

Dietary Habit and Risk Factors of Eating Disorders among Adolescent Residing at Lucknow District

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Abstract: ***Aims & Objective:** To study of dietary habit and risk factors of eating disorders among adolescent residing at Lucknow district. **Methods:** In this school-based cross-sectional study, 120 adolescent students were selected by used stratified random sampling, aged 11-19 years. Structured anonymous-self-administered questionnaire was used as a study tool for Information obtained on frequencies of skipping meals, reasons for skipping meals, food choices. Pilot study was done to asses' reliability and validity of questionnaire. **Results:** Most of Adolescent girls and boys had irregular timing of meal. Adolescent boys and girls both like outside eating. 40% boys were suffering from bulimia nervosa and twenty five percent girls suffering from bulimia nervosa. Majority 75% of boys had binge eating, girls had 45.00%. There are significant difference between eating disorder among boys and girls. **Conclusion:** the study found that meal skipping, snacking and practicing various weight loss behaviors were some of the unhealthy eating behaviors depicted among adolescent girls and boys. These unhealthy eating behaviors among adolescent develop risk factor of eating disorder so most of boys and girls was suffering from eating disorder. Focusing on promotion of healthy eating that stresses on the importance of regular intakes of main meals during adolescence is crucial for their current and future health and well-being.*

Keywords: Skipping meal, eating behavior, Eating disorder

1. Introduction

Adolescence is a delicate phase of life. The never-ending sequence of physical and psychological adaptations of adolescents has a remarkable influence on the social and behavioral aspects of their lives. (3-4) Dieting, a behavioral phenomenon which is becoming more and more common among adolescents as a result of their persistent endeavors to modify their physical appearance, is certainly involved in the pathogenesis of eating disorders (EDs) (1-8). The physical growth of adolescents is characterized by an intense anabolic phase, and adequate amounts of energy, nutrients, vitamins and minerals are required. Therefore, the relentless and obsessive search for weight loss through dieting may result in an unbalanced nutrition both quantitatively and qualitatively (5-6). Eating behavior or Eating disorders play important role in adolescent development during puberty nutritional behavior can however change. Adolescent girls who engage in unhealthy weight-control behaviors are at increased risk for dietary inadequacy (15). In country like America, adolescents tend to have less portion size of fruits, vegetables and calcium rich foods that can impair their growth and intake of foods high in fat leads to obesity (12). The pressure to conform to society's view of the ideal body, combined with other factors in an adolescent's life, can set the stage for the development of an eating disorder. Clinical eating disorders or disordered eating habits can affect the teen's ability to learn since the teen spends time thinking about food and weight. Eating disorders are currently classified into two types: anorexia nervosa and bulimia nervosa. Researchers are also investigating another condition known as binge-eating disorder.

Anorexia nervosa, this is the refusal to maintain a minimally normal body weight, defined as at least 85% body weight compared to the national norms. There are two types of anorexia nervosa, restricting type and binge-eating and purging type. Restricting-type anorexics limit their food intake so severely that their bodies experience starvation. Many restricting-type anorexics initially feel a euphoria commonly called the dieter's high. This feeling eventually disappears and is replaced by a constant depressed mood. Purging-type anorexics use inappropriate compensatory behaviors such as self induced vomiting after eating. Bulimia nervosa, this is distinguished by reoccurring episodes of binge eating followed by inappropriate compensatory behaviors such as self-induced vomiting, misuse of laxatives, diuretics or other medications, fasting, or excessive exercise. Bulimia is diagnosed twice as often as anorexia, but in contrast to people with anorexia (including binge and purging type) those with bulimia maintain a fairly average body weight, making it difficult to detect based on appearance alone. Bulimics are more likely to seek out treatment for their illness than are anorexics.

Binge-eating, researchers have begun to investigate the existence of this third type of eating disorder. Binge-eating disorder describes an individual who binges in the same way as one with bulimia, but does not compensate for the binge. A binge is typically composed of foods that are high in fat and sugar content. Although most individuals with a binge-eating disorder tend to be obese, some do manage to maintain an average weight by alternately bingeing and starving (9). The aim of the present study was assessment of eating habits and behavior distress among adolescent boys and girls, food consumption pattern have been assessed in order to verify the presence of unbalanced diets.

2. Material and Method

This is a cross sectional study done at a district Lucknow, Uttar Pradesh, India. This was carried out among adolescent students over a period of 2013-2014. Out of the total sample frame, 120 students from 11-19 years. Self-structured questionnaire was used as a study tool. The study variables are sex and eating practices. Statistical analysis was performed by SPSS. Results are presented in number and percentage.

3. Result

Table 1: Distribution of respondent on basis of Timing of meal

S. No	Timing of meal	Boys N=60		Girls N=60		Total N=120
		N	%	N	%	
1	Regular	27	45.0	23	38.3	50
2	Irregular	33	55.0	37	61.7	70
3	Fixed time	-	-	-	-	-
	total	60	100%	60	100%	120

Note- none of respondent take fixed time meal

Table 2: Distribution of respondent on basis of the nature of diet taken

S. No	Nature of diet taken	Boys N=60	Girls N=60	Total N=120
1	Vegetarian	13(21.7)	36(60.0)	49(40.833)
2	Non vegetarian	40(66.7)	22(36.7)	62(51.66)
3	Eggitarian	7(11.7)	2(3.3)	9(7.5)
	Total	60(100.0)	60(100.0)	120(100.0)

Table 3: Distribution of respondent according to taken Fortified items in meal (N=120)

S. No	Fortified items	Daily No (%)	Weekly No (%)	Fortnightly No (%)	Monthly No (%)	Occasionally No (%)	Never No (%)
1.	Wheat flour	19 (15.83)	52(43.33)	10(8.33)	10(8.33)	12(10.00)	27(22.5)
2.	Salt	120(100.00)	-	-	-	-	-
3.	Ghee/oil	-	115(98.8)	5(4.16)	-	-	-
4.	Milk	-	68(56.66)	34(28.33)	14(11.68)	4(3.33)	-
5.	Bread	-	-	23(19.5)	67(58.33)	10(8.33)	11(9.16)

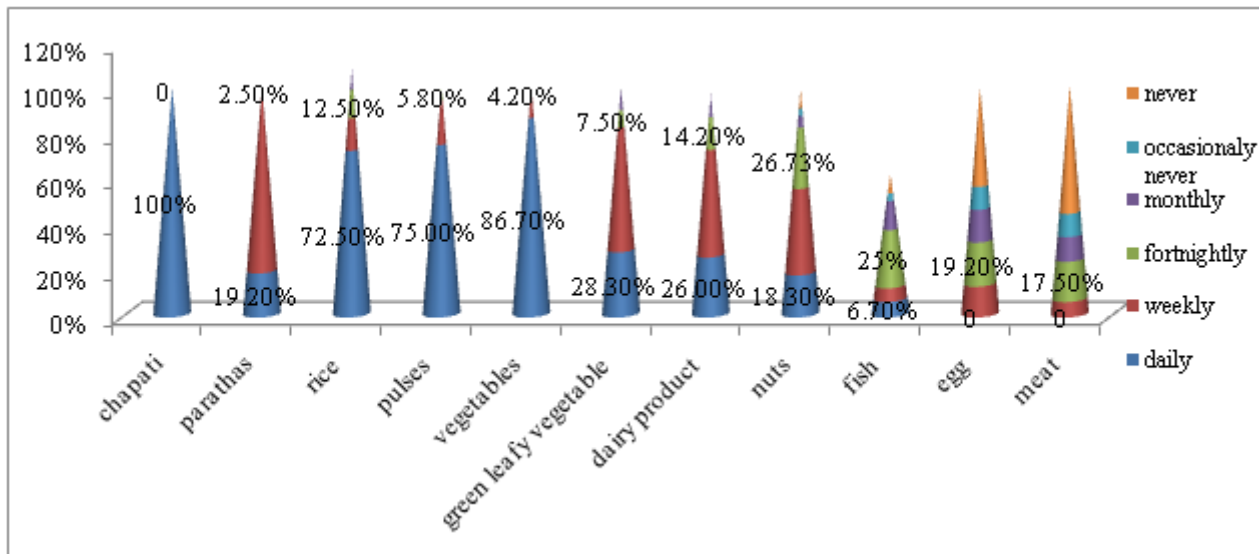


Figure 4: Consumption pattern of various food stuff (N=120)

Table 5: Basis of taken meal when celebrating event (N=120)

S. No	Food item	Daily No (%)	Weekly No (%)	Fortnightly No (%)	Monthly No (%)	Occasionally No (%)	Never No (%)
1	Orange juice	12(10.00)	30(25.00)	-	61(50.83)	6(5.00)	11(9.16)
2	Burger	-	12(10.00)	7(5.83)	55(45.89)	21(17.54)	25(20.83)
3	Pizza	-	22(18.33)	44(36.66)	2(24.16)	22(18.33)	4(3.33)
4	Sandwich	1(0.83)	20(16.66)	44(36.66)	29(24.16)	22(18.33)	4(3.33)
5	noodles	7(5.83)	31(25.38)	15(15.8)	32(26.7)	17(9.22)	20(16.66)
6	Cold drink	-	25(20.88)	32(26.7)	44(36.66)	18(15.88)	-
7	Pudding	-	36(30.00)	25(20.83)	53(44.16)	6(5.00)	-
8	Sweet	-	46(40.00)	24(20.00)	45(37.50)	6(5.00)	-
9	Halwa	-	24(20.00)	28(23.33)	48(40.00)	3(2.5)	-
10	Omlette	-	5(4.2)	23(19.22)	35(29.16)	4(3.33)	16(13.33)
11	Chicken	-	11(9.2)	18(15.00)	31(25.83)	5(4.16)	54(45.00)

4. Risk Factors

Table 6: Distribution of Respondent as per various dietary habit/practices

S.No	Practices	Boys(n=60)	Girls(n=60)	total
1	Anaroxia,bulimia nervosa	24	15(25.00%)	39(32.00%)
2	Outside eating	41(68.33%)	41(68.33%)	82(68.33%)
3	Binge eating	45(75.00%)	27(45.00%)	72(60.00%)
4	Single eating	17(28.33%)	36(60.00%)	41(34.16%)
5	Balance diet	29(48.33)	36(60.00%)	53(44.16%)
6	Menu plane diet	48(80.00%)	44(73.33%)	92(76.66%)

Table 7: Mean value of the respondent on basis of various eating disorders

S. No	Dietary Practices	Anaroxia,bulimia nervosa			Binge eating		
		Mean	SD	t-value	Mean	SD	t-value
1	Boys(n=60)	1.6	0.494	25.087	1.73	0.437	30.107
2	Girls(n=60)	1.75	0.437	31.043	1.45	0.662	18.048

*** Sig. at level of .000.

5. Discussion

In our study there were 60 adolescent boys and 60 girls. Among them timing of meal among adolescent found majority of boys (55.0%) have irregular timing of meal and majority of girls (61.7%) also irregular timing of meal. According to Muazzam & Khalid, (2008) The tendency of skipping meals was also more prominent in girls due to increasing trend to lose weight so that they can be thin like the fashion models they idealize (8).the study found Majority of boys (66.7%) was non vegetarian and majority of girls was vegetarian (60.0%).According to (National Academy of Science, 2003; United States Department of Agriculture, 2005). Many well-designed studies have concluded that children and adolescents who follow a properly designed vegetarian diet grow and develop normally.

The current study found that Majority of study subject had take chapatti daily (100%).Seventy two percent respondent take rice daily and (86.66%) respondent take vegetables daily. Majority of student (78.33%) eat paratha weekly and minority of respondent had take egg and meat daily. Whereas (43.33%) never eat fish (55.83%) meat. When celebrating event (25%) respondent used orange juice weekly, (36.66%) respondent take sandwich fortnightly,(38.33%) respondent take sweets weekly,(29.166%) take omelets monthly. Regarding fortified food majority of student take fortified salt (100%) daily, (95%) Prefer fortified oil/ghee weekly in diet, (56.66%) take fortified milk weekly,(55.88%) use fortified bread monthly. According to findings of (National Institute of Nutrition NIN) the food daily consume by all the subject included cereals, fat and oil sugar jeggry.71.33% consumed pulses,86.66% consumed milk,32% consuming green leafy vegetable on daily basis(6) .According to the study of Singh N.(2012) , The average consumption of cereals was 305.30±118.5 g/day. This was 72.57 per cent of the estimated RDA. Consumption of pulses and green leafy vegetables were observed to be 75.18 per cent and 79.50 percent, respectively of the estimated mean RDA. In

majority (83.55%) of subjects, frequently of meals was fixed time for their meals and only 16.45 per cent subjects were irregular in their meals (14). In case of eating practices and habit the present study found that (40.00%) boys suffering from bulimia nervosa and (25.00%) girls suffering from bulimia nervosa. (68.33%) boys and girls like outside eating. (75.00%) boys had binge eating; girls had (45.00%).Balanced diet taken by (48.33%) boys and (60.00%) girls. Furthermore our result indicates that majority of boys suffering from eating disorder rather than girls. Disturbed eating behavior was predicted among adolescent. According (Boschi M. 2003) we observed a prevalence of 1.28% of bulimia nervosa, 1.28% of binge eating, and 10.25% of eating disorders not otherwise specified. EDI 2 and PRFQ confirmed how important drive for thinness and body dissatisfaction dimensions are when we deal with adolescent girls and with the phenomenon of dieting.(2).The data shows that Boys respondents (1.60±.494) was suffering from Anaroxia,bulimia nervosa and the Girls respondent (1.75±.437) was suffering from eating disorder Anaroxia,bulimia nervosa and binge eating disorder among boys respondents (1.73±.437) and the Girls respondent (1.45±.662).So that data shows significantly difference between the boys and girls on the basis of eating disorder.

6. Conclusion

In conclusion, this study revealed that meal skipping, particularly breakfast, snacking and practicing various weight losses dietary behaviors were some of the unhealthy eating behaviors depicted by adolescent girls and boys. As adolescents are tomorrow's adults, promotion of healthy eating that stresses on the importance of regular intakes of main meals is crucial for their current and future health and well-being.

7. Recommendation

Nutritional needs during adolescence are increased because of the increased growth rate and changes in body composition associated with puberty .eating behavior affect body composition .So healthy eating behaviors should be established in childhood and maintained during adolescence. From the results, the following practical recommendations can be made (i) Adolescents, whether they experience weight problems or not, should receive guidance with regard to healthy eating habits. Teachers can assist but it is primarily parents' task to provide information in this regard. If parents are unsure, a dietician can be approached to plan meals and structure the eating pattern of the whole family. (ii)This gives new approach for further study. Parents need to set an example so that the child can gain insight into the importance of eating correctly. This is even more important in families where children are inclined to be overweight. (iii)Nutritious food such as fruit and vegetables should be available instead of cake, sweets, cold drinks and so forth. The qualitative research must include quantitative research so that development of adolescent much is better.

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