ASSESSMENT OF LIFESTYLE AND EATING HABITS AMONG ADOLESCENT GIRLS

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Abstract

The present study assesses lifestyle and eating habits of adolescent girls. This cross-sectional study was conducted on 430 adolescent girls aged 16-19 Years. Lifestyle and eating habits of adolescents were assessed. The prevalence of overweight was 30.23% and that of obesity was 8.1%. The frequencies of daily intake of fruits, dairy products and vegetables are 20.69%, 38.37% and 78.83% respectively. Skipping lunch (28.60%) was more frequent than breakfast (26.27%) and dinner (23.02%). Moreover 31.62% of subjects had fast foods habits and 83.72% had fast foods 1-3 times per week. Consumption of millets was rarely seen among the samples and around 76 % of the samples had spent less than 200 rupees for purchasing millets. Overall 77.20% participants watched television for at least 2 hours per day and 57.67% reported to have a sleeping time of less than 8 hours a day. Low physical activity that is less than 30 minutes per day was seen 60.46% among the samples. Adolescent nutrition deserves attention given the poor quality of their dietary intake which may put them at risk of malnutrition and chronic diseases. Improvement of food and lifestyle habits should be considered in public health plans for health promotion of adolescent girls and the next generation.

Keywords: Adolescent girls, Dietary behavior, Life style, Physical activity.

Introduction:

The period of development and growth that occurs between childhood and maturity is known as adolescence. The World Health Organization (WHO) defines an adolescent as any individual who is between the ages of 10 and 19.[1]An estimated 18% of the world's population is in their teens, with over half of them living in the Asian subcontinent. In absolute terms, India has the largest population of adolescents.[2] This is a crucial time in a person's life because of a number of mental, emotional, and physical difficulties. Numerous research shown that during this

time, female adolescents typically experience greater challenges than male adolescents.[3]. Adolescence brings about a number of changes in a person's routines and behavior.[4]Certain behavioural changes made by teenagers, like increased physical activity, eating habits, smoking, and sleep patterns, might have a negative impact on their health as adults.[5]. In terms of adolescents' mental and psychological well-being, physical activity is important.[6] The length and quality of sleep are two other crucial factors that affect adolescent mental health, brain development, the cognitive system, and the learning and memory systems. Teenagers typically get less sleep than children do.[7]. Teens frequently eat unhealthy diets and have a tendency to overindulge in junk food that is greasy and salty. These nutrient-poor meals have an impact on adolescent girls' and pregnant women's nutritional status. Adolescents, particularly female adolescents, are more self-conscious about their weight and body appearance, which might prevent them from consuming the right amount of energy and nutrients for their fast growth during adolescence. In addition, it results in iron deficiency anaemia, malnutrition, and nutritional deficiencies.[8] Girls throughout their adolescence will grow up to be healthy adult ladies. In the growth and development of the next generation, adolescent females play a crucial role as future mothers. Indian teenage girls, particularly those living in rural areas, consume too little food, both in terms of quantity and quality. The present cross-sectional study was carried out among adolescents girls to assess their lifestyle and eating habits.

Materials and Methods

Study Population

In the present study, the data of Government and private college adolescent girls in the age of 16-20 years were selected and data were collected.

Data Collection

In the present study data from 430 adolescent girls were assessed. Participants' ages ranged from 16 to 20. Demographic characteristics, weight status, physical activity, dietary habits, sleep patterns, television watching, personal computer (PC) working time, duration of mobile use were assessed. The questionnaire used to collect this data was validated. During in-person interviews with one of the parents, the questionnaire covering eating habits, leisure time activities, and sleep patterns was completed. We examined the validity and reliability of every questionnaire.[9,10]

To assess dietary habits, the frequency of intake of various food groups was asked, including: vegetables (fresh or cooked); fruit (fresh, dried, or packed); dairy products (milk, yogurt, cheese); fast food (noodles, burgers, and pizza); salty snacks (snacks and chips); sweets (cakes, cookies, pastries, biscuits, and chocolate); and drinks (carbonated drinks, diet sodas, tea, coffee).

A calibrated scale was placed on a flat ground and weightwas measured to the nearest 0.1 kg. Height was measured using a portable stadiometer to the nearest 0.1 cm. Waist circumference was measured at the midway point betweenthe lower border of the rib cage and the iliac crest at the end of normal expiration.

The number of hours per day watching television and/ or videos, using a personal computer or playing electronic games was asked for assessment of screen time (ST)behavior. Based on this data, the total cumulative time spent as ST was calculated. Two categories were definedfor ST: less than 2 h/d was considered as low, and 2 h/d ormore was considered as high group.

The amount of time spent sleeping was calculated by averaging the number of hours per day on workdays and weekends. Short sleep duration was defined as 8 hours or less per day of sleep. Sometimes someone would ask when sleep started. If students exercised for at least thirty minutes a day and experienced a significant rise in heart rate or respiration, they were deemed to be getting enough physical activity. A pair of inquiries was employed to evaluate physical activity levels. Physical activity was classified as low if it lasted less than 30 minutes a day and as sufficient if it lasted more than 30 minutes.[11]

A principal component approach was employed to evaluate the socioeconomic status (SES). Parents' occupations and educational backgrounds, possession of a car and computer, and the student's choice of college (private or public) were all questioned about. Regarding SES, three groups were taken into account: low (first tertile), medium (second tertile), and high (third tertile).

Statistical Analysis

The data was analyzed using the SPSS statistical package (SPSS, Chicago, IL; version 18:0) for Windows. The standard deviation (SD) of the mean was displayed for quantitative variables. In qualitative variables, frequency (percentage) was displayed. The study employed the chi-square test to compare lifestyle and demographic variables across different socioeconomic status levels. P values were regarded as statistically significant if they were less than 0.05.

Results and Discussion

Table 1 displays the adolescent girls' demographic information. The age of the girls was 18.66 (1.09) years on average (SD). The study found that the prevalence of obesity was 8.1% and that of overweight was 30.23%. The prevalence rates of obesity and overweight in Asian teenagers are 6.2% and 13.7%, respectively.[12] According to a large study done on children and teenagers in America, the prevalence of overweight people was 31.8% and obesity was 16.9%.[13] The prevalence of excess weight in children and adolescents has rapidly increased in recent decades due to changes in dietary patterns, including increased intake of sweets and soft drinks and decreased intake of fruits and vegetables in many countries.[14]

Table – 1

Socio demographic characteristics of adolescent girls

Variables	Mean	SD
Age	18.66	1.09
Height (cm)	152.87	10.76
Weight (kg)	45.25	8.86
Hemoglobin (g/100 cc)	9.9	1.57
	No.	**%**
Type of Family		
Joint	156	36.27
Nuclear	274	63.7
Educational status of parents		
Literate	134	31.16
Illiterate	296	68.83
Income		
Below 10000	331	76.97
10001-30000	68	15.81
Above 30000	31	7.2

Table 2 displays the adolescent girls' food and snack intake. Fruits (20.69%), vegetables (78.85%), and dairy products (38.37%) were consumed more frequently on a daily basis than fast food, sugary snacks, salty snacks, and carbonated drinks.Consuming a sufficient amount of fruits and vegetables is crucial as they are effective providers of antioxidants and play a significant role in preventing non-communicable illnesses.[15]

Our research revealed that 38.37% of teenage girls regularly ate dairy products. Products made from dairy are a vital component of a balanced diet. They significantly contribute to the improvement of bone and tooth health as well as the prevention of obesity, hypertension, and cardiovascular disease. One essential micronutrient during adolescence is calcium, which can be found in dairy products.[16]

Our research revealed that teenage girls consumed 2.55% of fast food items daily and 24.41% of them weekly. One of the main issues during adolescence is obesity. Fast food and snack consumption is on the rise in today's society, which is undoubtedly contributing to this issue.[17]

Table – 2

Food and snack consumption of adolescent girls

Food items		Daily	Weekly	Rarely	Never
Sweet snacks	Number	107	175	131	17
	Percentage	24.88	40.69	30.46	3.95
Salty snacks	Number	95	140	159	36
	Percentage	22.09	32.55	36.97	8.37
Carbonated drinks	Number	13	87	238	92
	percentage	3	20.23	55.34	21.39
Fruit	Number	89	192	143	6
	Percentage	20.69	44.65	33.25	1.39
Vegetables	Number	339	74	17	0
	Percentage	78.85	17.2	3.95	0
Dairy products	Number	165	105	112	48
	Percentage	38.37	24.41	26.04	11.16
Fast foods	Number	11	105	266	48
	Percentage	2.55	24.41	61.86	11.16

The lifestyle choices made by the teenage girls that were chosen are shown in Table 3. Compared to breakfast and dinner, skipping lunch (28.60%) was more common among the main meals. Additionally, 51.86% of the girls used their phones for two hours or more every day, and 77.2% of the girls watched television. The current study showed that 57.67% of adolescent girls slept for less than 8 hours a day. Short sleep duration and poor sleep quality are very common among adolescents. Sleep issues are common in adolescents, affecting 25% to 50% of them.[18]

According to the current study, 20.69% of teenage girls and 78.83% of adolescent girls consumed fruits every day.

We found that 73.72% of adolescent girls consumed breakfast regularly; it is higher than breakfast consumption in Western countries which is reported to be about 60% to 70%. Breakfast is the most important meal of the day, and has a significant effect on physical and cognitive development during the adolescence period. A growing body of evidence has documented the effects of breakfast consumption on reducing the risk of obesity and overweight.[19]

Table – 3

Life style habits of adolescent girls

Breakfast	Number	Percentage
Skipper	113	26.27
Nonskipper	317	73.72
Lunch		
Skipper	123	28.6
Nonskipper	307	71.39
Dinner		
Skipper	99	23.02
Nonskipper	331	76.97
Sleep duration		
Less than 8 hours / day	248	57.67
More than 8 hours / day	182	42.32
Television watching		
Less than 2 hours / day	332	77.2
More than 2 hours / day	98	22.79
Personal computer use		
Less than 2 hours / day	379	88.13
More than 2 hours / day	51	11.86
Mobile use		
Less than 2 hours / day	207	48.13
More than 2 hours / day	223	51.86
Physical activity		
Less than 30 minutes / day	260	60.46
More than 30 minutes / day	170	39.53

Table 4 displays the frequency of lifestyle factors among participants based on their socioeconomic status. Adolescent girls from low-SES backgrounds were less likely than those from medium- or high-SES backgrounds to engage in low physical activity, defined as less than 30 minutes per day (62.84% vs. 50% and 58.06%, respectively). With the exception of fruit and vegetable intake, there was no discernible difference in the frequency of food consumption based on the participants' SES (P value > 0.05). In the present study, there were no differences in intake of food items among adolescent girls according to their SES except fruits and vegetables intake.

Table – 4

Frequency of food items intake and lifestyle habits according to socio-economic status

		Socio-economic status						p value
		Low		Medium		High		
		No.	%	No.	%	No.	%	
Sweet snacks	Daily	90	27.19	14	20.59	3	9.67	0.065[NS]
	Non daily	241	72.81	54	79.41	28	90.32	
Salty snacks	Daily	73	22.05	15	22.06	7	22.58	0.997[NS]
	Non daily	258	77.95	53	77.94	24	77.42	
Carbonated drinks	Daily	10	3.02	3	4.41	1	3.23	0.840[NS]
	Non daily	321	96.98	65	95.59	30	96.77	
Fruit	Daily	65	19.64	21	30.88	3	9.68	0.033[*]
	Non daily	266	80.36	47	69.12	28	90.32	
Vegetables	Daily	260	78.55	60	88.24	19	61.29	0.009*
	Non daily	71	21.45	8	11.76	12	38.71	
Dairy products	Daily	130	39.27	27	39.71	8	25.81	0.327[NS]
	Non daily	201	60.73	41	60.29	23	74.19	
Fast foods	Daily	10	3.02	1	1.47	1	3.23	0.769[NS]
	Non daily	321	96.98	67	98.53	30	96.77	
Screen time	Less than 2 hours / day	148	44.71	40	58.82	19	61.29	0.033*
	More than 2 hours / day	183	52.29	28	41.18	12	38.71	
Physical activity	Less than 30 minutes / day	208	62.84	34	50	18	58.06	0.137[NS]
	More than 30 minutes / day	123	37.16	34	50	13	41.94	

According to this study, 39.53% of teenage girls engaged in physical activity for longer than 30 minutes every day. Just 16% of female adolescents worldwide are physically active, according to a 2010 WHO report.

The amount of time teenagers spend playing video games and watching television is directly correlated with the rising rates of obesity and physical inactivity. Not only does watching television significantly reduce physical activity, but it can also lead to an increase in snacking and high-calorie food consumption. Our research revealed that 22.79% of teenage girls watched television for more than two hours every day. 42.8% of girls in an American high school study said they watched television for more than two hours a day.[20]

The current study's finding that screen time and SES are positively correlated. Likewise, among German children and adolescents, higher SES was linked to less time spent watching television.[21] Nonetheless, there was no variation in participants' physical activity levels based on their socioeconomic status in the current study. In the present study, we assessed lifestyle factors and eating habits in a large sample of adolescent girls with different SES.

Conclusion :

In conclusion , the study revealed that teenage girls' consumption of fruits, vegetables, and dairy products was below recommended levels. Major unhealthy lifestyle habits included skipping breakfast, having trouble sleeping, and being physically inactive, especially when it comes to people with high socioeconomic status. Adolescence is a crucial stage of life for girls, impacting not only their present health but also the health of future generations and themselves. For this reason, health programs for individuals and the general public should prioritize promoting the health and improving the lifestyle habits of adolescent girls.

Acknowledgement :

Conflicts of interest :

There are no conflicts of interest.

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