



E-ISSN: 2278-4136  
 P-ISSN: 2349-8234  
 JPP 2019; 8(1): 1497-1500  
 Received: 21-11-2018  
 Accepted: 23-12-2018

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## Knowledge and Adoption level of Homes science technologies by farm women

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### Abstract

Home Science is also a multidisciplinary field which is the combination of Science and Art altogether. In Home Science, the science is studied in an artistic way and at the same time art is developed scientifically in the form of skills. Many times Home Science Education being the basis for education of family ecosystem is referred to as the "Education for Better Living". It deals with the natural as well as man-made environments in a family and inter as well as intra family relationships. The present study was carried out to know the knowledge level and adoption level of respondents about the introduced technologies in three villages were intervention carried out during 2015-16. From three districts, three villages and from each village 40 SHG members were selected. Thus total sample constitute 120. The technologies selected for the study were, Developmental mile stones and Stimulating play materials, Importance of Food and Food Pyramid, Consumer Education and Standard Signs and Stain Removal. Paired 't' test method was used to analyze knowledge level and adoption level differences before and after intervention. Result reveals that after intervention Knowledge level Index of the respondents about Home Science technologies, regarding Developmental mile stones and Stimulating play materials, was increased up to 78.79 per cent (paired 't' test value 20.60\*\*) and Adoption Index level was increased up to 81.79 per cent test (29.17\*\*). Regarding Importance of Food and Food Pyramid knowledge level was increased up to 76.84 (paired 't' test value 17.86\*\*) and adoption level was increased up to 77.22 per cent (17.38\*\*). Considering Stain removal knowledge level was increased up to 69.77 per cent (paired 't' test value 7.97\*) and adoption level was increased up to 71.88 per cent (11.42\*\*). In case of Consumer Education and Standard Signs was found to be increased in post- test i.e. 65.98 per cent (paired 't' test value 11.80\*\*), and adoption level found to be increased in post- test i.e. 57.88 per cent (19.50\*\*), the statistical values indicates the results were highly significant.

**Keywords:** Home science, knowledge, adoption

### Introduction

Women are the backbone of family, Home Science is dedicated to overall development of women folk. It has developed certain low cost technologies suitable for alleviating drudgery in women's life. Technologies related to drudgery reduction, simplification of working pattern, consumer education, educating about health and hygiene, introducing improved equipments, etc. are developed by the scientists across the country. Home Science colleges are located in agricultural universities with the purpose of benefiting rural women folk, besides giving education to rural girls in the college. So Home Science College has the major responsibility of disseminating or popularizing Home Science technologies to the concerned or needy rural women folk.

Disseminating of technologies results in adoption of technologies at individual level. Adoption of technologies would be an effective means of bringing relief to the rural women from their back breaking tasks. However, rural women have to acquire knowledge to adopt technologies. Since knowledge of the existence of technologies can create motivation for its adoption and knowledge is found to be related as the attitude of the respondents towards adoption. Opportunities should be provided to rural women through demonstrations, exhibitions and discussions to enable them to acquire more knowledge and subsequently to formulate more favourable attitude towards adoption of improved technology for reducing drudgery and raising the family income.

### Material and Methods

The study was conducted in Belgum, Dharwad and Haveri district in the year 2015-16. One village from these three districts were selected namely Gundenatti (Belgum district), Baada (Dharwad district) and Kagenele (Haveri district), where the intervention carried out. Total one hundred and twenty rural women (SHGs members) were selected for the present study. Out of the total sample forty sample were selected from each district.

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The data was collected from the SHGs members with the help of pre-structured schedule by personal interview technique. The data was tabulated and appropriate statistical methods were adopted.

### Results and Discussion

It was observed (Table 1) that 38.33 per cent of the respondents involved in adoption of Home Science technologies belonged to middle age group (36 – 50 years), 36.66 per cent of them belonged to young age (18 – 35 years) and remaining 25.00 per cent of the respondents are in the old age (51 and above years) category. Table also indicated that, 35.83 per cent of the respondents belongs to illiterate category, 30.83 per cent of them were educated upto middle school, 13.33 had education up to primary school, 10.33 per cent of them were educated upto high school level and only 9.16 per cent of the respondents had education up to college, and 79.16 per cent of the farm women belong to joint family and about 20.83 per cent of the respondents belong to nuclear family. The data in the table indicates that, 39.16 per cent of the respondents had an annual family income up to Rs. 51,000 i.e medium category, 30.83 per cent of the respondents belong to low income category (up to Rs 17,000), 20.33 per cent of them belong to semi-medium (Rs. 17,001 to 34,000) only 9.00 percent of the respondents had high annual income (>Rs. 5,72,000). The results indicated that, 55.83 per cent of the respondents were agriculture labourers, equal number of them (15.83 % each) had their occupation as Agriculture and House wife, followed by salaried job (7.50 %), very less per cent of the respondents were dependent on salaried subsidiary occupation (5.00%) and 45.83 per cent of the farm women belonged to medium farming family with a land holding of 5-10 acres, 39.16 per cent of them belong to small farming families (2.5 – 5 acres), and 15 per cent of the respondents belong to big farming families (>10 acre). It was observed that 63.33 per cent women belonged to the category of low extension contact, followed by Medium contact (28.33 %) and only 8.3 per cent respondents had high extension contact and 62.51 per cent of the women were members in one organization, 26.66 per cent were not a member in any organization and only 10.33 percent of the respondents were members in more than one organization and 41.66 per cent of women possessed medium Mass media utilization followed by low (35.83 %) and high Mass media utilization (22.50 %). It is clear from table 2 that the knowledge level of the respondents after exposure to intervention programme on Developmental mile stones & stimulating play materials, majority of the respondents (55.00 %) had medium level of knowledge score, followed by (29.16 %) high level of knowledge score and less number of the respondents (15.83%) had low level knowledge. Regarding the knowledge level of the respondents about Importance of food and food pyramid, it could be seen that majority of the respondents (54.16%) had medium level of knowledge, followed by high (38.33 %) level of knowledge and few respondents (7.50%) had low level of knowledge. In case of Consumer Education & Standard Signs of the respondents had medium level (36.66%) of knowledge, followed by high level (33.33 %) of knowledge and 15.83 per cent of the respondents had low level of Knowledge. Considering Stain removal technology,

knowledge level of the respondents depicts that, most of the respondents (48.33%) had medium level of knowledge, followed by high (35.83 %) level of knowledge and 15.83 per cent of the respondents had low level of knowledge.

Table 3 present on the mean knowledge score of the respondents about Home Science technologies, regarding Developmental mile stones & stimulating play materials, pre-knowledge mean score was 41.01, it was increased with mean score 78.79 and it shows the results were highly significant by using paired 't' test (20.60\*\*). Pre-knowledge mean score of the respondents about Importance of food and food pyramid was 42.07 it was increased up to 76.84 after intervention. It shows the results were highly significant represented by paired 't' test (17.86\*\*). Considering Stain removal it was found 40.68 in pre-test and it was increased with mean score 69.77. It shows the results were significant was denoted by paired 't' test (7.97\*). Pre-knowledge mean score of the respondents about Consumer Education and Standard Signs was 40.11 and it found to be increased in post- test i.e. 65.98 and the statistical value indicates the results were highly significant (paired 't' test value 11.80\*\*).

Data in Table 4 shows the adoption of selected Home Science technologies. It is clear from table that the adoption level of the respondents after exposure to intervention programme on Developmental mile stones & stimulating play materials, more number of the respondents (45.83 %) had medium level of adoption score, followed by (40.00%) high level of adoption score followed by low level (14.16%) adoption score. Regarding adoption level of the respondents on Importance of food and food pyramid, more number of the respondents (45.00%) had medium level of adoption score, followed by high (40.00 %) level of adoption score followed by low level (17.50%) of adoption score. Adoption level of the respondents on Consumer education and standard signs more number of the respondents (43.33%) had medium level of adoption score, followed by high (39.16 %) level of adoption score and 15.50 per cent of the respondents had low level of adoption. In case of adoption level of Stain removal technology by the respondents, more number of the respondents (45.00%) had medium level of adoption score, followed by high level (35.00 %) of adoption score and 20.00 per cent of the respondents had low level of adoption score.

Table 5 presents on the mean adoption score of the respondents about Home Science technologies, regarding Developmental mile stones & stimulating play materials pre-Adoption means score was 37.58 after intervention it was increased up to 81.79, it means the result was highly significant was denoted by paired 't' test (2917\*\*). Pre-adoption mean score of respondents about Importance of food and food pyramid was 47.00, it was increased up to 77.22 after intervention, it means the result was highly significant by using paired 't' value (17.38\*\*). Considering Stain removal it was found 38.94 in pre-test and it was increased with the mean score 71.88. The paired 't' values of these technologies (11.42\*\*) indicate highly significant results. Pre-Adoption mean score of the respondents about Consumer education and standard signs was 38.86 and it found to be increased with the mean score post- test i.e. 57.88 and the statistical value (19.50\*\*) indicates the results are highly significant.

**Table 1:** Socio-personal characteristics of rural women n=120

	Categories	Frequency	Percentage
Age	Younger (18-35)	44	36.66
	Middle (36-50)	46	38.33
	Old (51 & above)	30	25.00
Education	No schooling	43	35.83
	Primary school	16	13.33
	Middle school	37	30.83
	High school	13	10.33
Occupation	College	11	9.16
	House wife	19	15.83
	Agriculture labour	67	55.83
	Agriculture	19	15.83
Income	Subsidiary	6	5.00
	Salaried job	9	7.50
	Low income (Up to Rs 17, 000)	37	30.83
	Semi-medium income (Rs. 17,001 to 34,000)	25	20.33
Family type	Medium income (Rs. 34,001 to 51,000)	47	39.16
	High income (Above Rs. 51,000)	11	9.16
	Nuclear	95	79.16
	Joint	25	20.83
Land	Small	47	39.16
	Medium	55	45.83
	Big	18	15.00
Social Participation	Member in more than one organisation	13	10.33
	Member in one organisation	75	62.51
	Not a member in any organisation	32	26.66
Mass media participation	Low	43	35.83
	Medium	50	41.66
	High	27	22.50
Extension Contact	Low	76	63.33
	Medium	34	28.33
	High	10	8.3
Cosmopolitaness	Low	41	34.16
	Medium	54	45.00
	High	25	20.83

**Table 2:** Knowledge level of rural women about selected Home Science technologies n=120

Technologies	Knowledge level	Respondents	
		Frequency	Percentage
Developmental mile stones and Stimulating play materials	Low (0-36)	19	15.83
	Medium (36-42)	66	55.00
	High (42 and above)	35	29.16
Importance of Food and Food Pyramid	Low (0-13)	9	7.50
	Medium (13-15)	65	54.16
	High(15. and above)	46	38.33
Consumer Education and Standard Signs	Low (0-9)	36	30.00
	Medium (9 -11)	44	36.66
	High(11 and above)	40	33.33
Stain Removal	Low (0-6)	19	15.83
	Medium (6-8)	58	48.33
	High(8 and above)	43	35.83

**Table 3:** Mean Knowledge score of the respondents about Home Science technologies n=120

Technologies	Mean Knowledge score		Difference	Paired t-test
	Pre	Post		
Developmental mile stones and Stimulating play materials	41.01	78.79	37.78	20.60**
Importance of Food and Food Pyramid	42.07	76.84	34.77	17.86**
Consumer Education and Standard Signs	40.11	65.98	25.87	7.97**
Stain Removal	40.68	69.77	29.09	11.80**

\*\* Significant at 0.01 level

**Table 4:** Adoption level of rural women about selected home science technologies n=120

Technologies	Adoption level	Respondents	
		Frequency	Percentage
Developmental mile stones and Stimulating play materials	Low (0-39)	17	14.16
	Medium (39-44)	55	45.83
	High (44 and above)	48	40.00
Importance of Food and Food Pyramid	Low (0-13)	18	15.00
	Medium (13-15)	54	45.00
	High (15 and above)	48	40.00
Consumer Education and Standard Signs	Low (0-10)	21	17.50
	Medium (10-12)	52	43.33
	High (12 and above)	47	39.16
Stain Removal	Low (0-8)	24	20.00
	Medium (8-10)	54	45.00
	High (10 and above)	42	35.00

**Table 5:** Mean Adoption score of the respondents about Home Science technologies n=120

Technologies	Mean Adoption score		Difference	Paired t-test
	Pre	Post		
Developmental mile stones and Stimulating play materials	37.58	81.79	44.21	29.17**
Importance of Food and Food Pyramid	47.00	77.22	30.22	17.38**
Consumer Education and Standard Signs	38.86	57.88	19.02	11.42**
Stain Removal	38.94	71.88	32.94	19.75**

\*\* Significant at 0.01 level \* Significant at 0.05 level NS: Non-significant

### Conclusion

The efforts put by intervention programme had a good impact on knowledge gain and adoption of Home Science technologies of rural women. Intervention programme helped in capacity building of rural women by creating awareness, increasing the knowledge about innovative technologies and practicing improved skills which intern help in the empowerment of rural women.

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