

Consumption pattern of rural and urban households in Amravati district

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ABSTRACT

In this study an attempt has been made to study the "Consumption pattern of rural and urban households in Amravati district." The present study is based on primary data collected from 80 households for the year 2012-2013. The households were classified on the basis of income of family. From the socio-economic point of view, it has been found that rural and urban households varies directly with the number of family members and educational status. The consumption of food stuff by sample households was computed as per consumer unit per month basis. The cereals were main food accounted for about 45.00 per cent, pulses contributed for more than 6.00 per cent and vegetables which accounted for about 10.00 per cent of total food stuff by rural and urban households. The dietary consumption of rural and urban households of food stuffs except leafy vegetables and sugar was found significantly lower than the recommended dietary allowances (RDA). However, the consumption of leafy vegetables and sugar was marginally surplus of RDA. In nutritional intake by rural and urban households, deficiency was observed more in calories, low level of deficiency in protein. However, consumption of fat was surplus than the recommended level.

INTRODUCTION

The word food refers to the chemical substances taken in to the body in order to keep the body in a healthy and active condition. The body requires food for the growth, repair and replacement of its worn out tissues. Hence, food has to provide the required raw material, energy and other regulating substances like vitamins and minerals for the smooth functioning of the body besides meeting the calorific requirements like carbohydrates, proteins, fats etc. It can be derived from plants, animals or other categories such as fungus or fermented products like alcohol. Although many human cultures sought food items through hunting and gathering, today most cultures

use farming, ranching, and fishing, with hunting, foraging and other methods of local nature included but playing a minor role.

Most traditions have a recognizable cuisine, a specific set of cooking traditions, preferences, and practices, the study of which is known as gastronomy. Many cultures have diversified their foods by means of preparation, cooking methods and manufacturing. This also includes a complex food trade which helps the cultures to economically survive by-way of food, not just by consumption. We will have to produce more food and other agricultural commodities under condition of diminishing per capita arable land and irrigation water resources and expanding biotic and abiotic stresses. It is

important that agriculture should help developing countries not only to produce enough food for the growing population but also lend for the generation of more income and opportunities for skilled employment.

Income and consumption pattern of the rural households and urban households depend on many factors like assets, level of education, occupation and demographic characteristics. Saving in any community, thus, depends on these factors. The sources of income in the rural household and urban households sector are various. In most of the households the main occupation is not the only source of income and in the cultivator households, more than 50 per cent of the household income originates from other sources. Non-agricultural sources are the main sources of income for many households in the rural area and in urban area job is the main type of source for consumption. Pattern of consumption expenditure is an indicator to show the frequent changes in both food and non-food expenditure due to the changes in income and occupation of the people.

India is the world's second largest producer of food next to China and has the potential of being the biggest industry. The average monthly per capita consumer expenditure (MPCE) in 2004-05 stood at Rs.599 in rural India and Rs.1052 in urban India. The per capita consumption expenditure in urban areas stood 88 per cent more than that of rural areas. It is necessary to study the consumption pattern under the changing situations of liberalization, privatization and globalization.

Some of the striking features of Indian consumers are that about 5 per cent of the urban population in 2004-05 had MPCE of Rs.2540 or more. Another 5 per cent had MPCE between Rs.1880 and Rs.2540. About 5 per cent of rural population had Rs.1155 or more while another 5 per cent had MPCE between Rs.890 and Rs. 1155. Quantity of cereal of consumed per person per month declined between 1993-94 and 2004-05 (from 13.4kgs to 10.73kgs in rural India and from 10.87kgs to 9.71kgs in urban India). Between 1972-73 and 2004-05, the share of food in total consumer expenditure also fell from 73 per cent to 55 per cent in rural areas and from 64 per cent to 44 per cent in urban areas (Giri, 2006).

MATERIAL AND METHODS

To study the factors influencing the food consumption in Amravati district, two models *i.e.* multiple linear regression (Cohen *et al.*, 2003) and double log

regression model was carried out. Out of these two models, on the basis of highest R^2 value and numbers of significant variable, the result of one model was incorporated in the present study. Total annual expenditure on food was used as a dependent variable and the other independent variables was *viz.*, family size, type of family, food habit and annual income was used.

The functional form of multiple linear regression equation was used :

$$Y = a_0 + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + b_1D_1 + b_2D_2 + u.$$

OR

The double log regression equation was used :

$$\ln N = b_0 + \sum_{i=1}^M b_i \ln X_i + \mu_i$$

N = Household nutritional status is measured by calorie intake (K cal) per consumer per day.

Y = Annual food expenditure in Rs./family

X_1 = Family income (Rs./month)

X_2 = Household expenditure (Rupees) per consumer in a 30 day.

X_3 = Family size (Total count of household members)

X_4 = Level of education of the household head. It takes the value of 1 for an illiterate, 2 for below primary, 3 for above primary and 4 for technical education.

D_1 = Family type (Dummy Variable) value '2' for joint and '1' for Nuclear family

D_2 = Food habit (Dummy Variable) value '2' for non-veg and '1' for veg family

a_i = Regression co-efficient for i^{th} variable, where i range from 1 to 5 while b_0 represented the intercept term.

Nutrition status were established by calculating the intake of protein, fat and calories.

The constraint in the consumption with respect to different food items such as cereals, pulses, milk, and milk products, fruits, vegetables, egg and meat were analyzed by working out percentages.

OBSERVATIONS AND ANALYSIS

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Consumption pattern of selected households :

Consumption of food stuff by rural and urban households :

The main categories of food stuff consumed were

cereal, pulses leafy vegetable, other vegetables, sugar, edible oil and fats, milk and milk product etc. consumption pattern was assessed according to groups. The consumption of various food stuff by the samples of households was computed on per consumer unit per month basis. Table 1 shows that cereal were consumed in less quantities in all groups. Leafy vegetable were consumed in largest quantities in all groups. These were followed by other foodstuff, while in least consumed item were oil and fat, sugar and jaggery, milk and milk products also. There was less consumption of animal product as compared to plant product. This might be explained by the fact that a high proportion of Indians are vegetarians either because of traditional persuasions or for economic reasons (Gopalan, 1994).

There was an increase in consumption of all foodstuffs with an increase in the education level of households heads and the increase in monthly income. An interesting feature was the high consumption of high value foodstuff by households with higher education and land holding. The consumption of foodstuff in household were exceeded the recommended dietary level in case of leafy vegetables (Agrahar and Murugkar, 2005).

Dietary consumption and nutritional status of rural and urban households :

The data on dietary consumption by the different households were categorized on the basis of nature of food items viz., cereals, pulses, leafy vegetables, other vegetables and other vegetables, edible oil and fat, sugar

and jaggery, milk and milk products, etc. The mean values of food consumption of the individual under study were compared with recommended dietary allowances (RDA) prescribed by Indian Council of Medical Research (ICMR). Each item of food stuff are presented in terms of deficit or surplus consumption on percentage basis.

On the basis of diet intake the nutritional value of each food item were computed for each individual referring the food composition tables presented by the Indian Council of Medical Research (Nutritive Value of Indian Food). The nutritive value of all the food-stuff items for all the individual of rural and urban households group in the study were computed.

Nutritive value of food consumption was work out for energy, protein and fats. These nutritive values were then compared with the recommended daily allowances prescribed by the ICMR. Accordingly the proportion of deficiency or surplus intake of nutrition was worked out and presented subsequently (Sharma and Kuber, 1991).

Dietary pattern of rural and urban households :

Indian Council of Medical Research (ICMR) suggested Recommended Dietary Allowances (RDA) that cereals formed the major part of food stuff and accounted for about 45.00 per cent of total food stuffs consumed. Pulses contributed to about 6.00 per cent of the dietary consumption. Tur, gram were the pulses used by the rural and urban households. Leafy vegetables were consumed by rural and urban households. In leafy vegetables spinach, fenugreek, other vegetable were used

| Particulars | Table1 : Consumption of foodstuff by rural and urban households in Amravati district (kg/consumer unit/month) | | | | | | |
|-------------------------|---|--------|------------|-----------|-------|-----------------------|-------|
| | Cereal | Pulses | Edible Oil | Vegetable | | Milk and milk product | Sugar |
| | | | | Leafy | Other | | |
| Rural households | | | | | | | |
| Low | 7.64 | 0.60 | 0.77 | 1.83 | 1.86 | 3.92 | 1.30 |
| Medium | 7.77 | 0.85 | 0.80 | 1.91 | 1.96 | 4.47 | 1.48 |
| High | 7.81 | 0.94 | 0.88 | 1.98 | 2.03 | 5.09 | 1.54 |
| Overall | 7.74 | 0.80 | 0.82 | 1.910 | 1.955 | 4.49 | 1.44 |
| RDA (kg/month) | 15.60 | 1.50 | 1.35 | 1.20 | 2.10 | 6.00 | 1.05 |
| Deficit (per cent) | 52.00 | 46.00 | 39.0 | 00.00 | 07.00 | 25.00 | 00.00 |
| Urban households | | | | | | | |
| Low | 7.31 | 0.82 | 0.87 | 1.65 | 1.97 | 3.85 | 1.48 |
| Medium | 7.68 | 0.95 | 0.83 | 1.70 | 2.02 | 3.98 | 1.59 |
| High | 7.31 | 0.99 | 0.95 | 1.75 | 2.05 | 5.46 | 1.63 |
| Overall | 7.43 | 0.92 | 0.88 | 1.70 | 2.01 | 4.43 | 1.57 |
| RDA (kg/month) | 15.60 | 1.50 | 1.35 | 1.20 | 2.10 | 6.00 | 0.90 |
| Deficit (per cent) | 52.00 | 38.00 | 65.55 | 00.00 | 4.00 | 26.00 | 00.00 |

in their diets. The milk consumption was 19.00 per cent in rural and urban households. The fat and oil and sugar were also observed to have consumed by rural and urban households. Meat, chicken and eggs was not consumed regularly. In the diets of wheat and jowar was the main staple food. besides pulses, leafy vegetables, other vegetables, oil and fats, sugar and jaggery were the constituents of food stuffs (Geetha, 2011).

Dietary consumption of rural households :

The data from Table 3 exhibited that the mean monthly consumption of cereals, pulses, leafy vegetables, other vegetables, edible oil and fat, sugar and jaggery, milk and milk products in case of low group of rural

households were 7.65 (kg), 0.60(kg), 1.83(kg), 1.86 (kg), 0.78 (kg), 1.31 (kg), 3.92 (kg).

In case of medium income group of rural households 7.77 (kg), 0.85 (kg), 1.92 (kg), 1.97 (kg), 0.81 (kg), 1.48 (kg), 4.48 (kg) and in high income group of rural households were 7.81 (kg), 0.95 (kg), 1.99 (kg), 2.03 (kg), 0.87 (kg), 1.55 (kg), 5.10 (kg), respectively. The consumption of leafy vegetables in all income groups was marginal surplus compared to the recommended level (Shrivastava and Dongra, 1991 and Musebe and Kumar, 2002).

On the basis of recommended level of allowances the high level of consumption deficiency in case of pulses was observed to the tune of 59.74 per cent in low group

| Sr. No. | Food stuff | Rural households | | | | Urban households | | | |
|-------------------|-----------------------|------------------|--------|-------|---------|------------------|--------|-------|---------|
| | | Low | Medium | High | Overall | Low | Medium | High | Overall |
| Cereal | | | | | | | | | |
| 1. | Rice | 0.65 | 0.87 | 1.09 | 0.83 | 0.89 | 0.83 | 0.87 | 0.84 |
| 2. | Jowar | 2.15 | 1.82 | 1.60 | 1.87 | 1.34 | 1.53 | 1.25 | 1.37 |
| 3. | Wheat | 4.84 | 5.08 | 5.19 | 5.02 | 5.14 | 5.32 | 5.2 | 5.23 |
| | Total cereals | 7.65 | 7.77 | 7.81 | 7.73 | 7.31 | 7.68 | 7.32 | 7.43 |
| Pulses | | | | | | | | | |
| 1. | Tur | 0.39 | 0.61 | 0.73 | 0.55 | 0.57 | 0.69 | 0.78 | 0.70 |
| 2. | Gram | 0.21 | 0.24 | 0.27 | 0.24 | 0.25 | 0.26 | 0.21 | 0.24 |
| | Total pulses | 0.60 | 0.85 | 0.95 | 0.79 | 0.82 | 0.95 | 0.97 | 0.93 |
| Vegetables | | | | | | | | | |
| 1. | Leafy vegetables | 1.83 | 1.92 | 1.99 | 1.90 | 1.66 | 1.70 | 1.75 | 1.71 |
| 2. | Other vegetables | 1.86 | 1.97 | 2.03 | 1.95 | 1.97 | 2.02 | 2.05 | 2.02 |
| | Total vegetables | 3.69 | 3.89 | 4.01 | 3.86 | 3.69 | 3.72 | 3.8 | 3.73 |
| | Fat and oil | 0.78 | 0.81 | 0.87 | 0.82 | 0.88 | 0.84 | 0.95 | 0.89 |
| | Sugar | 1.31 | 1.48 | 1.55 | 1.44 | 1.49 | 1.60 | 1.63 | 1.58 |
| | Milk and milk product | 3.92 | 4.48 | 5.10 | 4.45 | 3.86 | 3.99 | 5.46 | 4.58 |
| | Grand total | 17.95 | 19.28 | 20.36 | 19.10 | 17.98 | 18.78 | 20.16 | 22.89 |

| Sr. No. | Food stuff | Rural households | | | | | | | | |
|---------|-----------------------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|
| | | Low | | | Medium | | | High | | |
| | | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent |
| 1. | Cereals | 7.65 | 15.60 | (-) 52.03 | 7.77 | 15.60 | (-)50.16 | 7.81 | 15.60 | (-)49.92 |
| 2. | Pulses | 0.60 | 1.50 | (-) 59.74 | 0.85 | 1.50 | (-)43.06 | 0.94 | 1.50 | (-)36.8 |
| 3. | Leafy vegetables | 1.83 | 1.20 | (+) 52.55 | 1.92 | 1.20 | (+)59.94 | 1.98 | 1.20 | (+)65.09 |
| 4. | Other vegetables | 1.86 | 2.10 | (-) 11.36 | 1.97 | 2.10 | (-)6.66 | 2.04 | 2.10 | (-)3.00 |
| 5. | Oil and fat | 0.78 | 1.35 | (-) 42.28 | 0.81 | 1.35 | (-)40.26 | 0.89 | 1.35 | (-)34.31 |
| 6. | Sugar | 1.31 | 1.05 | (+) 24.53 | 1.40 | 1.05 | (+)41.33 | 1.55 | 1.05 | (+)47.34 |
| 7. | Milk and milk product | 3.92 | 6.00 | (-) 34.61 | 4.48 | 6.00 | (-)25.41 | 5.09 | 6.00 | (-)15.10 |

of rural households. In medium group of rural households *i.e.* 43.06 per cent and in high group of rural households there are 36.80 per cent. Thus, the consumption of other food stuff was not more deficit (Giri, 2006).

Dietary consumption by urban households :

The mean daily consumption of different food stuffs like cereals, pulses, leafy vegetables, other vegetables, edible oil and fat, sugar and jaggery, milk and milk products for low income group of urban households were 7.31 (kg), 0.82 (kg), 1.65 (kg), 1.97 (kg), 0.87 (kg), 1.48 (kg), 3.85 (kg) in medium income group of urban households were 7.680 (kg), 0.952 (kg), 1.70 (kg), 2.02 (kg), 0.83 (kg), 1.59 (kg), 3.98(kg), and high income group of rural households were 7.315 (kg), 0.99(kg), 1.75(kg), 2.05 (kg), 0.95 (kg), 1.63 (kg), 4.46 (kg), respectively.

A most deficiency of cereals consumption 53.14 per cent was noticed in low group and high income group of rural households, after the cereals food items pulses also had most deficiency in urban group. Pulses had 45.33 per cent deficiency in low group, in medium group 36.66 per cent and 34.00 per cent in high income group of rural household.

Nutritional intake of rural households :

The information on nutritional intake based on the

dietary consumption of rural households as per the nature of families in which they were consuming, it was prescribed below. It is revealed from the Table 5 that the daily mean nutritional intake of low, medium and high income group of rural households were 39.06 (Kcal), 44.15 (Kcal), 48.55 (Kcal) and protein 1.23 (kg),1.32 (kg), 1.35 (kg) and fats 0.93 (kg), 1.10 (kg), 1.26 (kg), respectively.

It was further observed that the nutritional intake of calories and protein was deficient by 52.30 per cent, 46.09 per cent, 40.71 per cent when compared to RDA similarly, protein were deficient than RDA by 31.22 per cent, 26.50 per cent and 25.55 per cent against RDA in low, medium and high income group of rural households, respectively. The nutritional intake fat was comparable to RDA.

Nutritional intake of Urban households :

Daily mean intake of nutrients by urban households such as households intake calories 42.33 (Kcal), 49.56 (Kcal), 48.14 (Kcal) also protein 1.33 (kg), 1.45 (kg), 1.31 kg and fats 1.17 (kg), 1.34 (kg), 1.12 (kg), respectively. The consumption of nutrients except fat, calories and protein was lower than the recommended level. It can be seen from Table 6 that the deficient intake of calories and protein, respectively and surplus shows intake of fat in urban households.

Table 4 : Dietary consumption by urban households (kg/consumer unit/month)

| Sr. No. | Food stuff | Urban households | | | | | | | | |
|---------|-----------------------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|
| | | Low | | | Medium | | | High | | |
| | | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent |
| 1. | Cereals | 7.31 | 15.60 | (-) 53.14 | 7.68 | 15.60 | (-) 50.76 | 7.31 | 15.60 | (-) 53.14 |
| 2. | Pulses | 0.82 | 1.50 | (-) 45.33 | 0.95 | 1.50 | (-) 36.66 | 0.99 | 1.50 | (-) 34.00 |
| 3. | Leafy vegetables | 1.66 | 1.20 | (+) 37.5 | 1.70 | 1.20 | (+) 41.66 | 1.75 | 1.20 | (+) 45.83 |
| 4. | Other vegetables | 1.97 | 2.100 | (-) 6.19 | 2.02 | 2.10 | (-) 3.81 | 2.05 | 2.10 | (-) 2.3 |
| 5. | Oil and fat | 0.87 | 1.35 | (-) 35.45 | 0.87 | 1.35 | (-) 38.51 | 0.95 | 1.35 | (-) 29.62 |
| 6. | Sugar | 1.49 | 1.05 | (+) 41.49 | 1.60 | 1.05 | (+) 51.90 | 1.63 | 1.05 | (+) 55.23 |
| 7. | Milk and milk product | 3.86 | 6.00 | (-) 35.71 | 3.99 | 6.00 | (-) 33.51 | 4.47 | 6.00 | (-) 25.66 |

Table 5 : Nutritional intake of rural households

| Nutrients | Rural households | | | | | | | | |
|-----------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|
| | Low | | | Medium | | | High | | |
| | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent |
| Calories | 39.06 | 81.90 | (-) 52.30 | 44.15 | 81.90 | (-) 46.09 | 48.55 | 81.90 | (-) 40.71 |
| Protein | 1.23 | 1.80 | (-) 31.22 | 1.32 | 1.80 | (-) 26.50 | 1.35 | 1.80 | (-) 24.55 |
| Fat | 0.93 | 0.75 | (+) 24.00 | 1.10 | 0.75 | (+) 46.93 | 1.26 | 0.75 | (+) 64.80 |

Determinant of nutritional status :

The key factors influencing nutritional status of the household shows using regression analysis and the result have been presented in Table 7.

The income was positively significant at five per cent level with nutritional status in medium income group of rural households and five per cent level positively significant with nutritional status in high income group of urban households. The per capita expenditure influenced the positive with nutritional status and it was statistically positively significant at one per cent level for low and medium income group of rural households, ten per cent level of positively significant in high income group of rural households and in overall income groups of rural households there was a one per cent level of positively significant with nutritional status. The per capita expenditure was found in urban households at five per cent level of significant for low income group of urban households and one per cent level of significant with nutritional status in medium, high and overall income groups of urban households.

The family size was found negative with nutritional status in both rural and urban households. It was found to be negatively significant at five per cent level in low income group of rural households and one per cent level of negatively significant with nutritional status in medium, high and overall income groups of rural households. Ten

per cent level of negatively significant in low income group of urban households and one per cent negatively significant with nutritional status in medium, high and overall income group of urban households (Nasurudeen *et al.*, 2006).

Educational status was both positive and negative with nutritional status, it was found to be positively significant at ten per cent and five per cent negatively significant with nutritional status in low and medium income group of rural households, respectively. Statistically positive significant at one per cent level and five per cent negatively significant with nutritional status in high and overall income groups of urban households. Similar work related to the present investigation was also carried out by Bakshhoodeh and Farajzadeh (2004); Deaton *et al.* (1994); Goyal *et al.* (1999); Jain and Patel (1996) and Namasivayam and Vijaykumar (2003).

Summary and Conclusion :

The consumption of food stuffs except leafy vegetables and sugar was found significantly lower than the recommended dietary allowances (RDA). However, the consumption of leafy vegetables and sugar was marginal surplus of recommended dietary allowances (RDA).

The overall average deficiency in rural households was found in pulses up to 46.00 per cent and overall

| Nutrients | Urban households | | | | | | | | |
|-----------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|---------------------------|----------------|--------------------------------------|
| | Low | | | Medium | | | High | | |
| | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent | Average intake (kg/month) | RDA (kg/month) | Deficit (-) and surplus (+) per cent |
| Calories | 42.33 | 81.90 | (-) 48.31 | 49.56 | 81.90 | (-) 39.47 | 48.14 | 81.90 | (-) 41.21 |
| Protein | 1.33 | 1.80 | (-) 25.72 | 1.45 | 1.80 | (-) 19.33 | 1.31 | 1.80 | (-) 27.11 |
| Fat | 1.17 | 0.75 | (+) 56.00 | 1.34 | 0.75 | (+) 79.06 | 1.12 | 0.75 | (+) 50.00 |

| Regression variable | Rural households | | | | Urban households | | | |
|---------------------|------------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|
| | Low | Medium | High | Overall | Low | Medium | High | Overall |
| Income | 0.07 (0.06) | 0.01** (0.09) | 0.19 (0.17) | 0.05 (0.02) | 0.07 (0.3) | -0.21 (0.10) | 0.03** (0.15) | -0.04 (0.03) |
| Expenditure | 0.10*** (0.10) | 0.65*** (0.14) | 0.34* (0.13) | 0.19*** (0.05) | 1.57** (0.3) | 0.81*** (0.23) | 0.35*** (0.10) | 0.37*** (0.06) |
| Family size | -0.31** (0.12) | -1.02*** (0.16) | -0.61*** (0.10) | -0.39*** (0.06) | -2.12* (0.5) | -0.77*** (0.20) | -0.52*** (0.10) | -0.50*** (0.07) |
| Education | 0.02* (0.16) | -0.01** (0.05) | -0.01 (0.04) | 0.01 (0.03) | 0.01 (0.12) | 0.01 (0.13) | 0.17** (0.26) | -0.03** (0.09) |
| Intercept | 2.67 (0.36) | 1.420 (0.60) | 1.48 (0.68) | 2.51 (0.12) | -1.11 (1.6) | 1.81 (0.98) | 2.04 (0.73) | 2.44 (0.19) |
| R ² | 0.65 | 0.90 | 0.94 | 0.72 | 0.93 | 0.85 | 0.80 | 0.66 |

Note : Figures in parenthesis are standard errors

***, ** and * indicate significance of values at P=0.1, 0.05 and 0.01, respectively

average deficiency found in urban households was in edible oil up to 65.55 per cent. After that 52.00 per cent deficiency in consumption of cereals in both group, but in case of leafy vegetables and sugar had surplus in daily diet. And in case of other vegetables, milk and milk products had minimum deficit in daily consumption.

From the point of view of monthly consumption of food stuff by a consumer unit is much more differ from each other, after analyzing the data concluded that in urban area cereal food stuff consumption was less than rural area but pulses consumption was more than rural households. But leafy vegetables got available in rural area than urban area so the consumption of leafy vegetables in rural area was more than urban area but average consumption of other vegetables consumption was more than rural area.

Nutritional intake of rural and urban households :

The nutritional intake of low, medium and high income group of rural and urban households had highly significant in recommended dietary allowances. The nutritional intake deficiency was found more in calories, a small level of deficiency was observed in case of protein however the consumption of fat was surplus than the recommendations.

For the determining of households nutritional status regression analysis was used. The income as independent variable, had a positive statistically non-significant contribution to the nutritional status in respect of low and high income groups of rural households and low income group of urban households, whereas the medium income group of rural households and high income group of urban households was positive and significant. In medium income group of urban households had negative and non-significant with income of households.

Expenditure was positively correlated to nutritional status and it was found statistically positively significant for low, medium, high, overall income groups of rural households. Also positively significant in low, medium, high and overall income groups of urban households.

The family size was negative with nutritional status in both rural and urban households. It was found to be negatively significant in low, medium, high and overall income groups of rural households. Also negative significant with nutritional status in low, medium, high and overall income groups of urban households.

Educational status was positive and negative with

nutritional status, it was found to be positive significant with nutritional status in low, negative significant in medium rural group and negative non-significant in medium rural group and not significant in overall income groups of rural households. It is also not significant in not significant in low and medium income groups of urban households but positively significant with nutritional status in high income group urban households.

Conclusion :

The following conclusions were drawn from the present study.

- Income, family size and educational status are the most important factors which influences the dietary pattern and nutrition status of households.
- The average family size had more in rural households as compared to urban households, therefore they cannot able to take proper diet.
- The result of this study indicate that the main approaches for improving nutritional status are the improvement in households, literacy levels, improved agricultural technology for increasing food production in rural households. In addition, policies and programmes for increasing the purchasing power of the households can improve the households nutritional status.
- The major nutrition problem has been calories deficiency.
- There was deficiency in food consumption and nutrient intake when compared with the recommended dietary allowances by ICMR. It is important to emphasize that although cereals from the main source of energy in Indian diet, a substantial proportion of the households was consuming less the dietary requirements.
- Consumption has positive relationship with Income.

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