

A Study on Fuel Use Pattern and Problems Encountered By Rural Women of Dharwad Taluk*

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Abstract: The investigation on rural women of Dharwad Taluka was conducted to know the fuel use pattern and problems encountered while using and getting the fuel. The study revealed that a large majority of the respondents were using agricultural waste as fuel for cooking and water heating purposes. Smoke and Soot deposition on utensils were the main problems expressed by majority of respondents.

Introduction

Hundreds of millions of people in developing countries such as India do light their home with oil lamps and cook by burning firewood, cowdung cakes and dried twigs. These people hardly use any petroleum products. Only few studies are available on fuel use pattern. The results of such studies would help to the policy makers, environmental scientists and extension agencies. Thus, the present study was designed with the following objectives.

- 1) To study the type of fuel used for cooking and water heating purposes.
- 2) To study the problems encountered regarding the availability and use of fuel.

Some reports revealed that fire wood was the major fuel used by majority of the respondents (Kumar and Sahay, 1984 and Kotamraju, 1988). On the other hand many others reported that majority of rural people were using agricultural waste, firewood and dung cake as fuel for cooking and water heating purposes (Sen *et al.*, 1990 and Neeraja and Ramaiah, 1991).

Material and Methods

The present investigation was carried out in Dharwad taluka of Dharwad district in the year 1993. The Dharwad taluka comprises of 4 ranges with 30 circles. Two circles from each range were selected randomly to represent the taluka. The villages in each of the circles were listed alphabetically. From the list so prepared one village from each circle were selected. Systematic random sampling procedure was followed for the selection of villages and respondents. After preparing a list of households from selected villages by following simple random sampling procedure, a sample of 20 respondents from each village were selected. The data were collected by personal interviews with the help of schedule. Finally 160 respondents were interviewed which formed the sample of the study. And the data were expressed in frequencies and percentages.

Results and Discussion

The data in table 1 indicated that a large majority of the respondents were using agricultural waste as fuel for both cooking and water heating purposes. Easy availability at cheaper cost or free of cost might be the reason for use of agricultural wastes by the highest percentage of rural people than firewood and

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twigs and branches which are to be purchased in most cases. This finding is similar to the earlier findings of Sen *et al.* (1990) and Neeraja and Ramaiah (1991) who reported that majority of rural people were using agricultural waste as fuel.

With respect to non-conventional fuel, kerosene was the major fuel used by the highest percentage of the respondents. Mainly it is due to the reason that it requires less skill and less initial and maintenance cost of kerosene as compared to other non-conventional fuel.

Table 1. Type of fuels used by the respondents for cooking and water heating(n=160)

Type of fuel	Respondents			
	No.	%	No.	%
Conventional				
Agricultural waste	142	88.75	135	84.38
Fire woods	122	76.25	81	50.63
Wood wastes and Twig branches	118	73.75	77	48.13
Dung cake	110	68.75	85	53.13
Char coal (Iddilu)	42	26.25	--	--
Non conventional				
Kerosene	56	35.00	13	8.13
Bio-gas	36	22.50	02	1.25
Electricity	01	0.63	03	1.88
L.P. Gas	06	3.75	01	0.63

The respondents were asked to state their problems regarding different types of fuel using and getting. The responses of the respondents with regards to problems are presented in table-2.

Regarding the constraints faced by respondents it could be noted that among the conventional fuel problems, the major problem faced by 60.42 per cent of respondents was the smoke and soot deposition on utensils. Use of conventional fuels, traditional chulha and the absence of chimney to let out smoke in traditional chulha resulted in the deposition of soot on utensils and hence 60.42 per cent of the respondents expressed the above problems.

The data indicated that majority of respondents who were using kerosene as fuel complained that 'ration shops do not supply required quantity of kerosene'. Limited quantity of kerosene provided at fair price in ration shops and demand of kerosene for cooking and

lightening might be the possible reason for the above findings.

With regard to L.P. Gas, since the carrying of cylinder in public vehicle is not allowed, majority of the respondents reported the problem of transportation of cylinder from town to their village. Large majority of respondents who were using Biogas as fuel, expressed the problem of insufficient gas production during winter.

Lack of knowledge about yeast that should be added to the Bio-gas plant during winter to accelerate the fermentation process to produce gas and lack of use of fuel/energy saving devices like pressure cooker which prepare more than one item at a item might be the possible reasons for existence of the above problem. The results of the study was in line with the findings of the studies of Singh (1988) and Khalache (1988), who reported that insufficient gas production as the major problem faced by majority of the respondents.

Table 2. Problems expressed by the respondents regarding use of different type of fuel

Problems	Respondents	
	No.	%
Conventional fuel		n=144
Smoke and soot deposit	87	60.42
Strains eyes and inhale of smoke	58	40.28
Cooking takes more time	54	37.50
Difficulty to light	36	25.00
Spoils the look of kitchen wall and roofs	28	19.44
Possibilities of injuries while gathering in fields	22	15.28
Storage problem during rainy season	11	7.64
Kerosene		n=67
Fair price shops do not supply required quantity	30	44.68
Not allowed to carry in public transport if purchased in towns	22	32.84
Costs more in open market	14	20.90
L.P. Gas		n=10
Problem of transportation of cylinder from towns	07	70.00
Needs more care in handling	02	20.00
Biogas		n=36
Insufficient gas production during winter	28	77.78
Burners do not work properly	20	55.56
Rats damage rubber pipes	19	52.78
Difficulty to get services for repairs	16	44.44
Water scarcity for preparation of slurry during summer	08	22.22
Affects quality of food	03	08.33

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