Quality Of Life As Reflected By Fuel Type For Cooking In National Capital Region – A Study

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ABSTRACT:

In a developing country like India reach of safe fuel for cooking is a constant problem particularly for socio-economically weaker sections of society. Intensity of this problem is very high in rural areas in comparison to urban areas. This led to high dependency of rural households on unsafe fuel for cooking such as fuel wood, cow dung cake and coal. The responsibility of collecting fuel wood from village commons and nearby forest areas lies on women and children. This process takes a lot of their energy and time. The smoke from these unsafe fuels emit a lot of harmful gases such as Co_2, Co, So_2, hydrocarbon and solid particulate matter, which adversely affect the health of women causing many health problems like irritation in eyes, cataract, skin infections, upper respiratory infection, burns etc. This also led to atmospheric pollution and increase in green house gases. NCR lies at the core of India, where a majority of households except Delhi all other sub-regions use unsafe fuel for cooking both in rural and urban areas. Scheduled caste households are at great disadvantage (both in rural and urban areas) in comparison to non-scheduled households in terms of safe fuel for cooking. Availability, socio-economic conditions and urbanisation are major factors deciding the type of fuel used for cooking.

KEY-WORDS: Fuel for cooking, scheduled caste household, Women, NCR

1. INTRODUCTION:

The nature and efficiency of energy services available in a community is a good measure of the level of poverty. This is because the fulfilment of basic human needs – food, shelter, health care, education and livelihood – requires application of energy inputs. The poor use energy inefficiently, mainly because the efficiency of their technologies of energy consumption are abysmally low (Batliwala, 1995). The poor all over the world are forced by their socio-economic conditions to depend on biomass energy resources and cow dung cake to meet their survival needs. They are related to energy very closely not only as primary providers or sources of human energy for domestic needs but also as gatherers of energy sources such as biomass cooking fuels and as users of energy. A large section of rural women and children especially girls spend a huge amount of human labour and time on fuel wood gathering for cooking, which can be redirected to more productive or quality of life enhancing activities (Agawal,1987). This means higher cost of economic opportunity lost for women particularly from rural and disadvantaged sections of the society, besides health hazards due to some traditional type of fuels used for cooking (Agarwal, 1986).

Evidences from around the world indicate that firewood, cow dung cake and other unsafe fuels, release highly toxic emissions such as carbon monoxide, particulate matter and hydrocarbons. Furthermore, these fuels are used primarily in traditional open cook stoves with a fuel efficiency of just three to ten percent, in poorly ventilated one or two room households. Even where ventilation is relatively good, the sheer magnitudes of emissions are such that they still seriously impair health (Batliwala, 1995). The health hazards of dependence on unsafe cooking fuels are not only restricted to those arising from air pollution alone but occur in each part of the fuel cycle from production, collection, processing and actual cooking. Some of the potential health hazards in preparing cow dung cake are faecal/oral/enteric infections and skin infections. In charcoal production carbon monoxide or smoke poisoning, burns, trauma, reduced infant and child care, bites from venomous reptiles, insects, allergic reactions, fungus infections, severe fatigue, muscular pain, back pain and arthritis are some of the health hazards faced by rural people particularly women and female children. In the actual cooking stage, conjunctivitis, upper respiratory irritation/inflammation, acute respiratory infections, acute poisoning, chronic bronchitis, lung cancer, burns, cataract, arthritis, female sterility, poor reproductive outcome like low birth weight infants and burn in infants/toddlers/children etc are some of the potential health hazards of using unsafe cooking fuel (Siddiqui et al, 2005). Apart from the direct health effects of unsafe cooking fuels used, studies in developed countries indicate that it have indirect negative bearing on social, economic, political and health status of women and children as they are at higher risk of morbidity and mortality from infections and communicable diseases, and have higher maternal/female morbidity and mortality which also results into poor reproductive outcomes, including low birth weight infants with reduced chances of survival; and hence increased infant and child mortality(Chand , 1995) .

In the light of above discussion, it becomes imperative to study the type of fuel used for cooking. In this paper an attempt is made to understand the quality of life, particularly of the most disadvantaged section of our society in rural as well as urban areas, as women and children share the burden of gathering of fuel for cooking and cooking food. This also reflects the general economic condition of a household.

2. OBJECTIVES OF THE STUDY:

The main objectives of the study are

1. To fathom the rural-urban differences in terms of fuel for cooking.
2. To analyse the disparity between scheduled caste and non scheduled caste households in terms of fuel used for cooking.
3. To analyse the spatial patterns of fuel used for cooking.

3. METHODOLOGY:

The data is taken from secondary sources. The main source of data is census of India, 1991. A simple statistical technique such as percentage is used for easy grasping. The fuel used for cooking is classified into two categories, (1) Safe fuel- consists of fuels which need low inputs of human energy, have efficient technologies of energy use, have very low health hazards for the user and most environment friendly. Under this category electricity, cooking gas and biogas are placed. (2) Unsafe fuel for cooking consists of fuels which needs high

input of human labour/energy, have high levels of health risk for gatherer as well as user , are highly inefficient energy sources and polluting. Under this category cow dung cake, coal/coke/ lignite, charcoal, wood and others are placed.

4. RESULS AND DISCUSSION:

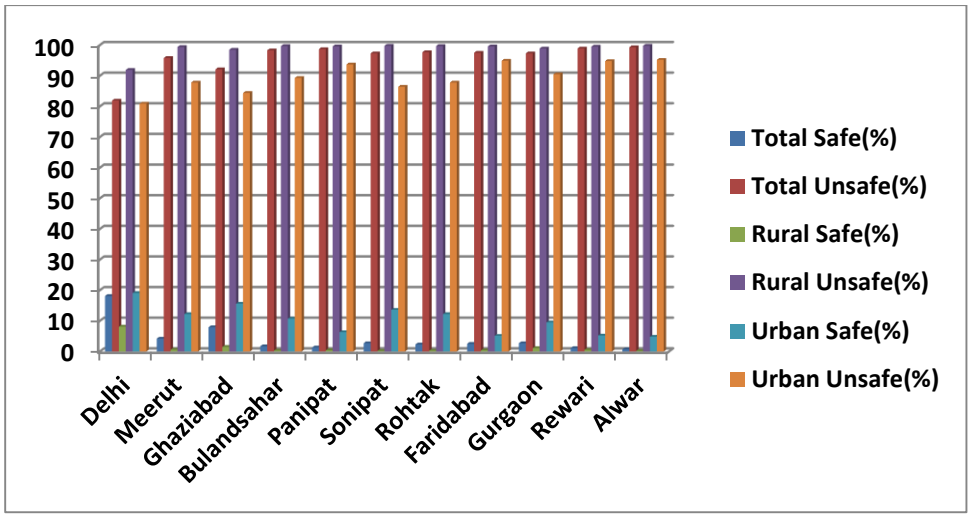
In respect of fuel for cooking in NCR, the range is from 4.9% to 47.3% of households using safe fuels. The highest proportion of households using safe fuel is in Delhi. This means more than half of the households in Delhi use unsafe fuel for cooking. In Delhi, predominant use of cooking gas means greater access, both physical and economic, to this type of fuel. In Bulandshahar households utilises lowest proportion of cooking gas. This is closely followed by Alwar and Rewari districts. In rest of all districts, households utilises less than 20% of cooking gas as a fuel for cooking except Faridabad.

In rural areas, it is well below 5% in all the districts except Delhi, where about one fifth of the rural households utilise cooking gas or electricity for cooking. Majority of rural households depend on either fuel wood or cow dung cake for cooking. In Haryana and Rajasthan sub-regions, majority of rural households utilises fuel wood followed by cow dung cake as a fuel for cooking. Reverse is true for Uttar Pradesh sub-region. In Delhi sub-region, kerosene followed by cow dung cake, cooking gas and fuel wood constitute more than 98% of total requirement in rural areas. In the urban areas of NCR, households are much better off in comparison to rural areas as in urban areas of Delhi, Rohtak and Gurgaon, more than 50% of households use safe fuels for cooking. There no clear-cut patterns of utilisation of cow dung cake, wood and kerosene in the urban areas of NCR.

Table-1: Distribution of Scheduled Caste Households by Fuel type for cooking

S.No	Distt / UT	Total		Rural		Urban	
		Safe(%)	Unsafe(%)	Safe(%)	Unsafe(%)	Safe(%)	Unsafe(%)
1.	Delhi	18.1	81.9	8.1	91.9	19.1	80.9
2.	Meerut	4.2	95.8	0.6	99.4	12.2	87.8
3.	Ghaziabad	7.9	92.1	1.5	98.5	15.6	84.4
4.	Bulandsahar	1.7	98.3	0.3	99.7	10.7	89.3
5.	Panipat	1.3	98.7	0.4	99.6	6.3	93.7
6.	Sonipat	2.7	97.3	0.2	99.8	13.6	86.4
7.	Rohtak	2.3	97.7	0.3	99.7	12.2	87.8
8.	Faridabad	2.5	97.5	0.4	99.6	5.1	94.9
9.	Gurgaon	2.7	97.3	1.1	98.9	9.5	90.5
10	Rewari	1.1	98.9	0.5	99.5	5.2	94.8
11.	Alwar	0.7	99.3	0.2	99.8	4.8	95.2

Source: Census of India, 1991, House-hold Table Rajasthan, Uttar-Pradesh and Delhi

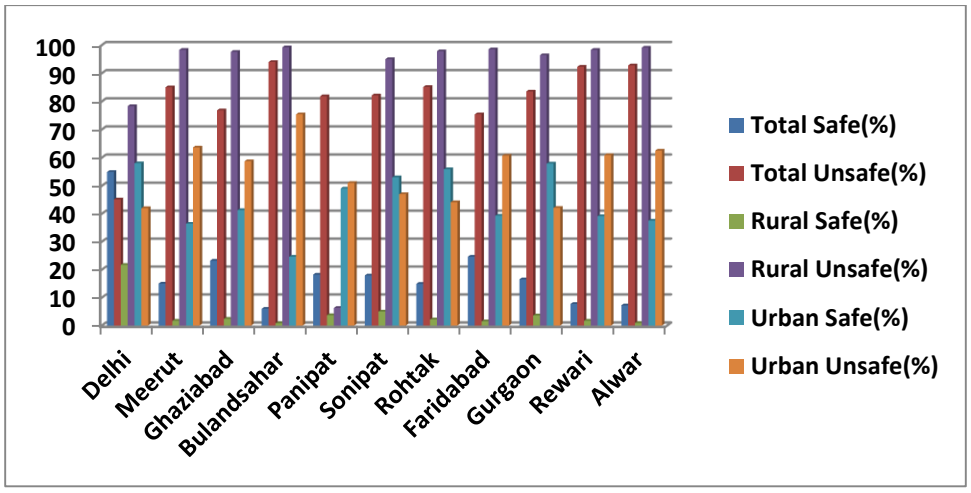


Rural-Urban differentials in use of safe and unsafe fuel for cooking indicate that majority of the households in urban areas use safe cooking fuels whereas a majority of households in rural areas use unsafe fuel for cooking. This can be also a factor for rural-urban differential in infant mortality, child mortality, maternal mortality and morbidity. This means rural people in general and rural females and children in particular are socially, economically and politically disadvantaged.

Table-2: Distribution of Non-scheduled Households by Fuel type for cooking

S.No	Distt / UT	Total		Rural		Urban	
		Safe(%)	Unsafe(%)	Safe(%)	Unsafe(%)	Safe(%)	Unsafe(%)
1.	Delhi	54.9	45.1	21.7	78.3	58.0	42.0
2.	Meerut	15.0	85.0	1.7	98.3	36.4	63.6
3.	Ghaziabad	23.2	76.8	2.4	97.6	41.3	58.7
4.	Bulandsahar	6.0	94.0	0.8	99.2	24.6	75.4
5.	Panipat	18.2	81.8	3.7	06.3	49.0	51.0
6.	Sonipat	17.9	82.1	5.0	95.0	53.0	47.0
7.	Rohtak	14.9	85.1	2.2	97.8	55.9	44.1
8.	Faridabad	24.6	75.4	1.5	98.5	39.3	60.7
9.	Gurgaon	16.5	83.5	3.6	96.4	57.9	42.1
10	Rewari	7.7	92.3	1.7	98.3	39.1	60.9
11.	Alwar	7.2	92.8	0.9	99.1	37.5	62.5

Source: Census of India, 1991, House-hold Table Rajasthan, Uttar-Pradesh and Delhi



In order to get a crystal clear picture of rural and urban areas, a comparative study of historically most disadvantaged social group and somewhat advantaged group is necessary. As a matter of fact, most of the scheduled caste households spend more time and energy in collection, preparation and cooking as compared to non-scheduled households in NCR, where the scheduled tribe households are negligible. In general, higher proportions of non-sc households use safe fuel for cooking in contrast to sc households. This is true for both rural as well as urban areas of NCR. Delhi has a higher proportion of sc households and non-sc households utilising safe fuel for cooking in both rural and urban areas. But within these two groups, higher proportions of urban households use safe fuel for cooking in comparison to rural areas.

In almost all districts, largest proportion of sc households uses unsafe fuel for cooking. Wood and cow dung cake is used in more than 80% of sc households in almost all districts except Delhi, where more than three fifth of households use kerosene. All the sub-regions of NCR, except Delhi only 5% of sc households use cooking gas. In rural areas, the situation of sc households is worst because more than 90% of them use unsafe fuels for cooking in all districts except Delhi. They either use fuel wood or cow dung cake except Delhi where they use kerosene, which is easily available and is cheap as compared to wood or cow dung cake in terms of economic opportunity cost.

In urban areas too, except Delhi, they either use wood or cow dung cake. In urban Delhi, kerosene is used in most of the households. In Uttar Pradesh sub-region, most of sc households use cow dung cakes both in rural and urban areas. In Haryana and Rajasthan sub-region, use of fuel wood is followed by cow dung cakes. Rural-urban comparison of sc households shows that although the situation in urban areas is better but it is far from satisfactory. For non-sc households highest proportion of households using safe cooking fuel is in Delhi (about 55%). The district Bulandsahar followed by Alwar and Rewari has lowest proportion (about 10%). In the category of safe fuel for cooking, majority of households use LPG. In rural areas, less than 5% of non scheduled households of all the districts of NCR use LPG except Delhi (about 22%). In urban areas, the situation of non-sc households is somewhat better as more than 50% of Delhi, Sonipat, Panipat, Rohtak and Gurgaon uses LPG. Except Bulandsahar (24.6%), more than one third non- scheduled households of rest of the districts use LPG. Here a clear-cut pattern emerges, with Delhi sub-region's non-sc urban households enjoying highest levels of quality of life followed by Haryana, Rajasthan and Uttar Pradesh sub-regions.

Rural-urban comparison for non-sc households indicate that more households in urban areas use safe fuel for cooking than rural areas which is reflected in their economic conditions. This implies that non-scheduled households have better means of income and are economical more prosperous than SC households both in rural and urban areas. This means women and children of SC household are greater health risk and socio-economically more disadvantage as compared to women and children of non SC households. This partially explains not only the rural-urban and male-female differences in literacy and educational levels within these groups but also differentials in morbidity and mortality between these groups.

5. CONCLUSION:

From the above discussion, it can be concluded that urban areas enjoy better quality of life in terms of fuel type in comparison to rural areas. It is true for both sc and non-sc households. The non-sc households are in better condition than sc households. It is also observed that fuel type for cooking not only affects the health of an individual but also have relationship with one's socio-economic conditions. One further observes that urbanisation and socio-economic development of an area have a direct bearing on the fuel type for cooking. In rural areas households predominantly use traditional fuel for cooking such as fire wood and cow dung cake. Another point noticed is that Delhi, core of NCR, has higher proportion of households with safe cooking fuel in comparison to peripheral districts in both rural and urban areas and among both groups, with Rajasthan sub-region at the lowest. In NCR urbanisation, easy access to type of fuel, socio-economic conditions and traditional use of fuel type play an important role in the use of type of fuel for cooking. Therefore, concerted efforts are needed on the part of NGO's and government to minimise the use of unsafe fuel for cooking particularly in rural areas so that the scheduled castes and the disadvantaged section of society can enjoy the facility of safe fuels and attains higher levels of education and health. This can also lead to higher status of women and girl child as well as will have a bearing on our family welfare programmes.

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