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Comparative study on the dietary food habit of adolescences girls of urban, rural and slum areas

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Abstract
Adolescent may represent a window of opportunity to prepare nutritionally for a healthy adult life. Adolescence is an important stage of growth and development in the lifespan. Unique Nutritional and health needs of the adolescents are also more important because of more requirements for growth spurt and increase in physical activity. It also supports other bodily functions such as growth, maintenance and repair. Urban diets in high-income countries consist of consumption of high in readymade and industrially processed foods compared to both rural and slum areas. Rural adolescent girls are the worst sufferers of the ravages of various forms of malnutrition because of their increased nutritional needs and low social power. Slums are likely to result in improper food habits, low health care use and hygiene awareness and lack of knowledge of the origin of sickness and proper measures for the cure. The objective of the study was to determine the nutritional status of adolescent girls and to study the relationship between the socio-economic statuses of the respondents with dietary habit of adolescent girls in urban, rural and slum areas in Kanpur district. A community based cross sectional study was carried out amongst adolescent girls in the age group of 14-18 years. Urban, rural and slum areas of Kanpur district were selected for study purpose. Study period was from January to June 2016.Total 150 adolescent girls were included. Variables included were age, socioeconomically status, weight, Height and dietary intake pattern. Data was analyzed using percentage, Arithmetic mean, standard deviation and Chi square test was applied to test the strength of association between the variables. The 72.0 per cent, 88.0 per cent and 84.0 per cent girls in urban, rural and slum areas were belonged to 14-16 age groups. Majority of urban girls were educated. The very poor eating habits and life style conditions were found in slum areas. But, its conditions were better in rural than slum. Most of girls vegetarian in rural area. The very differences in socio economical factors and different food habits were found in urban, rural and slum areas. Urban girls more nutritional awareness compared were rural and slum areas. The urban girls were more physically better than rural and slum areas. The socio economic conditions of urban area correspondents were better than rural and slum areas. Nutritional status has profound effect on health and food consumption performance of adolescent girls. The health of the adolescent girls is closely related to nutritional status but there are certain other eco-social variables such as literacy, social status and environmental hygiene which have impact on health of the girls.

Keywords: adolescent girls, energy, protein and fat consumed, urban, rural and slum area

Introduction

The term adolescence is derived from the Latin word 'adolescere' means "to grow, to mature." Adolescence has been defined by the World Health Organization as "the period of life spanning the ages between 10 to 19 years". This period is very important since these are the formative years in life where major physical, psychological and behavioral changes take place. Nutritional and health needs for the adolescents are more important because of more requirements for growth spurt and increase in physical activity (Ghai & Gupta et.al.2004) [2]. This classification is based on biological, psychological and developmental basis. a) The early adolescents having the age of 10 to 13 years. b) The middle adolescents with the age of 14 to 16 years and c) The late adolescents of the age of 17 to 19 years

The calorie and protein intake of the adolescent girls is much lower among adolescent girls from the lower socioeconomic group. Even in the comparatively better economic status girls, the intake fell short of requirement, which could be attributed to the concern for maintaining a slim look? In this study, income and number of siblings emerged as predictor variables. Sharma. *et al.* (2005) [7]. Eating patterns and behaviours of adolescents are influenced by many factors, including peer influences, parental modeling, food availability, food preferences, cost, convenience, personal and cultural beliefs, mass media, and body. The model depicts three interacting levels of influence which impact adolescent eating behaviors: personal or individual, environmental, and Microsystems. Personal factors that influence eating behavior include attitudes, beliefs, food preferences, self-efficacy and also biological changes. Environmental factors include the immediate social environment such as family, friends and peer networks, and other factors such as school, fast food outlets and social and cultural norms. The urban diet is influenced by level of socio-economic status; urban diets in high-income countries consist of consumption of high in readymade and industrially processed foods, often high in saturated fats, salt, and sugars and usually low in vitamins, minerals and fibers. At the same time the high-income countries suffer from epidemical proportions of nutrition-related chronic diseases, such as obesity, heart problems, some cancers, diabetes etc. The development of food habits trends within the urban areas

around the world has long been worrisome from a health perspective (Maletnlema. 2002) [6]. Rural areas are settled places outside towns and cities. They can have an agricultural character, though many rural areas are based on natural gas, petroleum, etc. Rural areas are less modern and open than urban areas. People there are probably more attached to their traditions and beliefs. Overcrowding further improve the health environment and increase the probability of infectious diseases In general rural adolescent girls are the worst sufferers of the ravages of various forms of malnutrition because of their increased nutritional needs and low social power. Poor nutritional status during adolescence is an important determinant of health outcomes at a later stage of life. Slum dwellers are exposed to poor environmental conditions (overcrowding, poor quality drinking water and sanitation, no removal of waste). Ignorance and difficult conditions of life in the slums are likely to result in improper food habits, low health care use and hygiene awareness and lack of knowledge of the origin of sickness.

Objective

To access the dietary pattern and nutritional status of the respondents

Methodology

A cross sectional study was carried out to assess food habits of girls of young girls of Kanpur district. A total of 150 young girls of 14 to 18 years of age, living in the rural, urban and slum areas of Kanpur district of Uttar Pradesh state were selected at randomly as sample. Out of them, 50 girls were from rural, 50 girls were from urban and 50 girls were from slum areas. Young girls were classified into two groups namely 14-16 years and 17-18 years. The investigator visited households to collect information from young girls who were school dropout. The socio-demographic data were elicited by administering the pretested questionnaire and anthropometric measurements such as height, weight, and mid arm circumference were recorded by following standard methods. And the indirect method used was diet survey; the 24 hours recall method and frequency of consumption of certain food stuff.

Result

Table 1: Distribution of girls based on age and area of living

Area of living		Age groups	
		14-16 Age	17-18 Age
Urban N=50	NO.	36	14
	%	72	28
Rural N=50	NO.	43	7
	%	88	14
Slum N=50	NO.	42	8
	%	84	16

Table 1reveals the distribution of girls based on age and area of living. 72 percent, 88 percent and 84 percent girls were belonged to 14-16 years age group, whereas, 28 percent, 12 percent and 16 percent girls belonged to 17-18 years age group from urban, rural and slum areas.

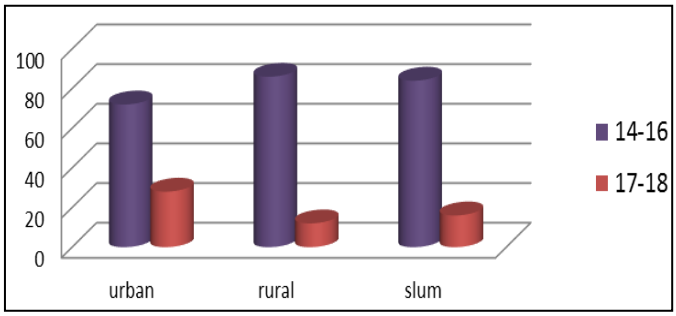

Fig 1

Table 2: distribution of girls according religion.

Area of living		Religion		
		Hindu	Muslim	Sikh
Urban N=50	NO.	48	1	1
	%	96	2	2
Rural N=50	NO.	49	1	0
	%	98	2	0
Slum N=50	NO.	30	20	0
	%	60	40	0

Table 2: reveals the distribution of girls based on religion 96 percent, 98percent and 60 percent girls were Hindu. While 2 percent, 2percent and 40 percent girls were Muslim from urban, rural and slum areas. And only 2 percent girls were Sikh in urban area.

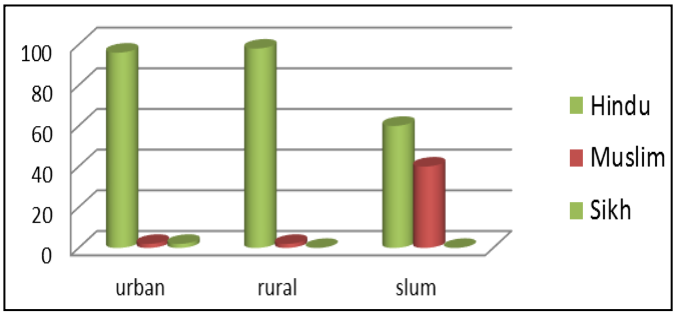

Fig 2

Table 3: distribution of girls according family members.

Area of living		Family member	
		3 - 5	6 - 8
Urban N=50	NO.	41	9
	%	82	18
Rural N=50	NO.	31	19
	%	62	38
Slum N=50	NO.	26	24
	%	52	48

Table 3: reveals the distribution of girls based on family member 82 percent, 62 percent and 52 percent girls were belonged to 3-5 family members. While 18 percent, 38 percent and 48 percent were belonged to 6-8 family members from urban, rural and slum areas.

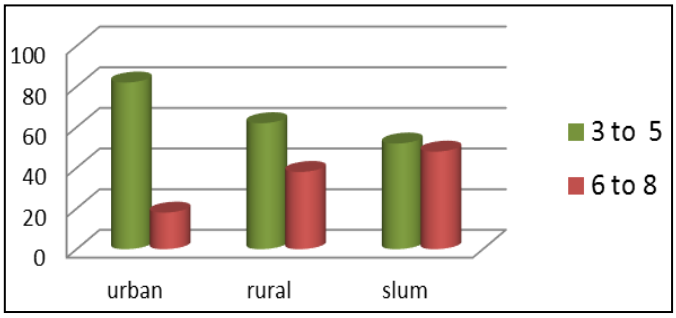

Fig 3

Table 4: distribution of girls according education.

Area of living		Education				
		Illiterate	Up to primary	Secondary	High school	Intermediate
Urban N=50	NO.	0	0	5	25	20
	%	0	0	10	50	40
Rural N=50	NO.	1	5	24	12	8
	%	2	10	48	24	16
Slum N=50	NO.	4	23	21	2	0
	%	8	46	42	4	0

Table 4: reveals that distribution of respondents according to educational qualification, maximum 40.0 per cent girls in urban and 16.0 per cent girls in rural belonged in intermediate whereas 50.0 per cent girls in urban, 24.0 per cent and 4.0 per cent belonged in high school levels, followed by 10.0 per cent in urban area, 48.0 per cent girls in rural and 42.0 per cent girls in slum belonged in secondary level education, 10.0 per cent girls in rural and 46.0 per cent girls in slum belonged in up to primary education and only 2.0 per cent girls in rural and 8.0 per cent girls in slum were illiterate.

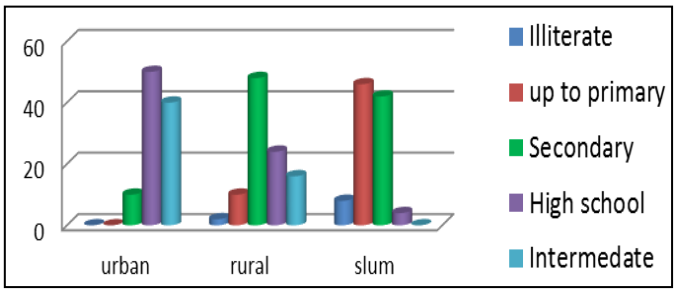

Fig 4

Table 5: Distribution of girls according Nutrients.

Nutrients	RDA	Urban area		Rural area		Slum area	
		Mean	Defi/inc %	Mean	Defi/inc %	Mean	Defi/inc%
Energy (kcal)	2440	2667.7	-9.3	1732.9	28.9	1287	-51.7
Protein (gm)	55.5	65.8	-18.6	33.6	39.4	17.3	68.6
Fat(gm)	35	69.9	-99.8	24.5	29.9	16.4	52.9

Table 5: reveals the distribution of girls based on Adolescence girls the highest average energy intake i.e. (2667.74 kcal/day) urban compared rural and slum (1287.05 kcal/day). Girls the highest average protein intake i.e. urban (65.84 gm/day) compared rural (33.61gm/day) and slum (17.38 gm/d). Girls the highest average fat intake i.e. urban (69.95 gm/d) compared rural (24.51gm/d) and slum (16.46 gm/d) was found in age group of 14-18 years.

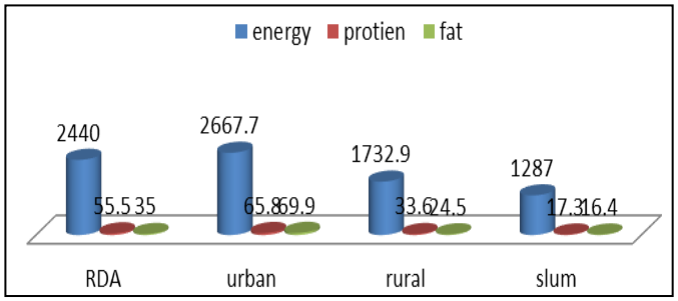

Fig 5

Discussion

The World Health Organization (WHO) pointed out the following when there is a shortage of food; most families know that they must make special efforts to ensure that babies are well nourished. It is less well understood that adolescent girls and boys have a need for extra nutrition as they grow rapidly and develop and that an inadequate diet can delay or impair healthy development. Stunting can occur in childhood or during adolescence. A healthy diet involves consuming appropriate amounts of all essential nutrients and an adequate amount of water. Nutrients can be obtained from many different foods, so there are numerous diets that may be considered healthy the best way to healthy eating is through choosing a range of different foods from the five food groups every day. Eating a variety of foods means your body will receive all the different nutrients it needs to be healthy.

Conclusion

The very differences in socio economical factors were found in urban, rural and slum areas. The average nutrients consumption were more than RDA recommendation at urban area. The average nutrients consumption were less than RDA recommendation at both places rural and slum. Family structure was observed to have an effect on nutritional status of adolescent girls, as girls from extended families were observed to be better nourished than those from joint families. The health of the adolescent girls is closely related to nutritional status but there are certain other eco-social variables such as literacy, social status and environmental hygiene which have impact on health of the girls.

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