

**RESEARCH ARTICLE :**

Role of skill development and knowledge enrichment in the adoption of energy conservation practices

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SUMMARY : The present research on role of skill development and knowledge enrichment in the adoption of energy conservation practices was conducted in Hoshiarpur district of Punjab state. Fifty rural women were selected randomly from two villages. The data were collected by using structured interview schedule both before and after imparting knowledge and skill. Knowledge and skill was imparted through lectures and participatory demonstrations. Mostly respondents were found in medium age category, matric passed, agricultural background and medium income group. Mostly respondents adopted human energy conservation practices and lesser change in developing habits for judicious use of electricity was found among family members. Lack of interest was the main issue among respondents for non-adoption of heat energy conservation practices.

KEY WORDS :Adoption,
Knowledge,
Constraints, Energy
conservation

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BACKGROUND AND OBJECTIVES

Everyone has twenty four hours a day to use in some way. Time is one resource we all share alike and is not possible to regain the wasted time. Similarly, energy is a basic requirement of men for maintenance of life, growth and physical output. Energy management is more difficult and complex than time management because we never know how much energy can be counted on to carry them out (Oberoi and Sidhu, 2006). The amount of energy that each person has for work and other activities depends on physical heritage, mental and physical health.

Sometimes, requirement of energy is too high for completion of work, then at that time some changes/modification are required in work methods to ensure the attainment of all family goals satisfactorily without any feeling of fatigue. Fatigue or tiredness from physical work lowers one's capacity to perform subsequent work. Hence, it is important to plan the use of time as well as energy in such a way so as to avoid meaningless wastage (Bakhshi, 1998). In this direction, mechanization of home is one of the most significant developments. Manufacturers of household equipments are constantly improving their products making them easier

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to operate and greatly reduce the homemaker's expenditure of time and energy. In the fast changing days of modern life, the responsibilities of homemaker are increased. She is left with less time to perform her household work which has been made possible by the availability of several household equipments and appliances in the market. But due to lack of knowledge and awareness about energy conservation, rural families adopt conventional methods and equipments in performing household tasks. In this regard, homemaker should be well aware about the products available in the market and should also have knowledge about the process of work, use of equipment and energy saving methods. Besides this, she should have confidence while doing the work and also have positive attitude towards work creates interest and reduces stress during work.

Change in awareness level is possible by educating and imparting skills for better outcome. Keeping all these points in view, the present study on adoption of energy conservation practices was undertaken.

RESOURCES AND METHODS

A sample of 50 rural home makers who actively perform household tasks in the age group of 25-45 years were selected from two villages of Mahilpur block of Hoshiarpur district. A structured schedule was administered to test their knowledge and skill about the use of energy before providing knowledge to them. The subjects were imparted knowledge and awareness by way of counseling on energy conservation methods. Awareness for proper use of energy at household level was provided through lectures and participatory demonstrations in five sessions on different days. After counseling, change in knowledge and adoption of energy conservation methods during performance of household activities were observed and reason for non adoption of energy conservation methods were also assessed. Level of adoption was ascertained statistically after three months of intervention. The data were analyzed and tabulated in percentages.

OBSERVATIONS AND ANALYSIS

The results obtained from the present study as well as discussions have been summarised under following heads:

Socio-economic profile of rural women :

The Table 1 regarding socio-economic profile of rural women shows that 78 per cent respondents that is highest sampled belonged to 35 years and above followed by 22.0 per cent belonged to 25-35 years age group. As regards to educational level of rural women, 52.0 per cent women were educated upto matriculate level followed by both primary and secondary level education of 18.0 per cent respondents. It is observed that only 4.0 per cent respondents had education upto post graduate level. It is also evident from table that majority of respondents (72.0%) belonged to agricultural family followed by 14.0 per cent in both service and business professions. It is also clear from table that 60.0 per cent respondents had medium level of income while 26.0 respondents had high level of income that is more than 2.5 lakh.

Table 1 : Socio-economic profile of rural women		(n=50)
Particulars	Frequency	Per cent
Age (Years)		
25-35	11	22.0
35-45	39	78.0
Education		
Primary	9	18.0
Matriculate	26	52.0
Senior Secondary	9	18.0
Graduate	4	8.0
Post Graduate	2	4.0
Occupation		
Agriculture	36	72.0
Service	7	14.0
Business	7	14.0
Annual income		
Low (\leq 1 lakh)	7	14.0
Medium (1-2.5 lakh)	30	60.0
High (\geq 2.5 lakh)	13	26.0

After imparting skill and knowledge :

The data presented in Table 2 show awareness of respondents in different energy conservation practices after imparting skill and knowledge. It is clear from table in relation to human energy conservation practices that majority of respondents were aware about the practices of planning light and heavy activities, inserting rest pauses in between heavy activities and also about the dovetail tasks. The results showed more adoption of these practices was because of these practices can be easily

accepted and also meaningful to the person thus saving lot of human energy. The findings are in line with the findings obtained by Pant and Dhanda (2012) that use of appropriate technology saves human energy and time thus saved energy and time could be utilized for other family welfare activities.

The results also indicated change in awareness and adoption level about heat energy conservation practices that cent per cent respondents adopted the practice of lowering flame once builds in pressure cooker but before imparting knowledge, lesser number of respondents (8%) were using this practice. Majority of respondents (96%) were get aware about cooking with covered lid only due to the reason that they were imparted knowledge about the importance of nutrients available in the food. Pandey *et al.* (2012) also found in their study that training programmes for imparting knowledge and skill was significant intervention to women regarding all aspects.

According to Table 2, the results also showed that majority of respondents (86%) adopted the practice of using only CFL/florescent lights in the house followed by 78.0 per cent respondents followed proper instructions for proper use of refrigerator.

It is also clear from table that there was no change in the use of other electrical conservation practices by the respondents. This was because of the reason that they had not purchased any new equipment during the

period of study.

Reasons for non adoption of energy conservation practices :

Table 3 shows that rural women were least interested in applying human energy conservation practices during the performance of home related activities. About 14.0 per cent women were not applied rest pauses in between heavy activities thus resulting fatigue to body during performance of household chores.

About non adoption of heat energy conservation practices, it is seen clear from table that 19.0 and 8.0 per cent of respondents did not choose utensils as per design of stove due to lack of interest and lack of money. About 18.0 per cent of respondents were least interested to repair stove regularly but in case of 10.0 per cent respondents, stove was not regularly repaired due to lack of money.

Table 3 further shows that 59.0 per cent of respondents did not develop habits for judicious use of electricity among family members. This might be because of lack of interest of respondents and also family members towards judicious use of electricity. Even 20.0 per cent respondents did not adopt to follow proper instructions for proper use of refrigerator due to lack of interest in saving the electricity. This might be due to habitualness of women and their family members of not

Table 2 : Per cent distribution of respondents after imparting skill and knowledge		(n = 50)
Energy conservation practices	Routine experience	After imparting skill and knowledge
Human energy conservation practices		
Dovetail tasks	30	80
Plant light and heavy activities alternatively	10	90
Insert rest pauses in between heavy activities	12	86
Heat energy conservation practices		
Choose bottom of utensils as per design of stove	60	72
Use of evenly heat distributing utensils for cooking	70	82
Do cooking with covered lid only	50	96
Lower flame once builds in pressure cooker	8	100
Repair stove regularly for efficient flame and high calorific value	18	72
Electrical conservation practices		
Use only ISI marked efficient equipment*	24	24
Select equipments as per use and scale of the family	30	30
Use only CFL/Florescent lights in the house	14	86
Follow proper instructions for proper use of refrigerator	10	78
Develop habits for judicious use of electricity among family members	26	38

*Chance for purchasing new equipment did not happen during period of study

Table 3 : Reasons for non-adoption of energy conservation practices by farm women (%age)

Energy conservation practices	Lack of interest	Lack of conviction	Lack of money
Human energy conservation practices			
Dovetail tasks	17	3	--
Plant light and heavy activities alternatively	8	2	--
Insert rest pauses in between heavy activities	14	--	--
Heat energy conservation practices			
Choose bottom of utensils as per design of stove	19	1	8
Use of evenly heat distributing utensils for cooking	8	2	8
Do cooking with covered lid only	4	-	-
Lower flame once builds in pressure cooker	-	-	-
Repair stove regularly for efficient flame and high calorific value	18	-	10
Electrical conservation practices			
Use only CFL/Florescent lights in the house	7	1	6
Follow proper instructions for proper use of refrigerator	20	2	-
Develop habits for judicious use of electricity among family members	59	3	-

following instructions.

Conclusion :

From above discussion, it can be concluded that majority of respondents adopted human energy conservation practices because these practices were directly related to their body. Cent per cent respondents also accepted to conserve heat energy in terms of lowering flame once builds in pressure cooker because it was easy task for them to do. Regarding non adoption of energy conservation practices, it was seen that they were not adopted any conservation practices only due to lack of interest. Lack of conviction was not major issue for non adoption of any conservation practices. Hence, media and other extension agencies should play pivotal role to aware and arouse interest among families about conservation of energy (Human and non-human) because

lack of awareness is the main cause for non adoption of energy conservation in rural homes.

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