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Socio Economic Profile and Nutritional Status in the Rural-Urban Households of North Bengaluru

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Abstract

A study on socio-economic status and nutritional status along the rural urban gradient was conducted in north Bengaluru. Two hundred households were interviewed to elicit the information using structured schedule. The majority of rural respondents (53 %) belong to young and urban respondents (47%) to middle age groups. Poor economic condition of rural families and lack of educational facilities curtail and majority of urban respondents were graduates (70%) and all the respondents were literate. Study shows that majority of the rural respondents were dependent on agriculture as their occupation (66 %) with the land holdings (88 %) upto two acres followed subsidiary occupation (21 %) for their source of income. The majority of the rural respondents (55%) belonged to middle income group and urban respondents (89%) were in high income group. It was found that among rural and urban, consumption of cereals, fats and oils exceeded the RDA. Significant difference was observed between rural and urban women with respect to weight and BMI. Diabetes, Hypertension and gastritis were more prevalent in urban respondents compared to rural.

Urbanization and globalization of eating habits has an impact on the nutritional status of individuals and households in urban areas. Despite the difficulties associated with using the surveys there is a broad consensus that in particular there is a need for comprehensive household survey work that covers both consumption and anthropometric indicators to provide a more sound basis for the measurement of food insecurity and under nutrition, its determinants and its impacts India had rapid progress in controlling communicable diseases and the socio economic status of people has shown marked improvement. However, ageing of the population and altered lifestyles (unhealthy diets and physical inactivity) have contributed to the increase in the prevalence of chronic non-communicable diseases such as diabetes and heart diseases. The nutritional, demographic, epidemiological, and socio economic transitions occurring in many developing countries has been hypothesized as a possible explanation for this trend.Therefore, the rural urban interface study was conducted to assess the socio economic, food consumption and nutritional status.

A structured shedule was developed to elicit information on socio economic, food consumption and nutritional status. All respondents were interviewed using pre-tested interview schedule. To understand the influence of socio economic characteristics like age, education, family occupation, and type of family, respondents were categorized into various groups. A socio economic scale developed by Market Research Society of India (MRSI, 2011) was used. Data on intake of foods was recorded namely cereals, pulses, fruits and vegetables, milk and milk products, fish and flesh foods, fats and oils, sugar and jaggery and it was compared with RDA (Mamatha, 2015). Nutritional status of the adults in the family was assessed by recording (Jelliffe, 1966) height and weight of the adults. Using these measurements, Body Mass Index (BMI) of each was calculated. All data were analyzed by 'Z' test for two sample means using Microsoft Excel 2007. Differences were declared statistically significant when $p < 0.05$.

Socio-economic status of rural and urban respondents is presented in Table I. The respondents were categorized into three age groups. The majority of rural respondents (53 %) belong to young and urban respondents (47%) to middle age groups. Poor economic condition of rural families and lack of educational facilities curtail and majority of urban respondents were graduates (70%) and all the respondents were literate. Study shows that majority

TABLE I

Socio-economic status of rural and urban households

	Particulars	Per cent	
		Rural (n=100)	Urban (n=100)
Age (years)	Young (18-35)	53	23
	Middle (36-50)	28	47
	Old (>50)	19	30
Education	Illiterate	15	00
	Primary	25	02
	High school	42	07
	PUC/ diploma	15	21
	Graduate/post graduate	03	70
Occupation	Agriculture	66	00
	Private employee	04	50
	Government employee	06	38
	Business	08	10
	Others	16	02
Family type	Joint	03	01
	Nuclear	87	99

of the rural respondents were dependent on agriculture as their occupation (66 %). Similar findings reported by George *et al.*(2009) stated that nearly one third of the respondents were under primary occupation of agriculture. The majority of urban respondents were private employees (50 %) with small ancestral land holdings and less subsidiary occupations. Irrespective of rural and urban household's majority of respondents belonged to nuclear family (87 and 99 %, respectively).

Figure 1 gives information on socio economic grades of rural and urban households. The majority of the rural respondents (55%) belonged to middle income group and urban respondents (89%) were in high income group. In the present study majority of urban respondents fall in high income group due to their higher educational qualification and possessing most of the household durables at home.

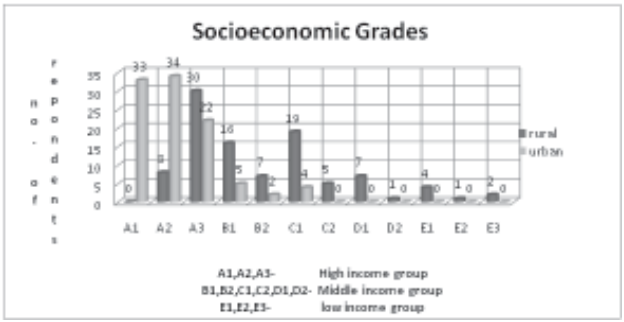

Fig 1. Socio economic grades of rural and urban households according to new SES MRSI, 2011

The comparison between actual food consumption of food items against the Recommended Daily Allowances (RDA) is presented in Table II. It was found that among rural and urban, consumption of cereals, fats and oils exceeded the RDA. In the present study the consumption of cereal (442.0) was high in rural compared to urban. The mean per cent adequacy was more in urban for most of food groups

TABLE II

Food consumption and adequacy of rural and urban households in comparison with RDA

Food groups	RDA	Rural (n=100)		Urban (n=100)	
		Mean (g)	Adequacy (%)	Mean (g)	Adequacy (%)
Cereals (g)	330	442.00	134	341.71	104
Pulses (g)	75	40.46	54	55.26	73
Green leafy vegetables (g)	100	30.03	30	53.21	53
Other vegetables (g)	200	63.83	32	296.68	148
Fruits (g)	100	33.21	33	115.74	116
Milk and Milk products (ml)	300	133.51	45	357.45	119
Meat , fish and egg (g)	60	39.22	65	43.66	100
Fats and oils (g)	25	36.69	147	43.41	176
Sugar and Jaggery (g)	30	29.16	97	33.71	110

RDA- Recommended Dietary Allowances (ICMR)

viz., consumption of cereals (104 %), vegetables (148 %), fruits (116 %), meat (100 %), milk and milk products (119%), fats and oils (176 %), sugar and jaggery (110 %) compared to rural consumption data. The consumption of fruits and vegetables, milk and milk products were less than 50 per cent of RDA among rural population. The difference is mainly due to the difference in their disposable income, difficulty in accessibility and affordability of other food groups compared to cereals. The present study findings are in line with the study findings of Arlappa *et al.* (2011) revealed that, the mean intakes of pulses and green leafy vegetables were below the RDA.

Table III shows gender specific means for anthropometric measurements in both urban and rural population. Significant difference was observed between rural and urban women with respect to weight and Body Mass Index (BMI). There was no significant difference between rural and urban men for weight, height and BMI. A similar significant difference between rural and urban gender specific means was observed by Adediran *et al.* (2013) for weight and BMI.

Health status of rural and urban adults presented in Table IV. Diabetes, hypertension and gastritis were more prevalent in urban respondents compared to rural. It is likely that these variations in the health profile of the two populations are due to the disparity in their lifestyles and dietary preferences. The rural participants were majorly farmers and manual unskilled workers while urban dwellers in this study were mainly private employees who were less physically active than their rural counterparts (Adediran *et al.*2013).

TABLE III

Weight, Height and Body Mass Index of rural and urban adults

Anthropometry	Women (Mean ± SD)		Z test	Men (Mean ± SD)		Z test
	Rural	Urban		Rural	Urban	
Weight (kg)	52.0 ± 9.8	64.7 ± 10.4	*	62.0 ± 6.4	69.4 ± 8.2	NS
Height (cms)	155.4 ± 6.5	156.3 ± 5.3	NS	161.9 ± 3.8	162.7 ± 5.9	NS
BMI(kg/m^2)	21.5 ± 3.7	26.4 ± 3.5	*	23.7 ± 2.4	26.2 ± 2.7	NS

*Significant @0.05% NS-non significant

TABLE IV

Health status of rural and urban adults

Health Status*	Rural (n=100)		Total	Urban (n=100)		Total
	Women	Men		Women	Men	
Diabetes	2	7	9	23	22	45
Hypertension	2	6	8	20	13	33
Arthritis	4	0	4	9	1	10
Gastritis	2	5	7	13	10	23
Hypothyroidism	0	0	0	7	1	8
Renal disorder	0	0	0	0	2	2
CVD	0	1	1	0	1	1
Osteoporosis	0	0	0	0	1	1
Asthma	0	0	0	1	0	1
Cancer	0	0	0	0	0	0

* Multiple responses

In conclusion, this study showed that socio economic status is improving in both rural and urban population but food insecurity is prevailing in rural compared to urban population due to accessibility and affordability. The risk factors such as overweight, obesity, hypertension and higher anthropometric indices were significantly prevalent among the urban population compared to the rural population. These outlooks suggest a linkage between dietary and environmental influence on the anthropometry and morbidity status.

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