Knowledge level of the farm women in improved home science technologies

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■ **ABSTRACT :** Rural women spend much of their time in unpaid activities like working in family farm or receiving income in kind by working for others and in domastic work. Being illiterate and confined to four-walls of the house, they have no or little knowledge about new technologies which can enhance their productivity and alleviate drudgry. Krishi Vigyan Kendra is an institution which imparts training to the rural women in these aspects. They impart skill training through work experience based on principle of learning by doing. Hence, an attempt was made for evaluation of impact of training imparted by Krishi Vigyan Kendra, Jodhpur on knowledge level of rural women by conducting this study.

■ **KEY WORDS :** Farm women, Impact, Knowledge level

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In a country like India, there is a vast scope of increasing agricultural production. This can only be achieved by effective transfer of technology from research laboratories to the farm families and providing appropriate training to the farmers, farm women and rural youths about various new and latest agricultural and home science technologies. The importance of training institutes like Krishi Vigyan Kendra (KVK) in quick and effective transfer of technology is well known (Singh *et al.*, 2001).

KVK is an institutional project of Indian Council of Agricultural Research (ICAR) to demonstrate the application of seience and technology inputs of agriculturel research and education on the farmer's field and in the rural area with the help of a multi-disciplinary team of scientists. It is, therefore also called as a frontline transfer of technology or extension system in the country. The agricultural technology is transferred through imparting vocational training to the farmers, farm women, rural youths and grass root level extension workers in broad-based agricultural production. The emphasis is given to provide critical skills so that the participants may confidently use on their farms to insrease agricultural productivity and also become economically self-reliat through gainful self-employment.

These institutions emphasize on learning by doing and work experience, these aim to impart the latest technological know-how to illiterate farmers though work experience.

Knowledge has been operationally defined as those behaviours and test situations which emphasized the remembering either by recognition or recalls of ideas, materials or phenomenon (Bloom *et. al.* 1956).

KVKs have been working in Rajasthan for long and no work has been conducted in the field of home science activities for farm women, so the study has an immense importance. It is therefore, high time that impact of KVK in terms of gain in knowledge should be scientifically assessed so as to strengthen the functioning of these Kendras in future. This type of research was felt as a necessity, so the researcher selected this topic for study. With the above views in mind, present study was undertaken with the following specific objectives :

–To find out the major home science technologies diffused under KVKs.
–To find the impact of KVK in terms of gain in knowledge in technologies diffused under home science programme of KVK.
–To ascertain the association of knowledge of farm women

with the selected independent variables *viz.,* age, educational level, socio economic status, size of family and caste.

■ RESEARCH METHODS

The study was conducted in Jodhpur district of Rajasthan. Jodhpur district comprises of total nine Panchayat Samities. Out of which, two Panchayat Samities namely, Mandore and Luni were selected purposely, because these Panchayat Samiti are under the working areas of home science programme of the KVK, Jodhpur. Out of these two Panchayat Samities, three villages from each Panchayat Samities were selected randomly. (Satlana, Madhopura and Luni from Luni Panchayat Samiti and Ghadav, Jipasani and Karvad from Mandore Panchayat Samiti).

A list of all the beneficiaries of the KVK was obtained from its office and fifteen farm women from each village were taken by simple random sampling technique. Thus, the total farm women contacted were 90 (15 x 6). In order to obtain the opinion about the utility of various home science activities, the views of Subject Matter Specialists (SMS) as well as Chief Training Organiser (CTO) was evaluated. This sample was of 20. Thus, the total sample comprised be of 110 (90+20) respondents.

The data for the study were collected with the help of a set of schedule prepared specially for the purpose. The data were collected by personal interview of the farm women by the researcher herself, after making good rapport with them while mailed questionnaires were used for SMS.

The data so collected were classified and interpreted after subjecting to statistical tests, to draw the conclusions.

■ RESEARCH FINDINGS AND DISCUSSION

The results of the present study as well as relevant discussions have been presented under following sub heads:

Major home science technologies diffused by KVKs:

Following technologies are generally diffused by KVKs, in home science field:

–Supplementary food (POSHAK) and balanced diet.
–Improvement in local diet by different methods such as mixing, sprouting etc.
–Smokeless Chullah.
–Improvement in existing storage bins for safe grain storage.
–Immunization of children and pregnant ladies.
–Nutritional gardening.
–Preservation and packaging.
–Tailoring.
–Health and personal hygiene.
–Use of solar energy.
–Income generation activities.

Knowledge level of farm women :

An attempt was made to find out the knowledge of farm women about home science technology transferred by the KVK under study.

The maximum and minimum scores respondents can scores on the knowledge test was 45 and 15, respactively. The maximum and minimum knowledge scores obtained by the respondents of the study were 45 and 15, respactively. The mean knowledge scores revealed that average farm women had good knowledge about home science technology .The standard deviation disclosed that there was a large variation in the knowledge of the farm women regarding improved home science technology.

Based on the knowledge score, three levels of the farm women were made as under :

1.	Low level	Less than 20.16 (A.M – SD)
2.	Medium level	20.16-38.28 (A.M $\pm$ SD)
3.	High level	More than 38.28 (A.M + SD)

Table 1 hows that majority of farm women (55.55%) had medium knowledge level with 28.08 average knowledge score. About 21.11 per cent of them had low knowledge level with 16.52 average knowledge score, whereas 23.33 per cent had high knowledge level with 41.95 average score.

Table 1 : Knowledge of farm women about home science technology			
Sr. No.	Knowledge level	Adopter farm women		
		Frequency	Percentage	Av. knowledge score
1.	Low level (Less than 20.16)	19	21.11	16.52
2.	Medium level (20.16-38.28)	50	55.55	28.08
3.	High level (More than 38.28)	21	23.33	41.95
			Mean score 28.85	

The knowledge level of the farm women regarding home science technology transferred by KVK is illustrated diagramatically in Fig. 1.
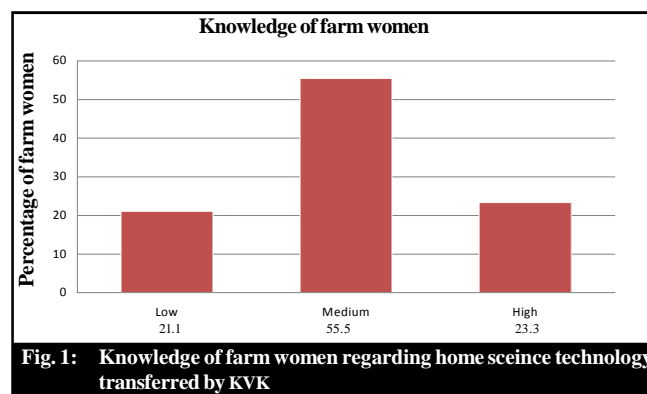
Fig. 1: Knowledge of farm women regarding home sceince technology transferred by KVK

From the data mentioned in Table 1, it was found that the adopter farm women had 28.85 mean knowledge score. It means those farm women who were adopted by the KVK appeared to possess more knowledge about new and improved home science technologies which were transferred by KVK.

From the findings, it may be observed that majority of farm women had medium to high knowledge of home science technology transferred by the KVK. It may be said, thus, that knowledge of new technology exerts its influence on the adoption of new and more improved home science technology transferred by KVK through different and varied educational activities.

The results are in line with the observations of Rao (1968), Singh (1969) and Dattari (1980) where they found that majority of farmers possessed high knowledge regarding new farm technology as a result of extension activities.

On the contrary, the findings are not in line with those of Singh and Singh (1974) Pathak *et al.* (1979), Ramesh Babu and Singh (1979) and Bangarva (1985) where they have found that there were large variations in farmer's knowledge. Majority of farmers had low knowledge about new improved farm technology.

Looking to the importance of KVKs, it is imperative that role, organisation and functions of KVKs must be evaluated on scientific lines and suggest some measures to strengthen it. It is believed that the scientists working at KVKs might have difference of opinion about the roles prescribed for them and the roles perceived by themselves. It is believed that the training programmes of KVK will increase the knowledge level of farm women and that will in turn increase their awareness.

Association between dependent and independent variables :

This part deals with the findings and discussion of association between farm women's knowledge with independent variables *viz.,* age, education, caste, socio-economic status and size of family. To determine the association between the dependent variables with the selected independent variables, Chi-square test was used.

Association between knowledge and educational level of the respondents :

An examination of Table 2 reveals that out of 90 respondents, 30 were educated below Primary, 36 were educated up to Primary and 24 were educated above primary. From the group of educated below Primary, 66.6 per cent had low knowledge, 30 per cent had medium knowledge while 13.3 per cent showed high knowledge. From the group of educated till Primary 83.3 per cent had low knowledge, 11.1 per cent had medium knowledge while 5.5 per cent showed high knowledge. Similarly from the group of educated above Primary, 79.1 per cent had low knowledge, 12.5 per cent

Table 2 : Association between knowledge level and education of farmwomen				
Knowledge level	Education			Total
	Below primary	primary	Above primary	
Low	20 (66.66)	30 (83.33)	19 (79.16)	69
Medium	6 (20)	4 (11.11)	3 (12.5)	13
High	4 (13.33)	2 (5.55)	2 (8.33)	8
	30	36	24	90

X^2= 2.81 non-significant at 0.05 level of probability

had medium knowledge, 8.3 per cent showed high knowledge.

Results of Table 2 depict that the level of education did not appear to have influence on the knowledge of farm women. So, education may not be an important factor for innovative, progressive and knowledgeable farm women. In the present study, formal education in the form of reading, writing and schooling was taken into account to ascertain the level of education of farm women.

Association between knowledge level and age of the respondents :

An examination of Table 3 reveals that out of 90 respondents, 35 were below 30 years of age, 37 fell in the age group 30-40 years, and 18 were above 40 years of age. From the group of below 30 years of age, 57.1 per cent had low knowledge, 37.1 per cent had medium knowledge and 5.7 per cent had high knowledge. From the group of 30-40 years of age, 51.3 per cent had low knowledge, 45.9 per cent had medium knowledge while 2.7 per cent showed high knowledge. From the group of above 40 years of age, 55.5 per cent had low knowledge, 38.8 per cent had medium knowledge while 5.5 per cent had high knowledge.

Table 3 : Association between knowledge level and age of respondent				
Knowledge level	Age			Total
	Blelow 30 years	30-40 years	Above 40 years	
Low	20 (57.14)	19 (51.35)	10 (55.55)	49
Medium	13 (37.14)	17 (45.94)	7 (38.88)	37
High	2 (5.71)	1 (2.70)	1 (5.55)	4
	35	37	18	90

X^2= 0.884 non-significant at 0.05 level of probability

Table 3 depicts that the age of the farm women did not appear to have influence on the knowledge of farm women.

Association between knowledge level and socio-economic status :

Close examination of Table 4 shows that 35 respondents belonged to low SES, 33 were of medium and 22 were of high SES. They were classified according to knowledge level as having low, medium, and high knowledge.

This shows that the socio-economic status has no influence on farm women's knowledge. This might be due to

Table 4 : Association between knowledge level and socio-economic status			
Knowledge level	Socio-economic status		
	Low	Medium	High	Total
Low	23 (65.71)	20 (60.61)	10 (45.45)	53
Medium	10 (28.57)	11 (33.33)	10 (45.45)	31
High	2 (5.71)	2 (6.06)	2 (9.09)	6
	35	33	22	90

X^2= 2.43 non-significant at 0.05 level of probability

the fact that higher socio-economic status usually diverts a farm woman to other avenues rather than putting her efforts to acquire the information. In general, high socio-economic status women seldom think of working themselves moreover, they neither give attentions nor they put their ears on the activities carried out by the KVK. This might have led them to have little knowledge towards activities of KVKs.

Association between knowledge level and caste of the respondents :

Table 5 shows that out of 90 respondents, 32 were of lower caste, 33 were of upper caste and 25 were of other castes. Out of lower caste, 46.8 per cent had low knowledge, 6.2 per cent had medium knowledge and 46.8 per cent had high knowledge. From upper caste, 60.6 per cent had low knowledge, 3.03 per cent had medium knowledge and 36.3 per cent had high knowledge. From the group of other castes, 24 per cent had low knowledge, 4 per cent had medium knowledge and 72 per cent had high knowledge.

Table 5: Association between knowledge level and caste of the respondents			
Knowledge level	Caste		
	Lower	Upper	Other	Total
Low	15 (46.87)	20 (60.60)	6 (24.0)	41
Medium	2 (6.25)	1 (3.03)	1 (4.0)	4
High	15 (46.87)	12 (36.03)	18 (72.0)	45
	32	33	25	90

X^2= 8.15 non-significant at 0.05 level of probability

The calculated Chi-square value was found to be 8.15 which is non-significant at 0.05 level of probability thus, there was no association between knowledge and caste of the respondents.

Association between knowledge level and size of family:

Table 6 shows that out of 90 respondents, 41 were from small families (up to 5 members) and 49 were from large families (above 5 members). Out of small family, 9.75 per cent
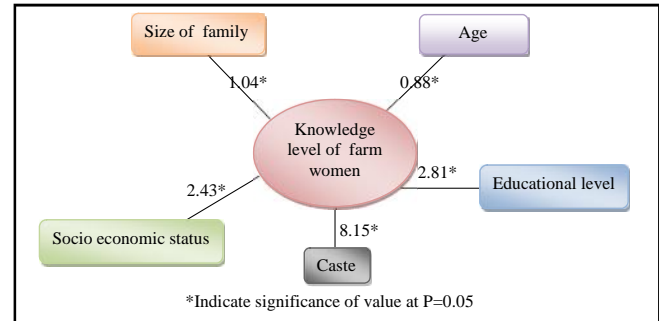
Table 6 : Association between knowledge level and size of family		
Knowledge level	Size of family	
	Up to 5 members	Above 5 members	Total
Low	4 (9.75)	9 (18.36)	13
Medium	37 (90.24)	40 (81.63)	77
	41	49	90

X^2= 1.04 non-significant at 0.05 level of probability

showed low knowledge, and 90.2 per cent showed medium knowledge. From the large family, 18.3 per cent had low knowledge while 81.6 per cent showed medium knowledge.

The Chi-square value was found to be 1.04 which is non-significant at 0.05 level of probability. Thus, there was no association between knowledge and size of family.

It can, therefore, be said that age, educational level, socio-economic status, size of family and caste of the respondents were non-significantly associated with their knowledge level (Fig. 2).

Fig. 2: Association of knowledge level with independent variables

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