and family size (-0.31*) were found to be negatively but significantly correlated with gain in knowledge for value added products of pearl millet.

Table 5 indicated that there is no significant correlation between socio-personal, economic, psychological variables and change in attitude for pearl millet products. Thus, it can be inferred that respondents with large land holding having small size family and belonged to lower caste had acquired more knowledge.

## CONCLUSION

Finding of the present study showed that the respondents succeeded in change their attitude at post-exposure in both the village and acquiring medium skill on all the aspects of value added products of pearl millet. Respondents succeeded in acquiring skill with respect to all aspects of value added pearl millet products. This reflects interactive and effective learning situation by providing step by step procedure along with lectures in a friendly environment in simple language for better comprehension. Findings of the present study are in conformity with those of Akansha (2006). Shivakumara (2008) also reported that 80 per cent of the respondents acquired vermicompost production skills by undergoing the training. Results of the present study further reveled that overall impact of training in terms of gain in knowledge and change in attitude was of moderate level. Similar results were also arrived at by Deepti (2008), Nutan (2009), Gita (2010) and Monika (2013).

*Paper received on : April 21, 2015*
*Accepted on : June 4,2015*

## REFERENCES

Seetharam, M.K., Swarkar, N.J., Toma, A.K.2001. Preparation of food products from various processing techniques. J.Nutr. Diet. 33: 210-216.

Shivakumara, C. 2008. Production and marketing of Vermicompost in Karnataka: a case of Dharwad district. M.Sc. Thesis, University of Agricultural Sciences, Dharwad.

Akansha 2006. Appraisal of trainings under central training scheme 'Women in Agriculture'. M.Sc. Thesis, CCS Haryana Agricultural University, Hisar.

Deepti, 2008. Impact assessment of All India Coordinated Research Project (AICRP) in home science on farm women. M.Sc. Thesis, CCS Haryana Agricultural University, Hisar.

Nutan, 2009. Economic feasibility of nursery raising for rural women. M.Sc. Thesis, CCS Haryana Agricultural University, Hisar.

Gita, 2010. Feasibility of fruit plant nursery as an enterprise for rural women. M.Sc Thesis, CCS Haryana Agricultural University, Hisar.