

A study on eating habits and food attitude of adolescent girls of Patna (Bihar)

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Nutritional needs during adolescence are increased because of the increased growth rate and changes in body composition associated with puberty. The dramatic increase in energy and nutrient requirements coincides with other factors that may affect adolescents' food choices and nutrient intake, and thus nutritional status. These factors, including the quest for independence and acceptance by peers, increased mobility, and greater time spent at school or work activities, and preoccupation with self-image, contribute to the erratic and unhealthy eating behaviors that are common during adolescence. This topic discusses characteristic adolescent eating habits, including skipping meals, fast food consumption, and dieting behaviors. The present study was taken up to understand food consumption pattern of 300 adolescent girls of 12 to 18 years age group sampled from selected government colleges and girls' schools within the jurisdiction of Patna Municipal area. 82 per cent and 93 per cent girls were found taking regular lunch and dinner, respectively and 38 per cent of the adolescent girls indicated that they skipped morning breakfast and 69 per cent skipped evening snack. Modern trend of consumption behavior among girls is alarming and hence, there is need to make effort to educate girls on the importance of proper food habits and nutritional needs.

Key Words : Food consumption pattern, Eating habit, Food attitude

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INTRODUCTION

Adolescence is one of the most challenging periods in human development. The relatively uniform growth of childhood is suddenly affected by a rapid increase in growth rate and, therefore, creates special nutritional needs. Adolescents have an increased demand for nutrients because of the dramatic increase in physical growth and they face several changes in life style and food habits (Krause, 2004). The food behavior domains that are affected during adolescent period are food preference, consumption and eating patterns.

Food consumption pattern followed from childhood get changed during adolescence. Irregular meals, snacking, eating away from home and following alternative dietary patterns characterise the food habits of adolescents. To keep in trend with modern life style and peer group pressure, adolescents

are exploited by commercial interest and subject themselves to dietary manipulations that may have negative consequences. Television and magazines have a greater influence on adolescent's eating habits. Adolescents are negatively associated with healthy food and positively associated with junk foods.

Objectives:

- To study the food consumption pattern and food attitude of the adolescent girls.
- To assess the frequency of food consumption of adolescent girls.

METHODOLOGY

The study was conducted in Patna (Bihar). 300 adolescent girls age group of 12 to 18 years were selected using random sampling method for the study from 9 government colleges and 6 government girls' schools within the jurisdiction of patna

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municipal area. 20 adolescent girls each were randomly selected from each of these identified colleges and schools. An interview schedule was used for obtaining information. The dietary intake of each study subject was assessed by 24 hours recall method. The consumption patterns and frequency of usage of each food stuff in each food group was recorded. Consumption frequency was categorised into five different categories for each food items such as daily, 2-4 times in a week, weekly, occasional and never. A list of foods taken in additional amounts and foods avoided with reasons for avoiding the particular foods with regard to belief and traditions of the respondent were also recorded. Daily food intake was designed to assess intakes at breakfast, lunch, dinner and snacks (both morning and afternoon snacks).

OBSERVATIONS AND ASSESSMENT

Food consumption pattern of the adolescent girls is

presented in Table 1. Wheat is the staple food of the people in Bihar. The consumption of rice was only once a day for lunch whereas roti or parathas (plain or stuff) were commonly consumed for breakfast and dinner. The other cereals consumed were rice flakes, roasted maize (bhutta), cornflakes and suji consumed 2-4 times in a week or occasionally by 51 per cent and 37.3 per cent, respectively.

Pulses consumed were usually in the form of dal, whole legumes, roasted chana and sattu in which consumption of dal was the highest (83.7%) daily. Variety of dal usually consumed was Bengal gram dal, lentil, mung dal, arhar dal etc. Sattu (Roasted Bengal gram flour) was used in summer as a beverage and in winter it was prepared in the form of Litti. About 53 per cent girls were consuming whole legume 2-4 times in a week and 25 per cent occasionally whereas 63.7 per cent girls consumed sattu 2-4 times a week.

Table 1 : Food consumption pattern of adolescent girls

Food	Food frequency									
	Daily		2-4 times in a week		weekly		Sometimes		Never	
	No.	%	No.	%	No.	%	No.	%	No.	%
Rice	284	94.7	4	1.3	12	4	-	-	-	-
wheat	286	95.3	4	1.3	4	1.3	6	2	-	-
Maize	28	9.4	153	51	7	2.3	112	37.3	-	-
Pulse	251	83.7	28	9.3	14	4.7	7	2.3	-	-
Whole legume	46	15.3	159	53	20	6.7	75	25	-	-
Sattu	65	21.7	191	63.7	14	4.7	30	10	-	-
Potato	186	62	84	28	8	2.7	22	7.3	-	-
Leafy vegetable	213	71	59	19.7	18	6	10	3.3	-	-
Green vegetable	278	93.6	14	4.7	6	2	2	.7	-	-
Fish	83	27.7	117	39	11	3.7	89	29.7	-	-
Meat	81	27	113	37.7	4	1.3	100	33.3	2	.7
Egg	70	23.3	134	44.7	21	7	73	24.3	2	.7
Chicken	64	21.4	142	47.3	9	3	81	27	4	1.3
Milk	178	59.4	84	28	8	2.7	30	10	-	-
Curd	85	28.3	167	55.7	20	6.7	28	9.3	-	-
Paneer	60	20	191	63.7	17	5.7	32	10.7	-	-
Khowa	44	14.7	201	67	4	1.3	51	17	-	-
Vitamin A rich fruit	102	34	161	53.7	19	6.3	18	6	-	-
Other fruit	133	44.4	133	44.3	28	9.3	6	2	-	-
Sugar	168	56	90	30	18	6	24	8	-	-
Coffe	55	18.3	164	54.7	10	3.3	71	23.7	-	-
Tea	166	55.3	67	22.3	10	3.3	57	19	-	-
Jam /Jally	48	16	154	51.3	14	4.7	84	28	-	-
Maggi /Choumin	75	25	155	51.7	27	9	43	14.3	-	-
Chat	71	23.7	193	64.3	26	8.7	10	3.3	-	-
Samosa	79	26.3	178	59.3	37	12.3	6	2	-	-
Fokacha	69	23	166	55.3	49	16.3	16	5.3	-	-

The consumption of potato were found about 62 per cent daily, 28 per cent 2-4 times a week and only 2.7 per cent weekly in the adolescent girls. The higher consumption of potatoes in this area can be attributed to higher availability and low-cost especially during summer. Among the vegetables, consumption of green vegetables was more compared to leafy vegetable. Parwal, cauliflower, beans, brinjal, lady's finger, cabbage etc. were commonly taken compared to different types of leafy vegetables eg. spinach, amaranth, bathua etc.

Consumption of non-vegetarian foods like fish, meat, egg and chicken was poor. About 27 per cent of the girls were consuming fish and meat daily. 23.3 per cent egg and 21.4 per cent chicken were consumed daily by the girls. Consumption of non-vegetarian foods was only weekly, twice or once a month because of its cost. Percentage of the consumption of milk was highest among the other milk products. Though (59.4%) of the girls were consuming milk

daily but daily consumption of curd, paneer and khowa were found comparatively less 28.3 per cent, 20 per cent and 14.7 per cent, respectively.

Daily consumption of vitamin A rich fruits and others fruits was 34 per cent and 44.4 per cent, respectively. About 56% of the girls daily consumed sugar. Percentage of the consumption of tea was highest (55.3% daily) and the coffee (18.3%). Consumption of coffee was low due to high cost. Daily consumption of jams and jally was also found low.

The consumption of magi, choumin, chat, samosa and fokacha was found higher. The consumption of magi, choumin, chat, samosa and fokacha were found 51.7 per cent, 64.3 per cent, 59.3 per cent and 55.3 per cent 2-4 times a week, respectively.

The food preference of the adolescent girls were studied under the three categories *i.e.* likes, likes most, and dislikes (Table 2). The results showed that among cereals more

Table 2 : Food attitude of adolescent girls

Food	Food attitude					
	Likes		Likes most		Dislikes	
	No.	%	No.	%	No.	%
Rice	168	58	120	40	12	4
wheat	203	67.7	85	28.3	12	4
Maize	157	52.3	22	7.3	121	40.3
Pulse	194	64.7	75	25	31	10.3
Whole legume	173	57.7	26	8.7	101	33.7
Sattu	192	64	50	16.7	58	19.3
Leafy vegetable	150	50	127	42.3	23	7.7
Green vegetable	154	51.3	144	48	2	.7
Potato	182	60.7	72	24	46	15.3
Fish	125	41.7	86	28.7	89	29.7
Meat	99	33	101	33.7	100	33
Egg	96	32	129	43	75	25
Chicken	91	30.3	120	40	89	29.7
Milk	138	46	92	30.7	70	23.3
Curd	157	52.3	111	37	32	10.7
Paneer	131	43.7	127	42.3	42	14
Khowa	132	44	114	38	54	18
Vitamin A rich fruit	178	59.3	100	33.3	22	7.3
Other fruit	157	52.3	137	45.7	6	2
Sugar	182	60.7	78	26	40	13.3
Coffe	161	53.7	74	24.7	65	21.7
Tea	153	51	86	28.7	61	20.3
Jam /Jally	152	50.7	60	20	88	29.3
Maggi /Choumin	109	36.3	148	49.3	43	14.3
Chat	98	32.7	186	62	16	5.3
Samosa	115	38.3	177	59	8	2.7
Fokacha	65	21.7	221	73.7	14	4.7

emphasis was on rice (40 %) than on chapatti 28.3 per cent. Among pulses *i.e.* dal, whole legume and sattu were preferred most. However, a higher inclination towards leafy vegetable and green vegetable was 42.3 per cent and 48 per cent, only 24 per cent girls liked Potato most.

Basically, non-vegetarian food was liked by the girls. However, preferences among non-vegetarian foods varied *i.e.* egg was preferred more than chicken and chicken more than meat and meat more than fish. In the case of milk products it was observed by that paneer was liked most (42.3%) by the adolescent girls. Other fruits seemed more popular among girls in comparison to vitamin A rich fruits. There was not much of a difference in the liking for coffee, tea and jam/jally. However, 21.7 per cent girls disliked coffee.

In the last, it was observed that majority of the adolescent girls inclination was towards fast foods *i.e.* magi, choumin, chat and fokacha. Among fast food, *i.e.* magi, choumin and chat was preferred most *i.e.* 49.3 per cent, 62 per cent and 59 per cent. However, higher inclination was towards fokacha (73.7 %).

On the whole, the table depicted that for majority of the adolescents girls fast food was the most preferred food item. In recent years there has been an increase of fast food consumption with constant low consumption of some recommended food. Recent studies have shown that fast food is a popular choice among adolescents. Unfortunately, easy access to in-expensive, high-calorie foods has contributed to obesity epidemic (Jeffery and French, 1998). The popularity of fast food among college students presents an especially pernicious problem, as negative eating habits adopted early in life tend to persist throughout adulthood (Levi *et al.*, 2006).

Conclusion:

The results of study showed that majority of the girls consumed cereals (wheat and rice) daily. Other items of daily consumption reported by large number of girls were potato, vegetables, milk, seasonal fruits, sugar and tea. Maize, whole legume and sattu, non-vegetarian, items like fish, meat, egg and chicken, milk products, fruits, coffee, jam/jelly, magi, choumin, chat and fokacha etc. food items were consumed mostly 2-4 times a week. Food preference of adolescent girls revealed that majority of the adolescent girls inclination was

towards fast foods *i.e.* magi, choumin, chat and fokacha (water-balls).

Recommendation:

There is a strong need to impart nutrition education to these girls on topics like use of locally available foods, their nutritional attributes as well as increased nutritional need during adolescence.

Educational campaign is essential to improve the awareness of the adolescent girls' population on importance of health and nutrition. Adolescent girls should be educated to consume enough fruits and vegetables to maintain daily vitamin, mineral and fibre requirements; and not to consume too much fat and sodium from fried and fast food.

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