

Association of Socio-Economic Characteristics of Rural Women with their Knowledge of Household Kitchen Appliances

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Introduction

Women in rural India are faced with drudgery during food preparation. Time and energy saving household kitchen appliances can help them to do their household work in no time and save both time and energy. (Ogwu, Taiwo and Ajibola, 2001). A study was conducted in two villages, Achitpur and Chota Mirzapur Khurd of Jamalpur Block in Mirzapur District with the objectives of finding the extent of knowledge among respondents about different time and energy saving kitchen appliances before and after training and the association/relationship of personal and socio-economic characteristics of respondents with their knowledge of time and energy saving household kitchen appliances.

Methodology

One hundred and twenty five (125) female respondents from the two villages were selected

randomly. Data were collected by using an interview schedule and observations. Quantitative analysis was undertaken using the SPSS computer package. . Various statistical tests such as chi-square test, t-test, F-test, one-way ANOVA and multivariate analysis are utilized to test for association between socio-economic and demographic and other important variables with the various level of confidence set as $p < 0.05$, 0.01 and 0.001 for all type of analysis.

It was found that the level of knowledge of time and energy saving kitchen appliances is influenced by socio-economic factors such as age, caste, literacy, family income and family size.

Table 1: Average (\pm SD) level of knowledge of the respondents about time & energy saving household appliances before and after the training.

Sl. No	Items	Before Training		After Training		Value of <i>t</i>	<i>df</i>	P	<i>r</i>
		Mean	SD	Mean	SD				
1..	Pressure Cooker	2.86	2.42	6.63	1.64	19.24	124	<0.001	*** 0.474
2.	Kerosene Stove	6.42	3.63	10.77	3.31	24.48	124	<0.001	*** 0.840

Table 1 describes the average level of knowledge of the respondents about time and energy saving household appliances before and after the training. On considering pressure cookers and kerosene stoves, it was found that the average level of knowledge was (2.86 ± 2.42) and (6.42 ± 6.63) before training whereas after providing the training, the average level of knowledge of the respondents were increased to

(6.63 ± 1.64) and (10.77 ± 3.31) about the pressure cookers and kerosene stoves respectively. The differences in average knowledge about the appliances pressure cookers and kerosene stoves before and after training are statistically highly significant. It shows that rural females were genuinely interested in getting knowledge about various time and energy saving household appliances.

Table 2: Association of level of knowledge of the respondents about pressure cookers before and after the training with their socio-economic characteristics.

Sl. No	Variables	Before Training		After Training		Value of <i>t</i>	<i>df</i>	P	<i>r</i>
		Mean	SD	Mean	SD				
A									
Age (years)									
1.	≤ 35	2.81	2.77	7.35	1.71	15.74	56	<0.001	0.62**
2.	36-45	3.17	2.05	6.53	1.30	9.80	35	<0.001	0.31
3.	> 46	2.62	2.18	5.47	1.11	8.45	31	<0.001	0.49**
B									
Caste									
1.	SC/ST	1.41	2.49	6.30	1.43	15.05	45	<0.001	0.48**
2.	OBC	3.57	1.95	6.69	1.67	13.41	68	<0.001	0.44**
3.	Others	4.70	1.64	7.70	1.95	5.38	9	<0.001	0.53
C									
Literacy									
1.	Illiterate	2.19	2.22	5.87	1.08	15.38	82	<0.001	0.28*
2.	Literate	4.19	2.28	8.14	1.51	11.49	41	<0.001	0.37*
D									
Family Annual Income (Rs.)									
1.	≤ 20000	2.12	2.40	6.23	1.49	14.33	65	<0.001	0.36**
2.	20000-40000	3.51	2.33	6.64	1.44	9.95	38	<0.001	0.54***
3.	> 40000	4.05	1.85	7.95	1.84	8.97	19	<0.001	0.45*
E									
Family Type									
1.	Nuclear	2.51	2.35	6.57	1.55	17.12	80	<0.001	0.46***
2.	Joint	3.54	2.44	6.75	1.81	9.69	43	<0.001	0.49**

On analyzing the facts, it is found that the average level of knowledge about pressure cookers was more (3.17 ± 2.05) in respondents of the 36-45 years-of-age group in comparison to the other two age groups of respondents while after intervention the average level of awareness was maximum (7.35 ± 1.71) in the younger age group of respondents. It was observed that the knowledge about pressure cookers acquired by respondents was in a decreasing pattern as age advanced. The differences in average level of knowledge before and after training are statistically highly significant of all age groups of respondents. It was also found that the level of knowledge of all age groups of subjects before training was positively and significantly correlated with the level of knowledge after providing training.

The educational status wise analysis about level of knowledge of pressure cookers shows that it was maximum (4.19 ± 2.28) and (8.14 ± 1.51) in literate respondents while it was less (2.19 ± 2.22) and (5.87 ± 1.08) in illiterate respondents during before and after training respectively. The

average increment in average level of knowledge is highly significant. It is also seen that the level of knowledge before training is positively and significantly correlated with the level of knowledge after training in both educational groups.

The average level of knowledge about pressure cookers before as well as after providing training was maximum in respondents of the higher income group and minimum in the lower economic group. The differences in average level of awareness before and after the intervention are statistically highly significant in respondents of all the economic groups. The level of knowledge before intervention is directly and significantly correlated with the level of knowledge of the subjects after intervention.

Type of family plays a significant role regarding awareness of pressure cookers because the average level of knowledge was more (3.54 ± 2.44) and (6.75 ± 1.81) in respondents from joint families than from respondents of nuclear families (2.51 ± 2.35) and (6.57 ± 1.55) during

before and after training respectively. The differences in average level of knowledge before and after training are highly significant for both family types. A positive and significant

correlation coefficient is observed between the levels of awareness of the respondents before and after the training in both nuclear and joint families.

Table 3: Association of level of knowledge of the respondents about kerosene stove before and after the training with their socio-economic characteristics.

Sl. No	Variables	Before Training		After Training		Value of <i>t</i>	<i>df</i>	P	<i>r</i>
		Mean	SD	Mean	SD				
A									
Age (years)									
1.	≤ 35	6.93	4.13	11.42	3.64	16.72	56	<0.001	0.87***
2.	36-45	6.39	3.56	10.97	2.82	15.32	35	<0.001	0.87***
3.	> 46	5.56	2.49	9.37	2.85	10.42	31	<0.001	0.71***
B									
Caste									
1.	SC/ST	5.59	3.01	9.93	2.64	19.54	45	<0.001	0.87***
2.	OBC	6.32	3.47	10.91	3.28	18.21	68	<0.001	0.81***
3.	Others	11.0	4.19	13.60	4.74	3.41	9	<0.001	0.86**
C									
Literacy									
1.	Illiterate	5.36	2.63	9.67	2.50	25.17	82	<0.001	0.82***
2.	Literate	8.52	4.36	12.93	3.67	10.77	41	<0.001	0.80***
D									
Family Annual Income (Rs.)									
1.	≤ 2000	5.42	2.67	10.03	2.77	22.25	65	<0.001	0.81***
2.	20000-40000	6.18	3.27	10.21	2.87	11.65	38	<0.001	0.76***
3.	> 40000	10.20	4.64	14.30	3.64	7.36	19	<0.001	0.85***
E									
Family Type									
1.	Nuclear	6.07	3.21	10.49	3.03	20.76	80	<0.001	0.81***
2.	Joint	7.07	4.26	11.27	3.75	13.16	43	<0.001	0.87***

Table 3 indicates that the average level of knowledge about kerosene stoves was found to be more in the younger age group of females than in the middle as well as above middle age group of females at the time of the survey and after providing training respectively. The average increase in level of knowledge from the initial stage to first contact after training is statistically highly significant in all age groups of respondents. The level of knowledge before training is directly and significantly correlated with the level of knowledge after providing training in the stated age groups of the respondents.

As with pressure cookers, the average level of knowledge about kerosene stoves was found to be more in literate respondents in comparison to illiterates at the initial stage as well as after training and differences in average knowledge scores before and after training were found to be

statistically highly significant in both literacy groups. It was also observed that both literate and illiterate respondents' level of knowledge before training positively and significantly correlated with the level of knowledge after training.

Caste wise analysis shows that respondents of other types of caste had a more average level of knowledge in comparison to respondents of OBC and SC/ST respectively before and after the training. In all these caste groups, the average increase in the level of awareness from beginning to after the time of training are highly significant. It was also noted that the level of knowledge before training of these caste group respondents is positively and significantly correlated with the level of knowledge after intervention.

The average level of knowledge about kerosene stoves was found to be maximum in

respondents of higher economic status while it was minimum in the lower economic group. The average level of knowledge showed an increasing trend as the economic status was increased in both the periods before and after training. The differences in the average level of knowledge before and after training are statistically highly significant in all the groups of economic status. In the respondents of all economic groups, the level of awareness before training is directly and significantly correlated with the level of knowledge after providing the training.

Those respondents who were from joint families had more average level of knowledge in comparison to those respondents who were from nuclear families in both situations i.e. before and after interventions. The increase in average level of knowledge of respondents from nuclear as well as joint families from the initial stage to after training are found to be significant at 0.001 level of significance. Like the other socio-economic variables, in both family types the correlation in level of awareness before and after training is highly significant.

Conclusion:

The results showed that the level of knowledge about time and energy saving household kitchen appliances is influenced by socio-economic factors such as age, caste, literacy, family income and family size. The level of knowledge about time and energy saving household kitchen appliances after training was higher among respondents in the age group ≤ 35 years. It was also higher among literate respondents than illiterate. More level of knowledge about time and energy saving household kitchen appliances is also acquired by respondents earning more than Rs. 40000. Joint families have more knowledge about pressure cooker and kerosene stove before and after the training than nuclear families.

Seven days' repeated demonstrations and trainings were given on the use of pressure cookers and kerosene stoves. The pressure cooker is used by very few rural women. So pressure cooking was not found very common because very few families possessed pressure cookers. At the time of training, rural women reported that pressure cooking saves their fuel

consumption and kerosene stove reduce the risk of respiratory ailments.

When the pressure cookers and kerosene stoves were taken back, the attitudes of the female respondents who used these appliances were studied. Many said that they could not purchase them because of money constraints. The knowledge level of the respondents about pressure cookers and kerosene stoves was very low before training hence their adoption has been affected. Respondents faced serious economic constraints followed by educational constraints. The high cost of appliances and lack of maintenance facilities were the constraints that affected adoption of pressure cookers and kerosene stoves. Time and energy saving household kitchen appliances affect the kitchen environment. Local manufacture of kitchen appliances will make them (and their spare parts) readily available at affordable rates. The government should encourage private entrepreneurs to set up industries for the local manufacture of time and energy saving household kitchen appliances by giving adequate incentives, tax relief, etc.

References:

Ogwu, Taiwo and Ajibola, "Assessment of Household Kitchen Equipment: Factors Influencing its Acquisition and its Impact on Food Consumption in Osun State of Nigeria", *Technovation*, Volume 21, Issue 9, September 2001, Pages 613-621.