Knowledge of rural homemakers regarding improved kitchen equipments

Promila Kanwar, Neetu Sharma and Anju Kapoor
Department of Home Science Extension Education, College of Home Science
CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur –176 062, India.

Abstract

The present investigation was carried out in village Padhiarkhar of district Kangra, Himachal Pradesh with a view to study the knowledge of rural homemakers regarding improved kitchen equipments. The data were collected with pre-tested interview schedule which was comprised of knowledge statements with respect to seven selected improved kitchen equipments namely pressure cooker, cooking gas, mixer and grinder, electric churner, solar cooker, milk boiler and sprouter. The results revealed that respondents were aware of most of the selected equipments but the possession status was found to be low for solar cooker and sprouter. As far as knowledge status is concerned a major fraction of rural women possessed knowledge regarding the advantages of most of the equipments but they fell short of knowledge with respect to the precautions to be taken while using any particular equipment.

Key words: Knowledge, improved equipments, kitchen, homemaker.

Introduction

The homemaker is a predominant figure in the home. Her work demands a high degree of physical efforts leading to drudgery and fatigue. Women in Indian villages shoulder a large part of the agricultural labour and household drudgeries. Appropriate use of science and technology can help them welcome change in their life pattern (Santhi *et al.* 2005). Technology is the key to development and to raise the living standards of the rural people.

Despite the development of various improved household tools and equipments, several rural as well as urban homemakers use the traditional implements leading to fatigue. This is due to perhaps lack of awareness, proper education, knowledge and inadequate training (Kumari and Sinha, 1995). If the homemaker has to perform the activities in the home satisfactorily without any strain on her, she must manage her time and energy efficiently and use of improved time and energy saving household tools is one of the ways to manage these two important resources. Thus, women by all means can be very effective agents of change for a better home, for a better society and for a better economy (Solanki, 1988). It is important, therefore, to develop and put to proper use their potentiality by improving their working environments, their skills and knowledge. Keeping this in mind an attempt has been made to assess the knowledge level of homemakers about selected improved kitchen equipments.

Material and Methods

The present study was conducted in village Padhiarkhar of district Kangra in Himachal Pradesh, which has been adopted under All India Coordinated Research Project (Home Science) ICAR. A sample of fifty rural women was randomly drawn from the selected area. The data pertinent to the study objectives were collected with the help of pre-tested interview schedule. The interview schedule comprised of the statements indicating the use, functions, importance and precautions of seven selected equipments namely pressure cooker, cooking gas stove, mixer and grinder, electric churner, solar cooker, milk boiler and sprouter. Frequencies and percentages were calculated to interpret the results.

Results and Discussion

Personal profile of respondents

Analysis of data presented in table 1 shows that more than fifty per cent of the rural homemakers were young in age, followed by 32.00 per cent who were middle aged. Just above one-third of the respondents hail from backward caste while approximately one- fourth of them either belonged to schedule caste or schedule tribe categories or upper middle class. With regard to their marital status, it was observed that majority of them (82.00%) were married. Almost an equal percentage of respondents were found to be illiterate (30.00%), educated up to high (26.00%) or middle (20.00%) school whereas a meager percentage of them was graduate or above. As far as occupation of respondents is concerned, fifty

per cent of them were non-wage earners followed by 32.00 per cent who belonged to farming community and none of them possessed any enterprise. As regards family occupation, a major fraction of respondent's families were either involved in farming (48.00%) or had business or service (46.00%).

Table1. Personal profile of the respondents

N=50

Characteristics	Categories	Frequency	% age
Age	Young	26	52.00
	Middle	16	32.00
	Old	08	16.00
Marital Status	Married	41	82.00
	Unmarried	01	02.00
	Widow	08	16.00
Caste hierarchy	SC/ST	12	24.00
	Backward	18	36.00
	Upper-middle	13	26.00
	Upper caste	07	14.00
Occupation of respondent	Non wage earner	25	50.00
	Farm labour		
	Farming	05	10.00
	Service	16	32.00
	Enterprise	04	08.00
		0	0
Respondent Education	Illiterate	15	30.00
	Can read and write	03	06.00
	Primary School	04	08.00
	Middle School	10	20.00
	High School	13	26.00
	Post matric diploma	04	08.00
	Graduate and above	01	02.00
Family occupation	Farming	24	48.00
	Business /Service	23	46.00
	Artisan/ Craftsman	01	02.00
	Farm labour	02	04.00

Awareness and possession of selected improved kitchen equipments

The data pertaining to awareness and possession of improved kitchen equipments have been presented in Table 2. With regard to awareness regarding selected equipments namely pressure cooker, cooking gas stove, mixer and grinder, electric churner, solar cooker, milk boiler and sprouter, it was found that majority of the respondents were aware of cooking gas stove (98.00%), pressure cooker (100.00%), mixer-grinder (90.00%) and churner (82.00%). The percentage of homemakers having awareness about solar cooker and milk boiler is not up to that extent but is quite appreciable i.e. 58.00 per cent and 46.00 per cent, respectively. The results led to the conclusion that with the advancement in information technology and extension efforts of the officials, the improved technologies might have invaded into the villages of Himachal Pradesh. Among all the selected equipments, sprouter is the only item which was recognized by just 10.00 per cent of the respondents.

Table 2. Distribution of respondents according to their awareness and possession level with respect to selected improved kitchen equipments

N=50

Sr. No.	Improved equipments	Awareness		Possession	
		Yes (%)	No (%)	Yes (%)	No (%)
1	Pressure cooker	50 (100.00)	0 (0.00)	48 (96.00)	02 (4.00)
2	Cooking gas stove	49 (98.00)	01 (2.00)	40 (80.00)	10 (20.00)
3	Mixer and grinder	45 (90.00)	05 (10.00)	28 (56.00)	22 (44.00)
4	Electric churner	41 (82.00)	09 (18.00)	28 (56.00)	22 (44.00)
5	Solar cooker	29 (58.00)	21 (42.00)	02 (4.00)	48 (96.00)
6	Milk boiler	23 (46.00)	27 (54.00)	08 (16.00)	42 (84.00)
7	Sprouter	5 (10.00)	45 (90.00)	02 (4.00)	48 (96.00)

Data regarding possession of equipments by respondents revealed (Table 2) that majority of them i.e. 96.00 per cent possessed pressure cooker, followed by 80.00 per cent who owned cooking gas. Possession of the equipments by such a good percentage of respondents indicates that these equipments are famous among the rural people. An equal percentage of respondents i.e. 56.00 per cent each had possession of mixer grinder and churner. A meager percentage of respondents possessed milk boiler (16.00%), sprouter (4.00%) and solar cooker (4.00%). Lack of change proneness on the part of respondents can be an important factor in low possession of the above stated equipments. Yadav and Sharma (1989) in their studies also reported habitual nature of respondents to use traditional ways of cooking as a serious constraint in adoption of solar cooker. The possession status of selected equipments by the respondents led to the conclusion that items of daily use like cooking gas stove, pressure cooker, mixer grinder, milk boiler and churner were possessed by majority of the respondents.

Table 3 presents information regarding the extent of use of selected equipments and it was studied only for those respondents who possessed these equipments. Results revealed that only 6.25

per cent respondents were either not using pressure cooker or using it occasionally. Rest 93.75 per cent was using it regularly.

Table 3. Use extent pattern of selected improved kitchen equipments by the respondents

Improved equipments	Use Extent		
	Daily/ Regularly	Occasionally /Rarely	Never
Pressure cooker (N=48)*	45 (93.75)	1 (2.08)	2 (4.17)
Cooking gas stove (N=40)	28 (70.00)	12 (30.00)	0
Mixer and grinder (N=28)	06 (21.43)	18 (64.28)	4 (14.29)
Electric Churner (N=28)	11 (39.29)	12 (42.86)	5 (17.85)
Solar cooker (N=2)	0	1 (50.00)	1 (50.00)
Milk boiler (N=8)	05 (62.50)	3 (37.50)	0
Sprouter (N=2)	0	1 (50.00)	1 (50.00)

* N indicates the frequency of respondents who possess the selected equipments

With regard to use-extent pattern of cooking gas stove, it was observed that majority of the respondents were using it regularly (70.00%). Thirty per cent respondents were using it occasionally, which may be due to the fact that in villages fuel wood is available in abundance. With a view to utilize such local resources and save money the rural women carry major cooking operations on chullah while for other petty cooking jobs they use cooking gas stove.

It was further noticed that only 21.43 per cent of the women were using the mixer-grinder regularly followed by 64.28 per cent who were using it sometimes. Nearly 15.00 per cent of the respondents had never used the equipment. It may be because of the cooking style followed by the ladies in the selected study area. Usually dried spices are used in Himachali cooking which reduces the chopping/ grinding operations. Secondly they are habitual of working on traditional method of grinding (sil-batta/kundi-sotta) so instead of assembling and disbanding different parts of the equipment every time, they might prefer to use their own traditional method.

It was further observed that approximately eighty per cent of the homemakers comprising an equal percentage were either using electric-churner daily or rarely. This may be due to variation in their requirements as some people daily churn the whey or extract butter while some do it occasionally.

Scrutiny of table 3 further revealed that as regards milk boiler, none of the persons who possessed the equipment kept it unused i.e. 62.50 per cent used it regularly and 37.50 per cent used it occasionally. On the other hand, none of the homemakers was found to use solar cooker daily that might be due to low awareness as well as low possession status of the equipment (only two respondents possessed it). It is clearly visible from the table that out of the two owners of solar cooker, one has never used it , may be because she had purchased out of curiosity but never tried to cook the food in it . On the other hand the second owner who is using it occasionally, might not be feeling comfortable in handling due to difficulty in orienting the solar cooker according to direction of sunlight and limitation of preparing some specific foods etc. Kaushik and Verma (1995) and Dhakar *et al.* (1998) in their studies also reported similar reasons for non adoption of solar cooker viz. require more time for food preparation, unaware of its advantages, difficulty in orienting the solar cooker according to direction of sunlight, all foods can't be prepared etc.

With regard to use of sprouter, alike solar cooker out of only two owners one is using it rarely while the other one had never used it. It may be because of the reason that in villages of district Kangra, people sprout the pulses especially black gram to distribute it to the guests during special occasions like birthday, birth of a baby etc. As a large amount of sprouts are to be distributed, thus a sprouter might not serve the purpose because of its small capacity of holding pulses. Further being a common practice they might not consider it to be a drudgery prone activity.

Knowledge status of selected improved kitchen equipments

The knowledge status of any individual can only be determined by considering his awareness level. Thus in Table 4 the knowledge status of only those respondents having awareness regarding the selected equipments has been presented.

It was assessed on general information and utility of the equipment in terms of time and energy /fuel conservation. A critical look at the data in table reveals that 86.00 per cent of the respondents were aware of benefits of pressure

cooker viz. it saves labour, time, energy and mo ıey while 78.00 per cent had knowledge about the precautions that the rubber gasket should be of proper size to check leakage of pressure. Data further reveals that only 30.00 per cent of the respondents knew that pressure cooker could reduce total cooking time to one-third and fuel requirement to half. It is quite interesting to note that despite the fact that almost 94.00 per cent of the respondents are using it daily but still they cannot estimate the exact quantity / amount of time and energy which can be saved by using pressure cooker.

With regard to knowledge regarding cooking gas stove, ninety per cent of the homemakers were aware of the fact that it can be used instantaneously. Eighty five per cent of them knew that its use leads to smoke free kitchen and it is a drudgery reducing equipment as it spares the rural women from the burden of fuel wood collection. Little more than three- fourth per cent (77.55%) of respondents had knowledge regarding safety precautions of cooking gas stove i.e. the regulator of the cylinder should be switched off when not in use.

Table 4. Distribution of respondents on the basis of their knowledge regarding selected improved kitchen equipments

Improved equipments	Knowledge statements	Yes (%)	No (%)
Pressure cooker (N=50)*	- It saves labour, time, energy and money	43(86.00)	7 (14.00)
	-Rubber gasket should be of proper size	39(78.00)	11 (22.00)
	-Fuel requirement is reduced to half	16(32.00)	34(68.00)
	-It reduces the total cooking time to one third	15 (30.00)	35(70.00)
Cooking gas stove (N=49)	-Cooking gas stove can be used instantaneously as it does not require any preparation	44 (89.80)	5(10.20)
	-Use of cooking gas does not release smoke. Thus keeps kitchen and utensil clean	42(85.71)	7 (14.29)
	- Regulator should be switched off when not in use	38 (77.55)	11(22.45)
	-It does not involve drudgery of fuel wood collection and fuel management	42 (85.71)	7 (14.29)
Mixer grinder (N=45)	-It can perform numerous functions like mixing, grinding and churning	35 (77.78)	10 (22.22)
	- It produces fine results	36(80.00)	9 (20.00)
	-While using, jars should not be filled more than half	10 (22.22)	35(77.78)
	-Motor should be switched off after every five seconds	05(11.11)	40(88.89)
Electric Churner (N=41)	-While working with electric churner, constant attention is not required	32 (78.05)	09(21.95)
	-It saves about 75 per cent of the time	30 (73.17)	11(26.83)
	-Motor of churner should not be immersed in water	18 (43.90)	23(56.10)
Solar cooker (N=29)	- Solar cooker saves fuel and money because the food is cooked by using solar energy	04 (13.79)	25(86.21)
	-It is convenient and labour saving	03(10.34)	26(89.66)
	-Direction of cooker should be changed according to sunlight	02(6.90)	27(75.86)
	-There is no botheration of smoke or dust	07(24.14)	22(75.86)
Milk boiler ((N=23)	-It checks overflow of milk	10 (43.38)	13(56.52)
	-Fuel consumption is reduced to half	02(8.70)	21(91.30)
	-It is essential to pour water in the inner chamber of boiler	09(39.13)	14(60.87)
Sprouter (N=5)	-It takes less time for sprouting	0 (0.00)	05(100.00)
	-It is more hygienic	01(20.00)	04(80.00)
	-It is necessary to soak the pulses in water over night before keeping in container	01(20.00)	04(80.00)
	-Pulses should not be packed tightly in sprouter	0 (0.00)	05 (100.00)
	-Water is filled in lower container and pulses to be sprouted are kept in other two containers	0 (0.00)	05 (100.00)

* N indicates frequency of respondents having awareness regarding selected kitchen equipments

As regards knowledge about mixer - grinder, 77.78 per cent of the respondents possessed knowledge regarding numerous functions of the equipment. It is quite interesting to observe that the frequency of respondents having knowledge about functions of the equipment is more than the frequency of owners. This is quite evident from the data in Table 4 which indicate that among total fifty respondents, 45 had awareness regarding the equipment, 28 possessed it and 35 knew about functions of the equipment. Thus it can be said that knowledge regarding any innovation is influenced by number of factors like exposure to media, services provided by extension officials, contact with other information sources like friends, neighbours etc. It was further observed that majority of the respondents did not have any information regarding the proper use of mixer- grinder as only 22.22 per cent of the women knew that the jars should not be filled more than half to avoid spilling of material and only 11.11 per cent responded to switch off the motor after every five seconds to maintain the life of the equipment.

As far as electric -churner is concerned, nearly eighty per cent of the respondents agreed to the statement that handling of manual churner requires more attention in comparison to electric-churner. About three -fourth of them were aware of its time saving quality/ characteristic. Knowledge regarding precautions to be taken while using churner i.e. not to immerse the motor in water was possessed by just forty five per cent of rural women. It calls for action by the extension persons to provide proper training and knowledge to the farm women as it is a serious lapse.

Knowledge status of respondents with respect to solar cooker was found to be low as more than eighty per cent of them did not know that food is cooked by using solar energy which is available free of cost and in abundance. A scanty proportion of respondents i.e. 6.90 per cent were aware about the proper method of using it.

Data in table 4 further portray that nearly forty five per cent of the homemakers knew that milk boiler checks overflow of milk and almost similar percentage had knowledge of pouring water in the inner chamber of boiler. The percentage of respondents having knowledge about reduction in fuel consumption to half was very meager (8.70%) which might be related to the low possession status of the equipment.

As regards sprouter it was found that the knowledge status of the respondents was almost negligible and this may be attributed to non-possession of this equipment by majority of them.

Thus it can be summarized from the results in Table 4 that the major proportion of rural women possessed knowledge regarding the advantages of most of the equipments but they fell short of knowledge with respect to precautions to be taken while using any particular equipment, which is one of the very important considerations before working on any device.

Conclusion

It can be summarized from the present investigation that the rural women were aware of most of the selected equipments except sprouter but the possession status was found to be low for the equipment demanding higher initial expenditure (e.g. solar cooker) or less utility (e.g. sprouter). Possession of cooking gas stove and pressure cooker by majority of the respondents might be due to the usefulness of the equipments as perceived by them. The extent of using the equipments was not very satisfactory except for pressure cooker and cooking gas stove because if someone owns any equipment, its use is justified only if it is operated regularly. Regarding knowledge status, it can be interpreted that the sampled homemakers had knowledge regarding the uses and functions of most of the equipments but they lack information regarding precautions while handling them. Thus, it is suggested that adequate and attractive subsidies on energy conservation equipments like solar cooker and pressure cooker should be given to all irrespective of income and class.

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