

## A comparative study on average food intake of rural and urban adolescent boys in Chapra (Saran) district of Bihar

■ KAVITA KUMARI AND KUMKUM KUMARI

Received: 25.01.2011; Revised: 27.02.2012; Accepted: 27.04.2012

See end of the paper for authors' affiliations

Correspondence to :

**KAVITA KUMARI**  
Department of Home Science,  
Magadh University, BODH  
GAYA (BIHAR) INDIA

■ **ABSTRACT** : For the purpose 82 adolescent boys from rural and 88 adolescent boys from urban area were randomly selected. A descriptive research design has been used. Information on dietary intake of the adolescent was collected by 24 hours recall method. The data were collected for three consecutive days. It may be inferred from the table that percentage adequacy obtained by rural and urban adolescent boys was above 90 per cent only in case of cereal consumption. But, percentage adequacy was less than 50 per cent in case of green leafy vegetables, fruits and milk products in rural as well as in urban area. It may also be concluded from the results that average food intake of rural boys was higher in most of the food groups except green leafy vegetables, other vegetables, fruits and sugar. However, average intake of total vegetables was higher among rural boys in consumption to urban adolescent boys.

■ **KEY WORDS** : Rural adolescent, Urban adolescent, Average food intake, RDA, Percentage adequacy

■ **HOW TO CITE THIS PAPER** : Kumari, Kavita and Kumari, Kumkum (2012). A comparative study on average food intake of rural and urban adolescent boys in Chapra (Saran) district of Bihar. *Asian J. Home Sci.*, 7 (1) : 88-90.

**T**here are 1.4 Bn Adolescents ages between 10-19 years in developing nations, making up 1/5<sup>th</sup> to 1/4<sup>th</sup> of their countries population but often receive few health care resources and vacant attention(Pandey *et al.*,1999).

Adolescent is a significant period of human growth and maturation. It may represent a window of opportunity to prepare nutritionally for adult life. This period is characterized by an exceptionally rapid rate of growth which exceeds only during fetal life and early infancy(Medhi *et al.*,2007).

Adolescents are the best human resources but for many years,their health has been neglected because they were considered to be less vulnerable to disease than young children or the very old ones.

The increase in attention towards adolescents is previously due to recognition of the increased significance of this group as a proportion of the total population.

Nutrition is an important indicator of the health and overall status of adolescents.Adolescent's growth and development is closely linked to the diet they receive during the childhood and adolescence (NNMB,2002).

Due to rapid accretion of new tissues and other widespread developmental changes, nutrition needs are also more during this period of life cycle ( Medhi *et al.*, 2007).

Inadequate diet and unfavourable environments in developing countries may adversely influence in the growth and nutrition of adolescents. Poor nutrition during adolescence can impair the work capacity and productivity of adolescent boys and girls in their latter years.

Most of the researches have traditionally been conducted on infants,pre-school children, pregnant and lactating women but adolescents receive few health care resources and least attention even,very few studies have been focussed on rural and urban adolescents at the same time.

Hence, the present investigation has been conducted in Chapra (Saran)district of Bihar with the main objective:

To assess the average daily food intake of rural and urban adolescent boys in Chapra (Saran), district, Bihar and its comparison with recommended dietary allowances.

## ■ RESEARCH METHODS

The present investigation was conducted in two schools of Chapra (Saran) district. The one school was situated in rural area while other was in urban area. Out of the total sample, 82 adolescent boys from rural area and 88 adolescent boys were from urban area.

The samples were selected randomly using random number Table 1 'descriptive research design' has been adopted.

Dietary information of adolescent boys have been gathered by 24 hours recall method. Dietary information was collected for three consecutive days and then average value for one day was calculated.

$$\text{Individual food in terms of raw quantity (g)} = \frac{\text{Total raw food used in preparation}}{\text{Total cooked food prepare}} \times \text{Individual intake}$$

$$\text{Percentage adequacy} = \frac{\text{Average food intake}}{\text{RDA}} \times 100$$

The data were further put for z test to assess the level of significance at which dietary intake of rural and urban

adolescent boys differ.

## ■ RESEARCH FINDINGS AND DISCUSSION

Table 1 clearly show that average intake of all the food groups in both rural and urban adolescent boys was below the recommended dietary allowances.

Percentage adequacy by both was above 90 per cent only in case of cereals consumption while consumption was below 50 per cent in case of green leafy vegetables (G.L.V.), fruits, milk and milk products in rural as well as urban area.

It may also be inferred from Table 1 that average intake of rural boys was higher in most of the food groups except green leafy vegetables, other vegetables, fruits and sugar.

However, average intake of total vegetables was higher among rural boys in comparison to urban boys.

Again, fruit intake was lower among rural boys. This may be due to fact that very few people in rural area use to buy fruits.

Perusal of Table 2 reveals that z values for cereals, pulses, green leafy vegetables (G.L.V.), other vegetables, fruits, milk, milk products, fat and oil and Sugar and jaggery were 0.275, 0.69, 0.41, 0.76, 0.94, 0.92, 0.34, 0.33 and 0.42, respectively and

**Table 1 : Average food intake of rural and urban adolescent boys (12-17 years) and comparison with recommended dietary allowances in terms of percentage adequacy**

Food groups		Average food intake (g)	RDA	Percentage adequacy
Cereals	(R)	407.26	420	96.97
	(U)	381.59		90.85
Pulses	(R)	44.51	60	74.18
	(U)	38.75		64.58
G.L.V.	(R)	26.46	100	26.46
	(U)	31.19		31.19
R and T	(R)	176.04	200	88.02
	(U)	131.88		65.94
Others	(R)	54.39	100	54.39
	(U)	82.50		82.50
Fruits	(R)	30.43	100	30.43
	(U)	35.51		35.61
Milk and	(R)	162.5	500	32.50
Milk products	(U)	137.84		27.57
Fats and	(R)	16.35	25	65.40
Oils	(U)	14.26		57.04
Sugar	(R)	17.40	35	49.71
and Jaggery	(U)	19.17		54.77

**Table 2 : Average food intake of rural and urban adolescent boys**

Food groups	Observed value $\bar{X} \pm S.E.$	Z value	Level of significance (%)
Cereals (R)	407.26 $\pm$ 4.966	0.275	3
(U)	381.59 $\pm$ 4.336		
Pulses (R)	44.51 $\pm$ 0.542	0.69	2
(U)	38.75 $\pm$ 0.440		
G.L.V. (R)	26.46 $\pm$ 0.322	0.41	2
(U)	31.19 $\pm$ 0.354		
R and T (R)	176.04 $\pm$ 0.322	0.76	2
(U)	131.88 $\pm$ 1.498		
Others (R)	54.39 $\pm$ 0.633	0.94	2
(U)	82.50 $\pm$ 0.937		
Fruits (R)	30.43 $\pm$ 0.371	0.92	2
(U)	35.51 $\pm$ 0.403		
Milk and milk product (R)	162.5 $\pm$ 1.981	0.34	2
(U)	137.84 $\pm$ 1.566		
Fats and oils (R)	16.35 $\pm$ 0.199	0.33	2
(U)	14.26 $\pm$ 0.162		
Sugar and jaggery (R)	17.40 $\pm$ 0.212	0.42	2
(U)	19.17 $\pm$ 0.217		

R- Rural, U- Urban

the difference was found significant at 3 per cent for cereals, 2 per cent for pulses, green leafy vegetables, roots and tubers, other vegetables, fruits, milk and milk products, fats and oils and sugar and jaggery.

Thus, dietary intake of rural and urban adolescent boys differed greatly.

### Conclusion :

It may be concluded from the results that average intake of rural boys was higher in most of the food groups except green leafy vegetables, other vegetables, fruits and sugar. However, average intake of total vegetables was higher among rural boys in comparison to urban boys.

Further, fruit intake was lower among rural boys. This may be due to the fact that very few people in rural area used to buy fruits. People used to eat only those fruits which were seasonal and locally available in abundance.

It may also be inferred from the results that average intake of all the food groups in both the region was below the recommended dietary allowances. Percentage adequacy obtained by both was above 90 per cent only in case of cereal consumption.

But, the percentage adequacy was less than 50 per cent in case of green leafy vegetables, fruits, milk and milk products in rural as well as urban adolescents.

Authors' affiliations:

**KUMKUM KUMARI**, Department of Home Science, J.D. Women's College, PATNA (BIHAR) INDIA

### REFERENCES

- Bari, Irena coli**, Kajfe Romana, Satali, Zvonimir and Cvjeti, Selma (2004). Comparison of dietary habits in urban and rural croatian School children. *European J.Nutr.*, **43**(3): 169-174.
- Leonie, Nzefa Dapi**, Nouedoui, Christophe, Janlert, Urban and Haglin, Lena (2005). Adolescent's food habits and nutritional status in Urban and Rural areas in Cameroon, Africa. *Scandinavian J. Nutr.*, **49**(4): 151-158.
- Llamas, Perez F.**, Garaulet, M., Nieto, M., Baraja, J.C. and Zamora, S. (2003). Estimates of food intake and dietary habits in a random sample of adolescents in South-east Spain. *J. Human Nutr. & Dietetics*, **9**(6): 463-471.
- Medhi, G.K.**, Hazarika, N.C. and Mahanta, Y. (2007). Nutritional status of adolescents among tea garden workers, India. *Indian J. Pediatr.*, **74**:343-347.
- NNMB** (2002). Diet and nutritional status of rural adolescents in India. *European J. Clinical Nutr.*, **56**: 1119-1125.
- Popkin, B.M.**, Horton, S., Kim, S., Mahal, A. and Shuigo, J. (2001). Trends in diet, nutritional status and diet related communicable disease in China and India. The economic casts of the nutrition transition, *Nutr.rev.*, **59**:379-390.
- Pandey, J.**, Yadav, S.B. and Sadhu, K.K. (1999). Adolescents education in schools, pacakage of basic material. National Population Education Project NCERT, NEW DELHI (India).

\*\*\*\*\*