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# Nutritional Habits Of Adolescents Studying In Kashmir University (School)

**Shifa Zahoor[1], Naila Irshad[2*]**

[1]M.Sc. Dietetics and Clinical Nutrition, University of Kashmir, Hazratbal, Jammu and Kashmir, 190006.
[2*]Assistant Professor, Food Science and Nutrition, University of Kashmir, Hazratbal, Jammu and Kashmir, 190006.

***Corresponding author-** Naila Irshad
*e-mail: nailairshad@uok.edu.in

***ABSTRACT***
During adolescence, a pivotal stage of physical and emotional development, a nutritious diet is essential for establishing a strong foundation of lifelong health and wellness. However, this age group faces a unique challenge: the coexistence of under and over nutrition. As a result, adolescents are considered a high-risk group for nutritional deficiencies. Despite this, there is a significant knowledge gap regarding their dietary patterns, food preferences, and nutritional status. Recent trends indicate a surge in the consumption of high-calorie, low-nutrient foods, particularly through snacking. While snacking can provide essential nutrients, excessive snacking is linked to increased energy intake, sugar consumption, and unhealthy habits like skipping meals. These dietary patterns are closely tied to impaired cognitive function, behavioral issues, mental health concerns, and eating disorders. To address this, our study investigated the dietary habits, food preferences, and eating patterns of urban adolescents attending Model High School, University of Kashmir, to better understand their nutritional needs and inform effective interventions.
**METHODOLOGY**: A study was carried out to assess the nutritional habits of adolescents in the age group of 13-16 years. A total number of 75 adolescents were selected randomly from Model High School, University of Kashmir.
**RESULT**: Majority of the respondents i.e. 78.8% consumed fast foods with 24.3% consuming it daily. Additionally 26.7% consumed packeted salty snacks, followed by chocolates (22.7%) as snacks. Moreover, 52% of the respondents skipped their meals, with lunch being the most frequently skipped meal (26.7%), followed by breakfast (20%).
**CONCLUSION**: It was found that higher proportion of adolescents consumed fast foods and skipped their meals, with lunch being skipped the most frequently skipped meal.

**KEYWORDS**: Adolescents, Dietary habits, Body Mass Index, Snacking, Diet, Nutrition, Food Intake, School

**Introduction:**
According to WHO, 1.2 billion adolescents live in the world which constitute 16% of the total population in the world, with over 253 million in India (Bansal et al., 2021).
The adolescent phase (10-19 years) is a transformative period marked by rapid physical growth, psychological maturation, and emergence of secondary sexual characteristics. This critical life stage lays the foundation for future health and well-being. Encouraging nutritious eating habits during adolescence is crucial for optimal growth, disease prevention, and establishing a lifelong pattern of healthy consumption.

However, the global rise in fast food consumption, including in India, poses a significant challenge. Adolescents often develop unhealthy dependencies on convenient but nutrient-poor options like junk food, sugary beverages, and processed Chinese food, leading to a range of diet-related health issues. By promoting balanced eating habits, we can empower adolescents to make informed choices that support their immediate and long-term health. These foods have high fat and contain high energy density and less fibre (Gupta et al., 2022). Snacking energy dense foods, skipping meals/irregular meals, increased consumption of fast foods and less frequent consumption of fruits and vegetables are commonly seen habits among adolescents (Vinay et al., 2019). Meal skipping has been frequently reported as a habit among adolescents (Zahrah et al., 2023).

Nowadays, skipping breakfast has become a controversial public health issue (Ma et al., 2020). Snacks are different from regular meals in terms of nutritional profile, time, and frequency of consumption (Roy et al., 2021). Poor eating habit and dietary pattern predispose adolescents to diet related non- communicable disease including hypertension (Okolosi et al., 2020). Dietary pattern assessment generates an evidence base and provides public health recommendations to interventionist (Sharma et al., 2021). The dietary pattern gives information on overall nutritional behavior rather than in a single component (Baral et al., 2021). Among urban adolescents in India, some of these patterns are also likely to be common but very little information is available. Therefore, this study was carried out among school going urban adolescents, with the objective to assess their dietary habits, snacking pattern, and pattern of skipping meals.

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**Material and methods**

The present study aimed to assess the nutritional habits of school going adolescents (13-16 years). The following methodology was adopted for the study:

**Data sources and collection:**

In this study, both the primary as well as secondary data were used.

**Primary data:**

The primary data was collected from the sample selected, using a structured interview cum questionnaire schedule.

**Secondary data:**

Information was gathered from books, unpublished and published dissertations, journals from Allama Iqbal library and the Departmental library of Institute of Home Science, University of Kashmir.

**Selection of sample:**

A total of 75 school going adolescents in the age of 13-16 years of both the sexes were selected randomly for the present study. The samples were taken from the school located in the Main Campus of University of Kashmir.

**Tools used:**

After a thorough and detailed study of the problem a self-devised questionnaire cum interview schedule was formulated. This questionnaire helped in extracting maximum information from students. In some cases, where the children were not able to answer the questions regarding qualification of their parents, the information was collected from their family members and school records. A specially crafted survey instrument was developed to explore the eating behaviors and dietary preferences of adolescents, aiming to gather insights into their typical food choices and consumption habits. The Questionnaire Cum Interview was divided into various sections:

**General information:**

This section includes information regarding name, age, sex, class of respondents and family background such as education & occupation of parents, type of family, number of family members, number of siblings & family income.

**Dietary habits:**

This section revealed information related to the dietary habits of adolescents. Questions about their meals, snacking etc. were also asked.

The gathered data underwent meticulous examination and organization, culminating in a comprehensive summary table that systematically consolidated all relevant information, facilitating a cohesive and detailed analysis. The data thus collected was tabulated, analyzed and interpreted as per the needs of the study with the help of various statistical tools.

**Results and discussion**

**Table 4.1: Distribution of respondents as per class**

| Class | Frequency | Percentage |
|---|---|---|
| $7^{th}$ | 16 | 21.3 |
| $8^{th}$ | 19 | 25.3 |
| $9^{th}$ | 20 | 26.7 |
| $10^{th}$ | 20 | 26.7 |
| Total | 75 | 100.0 |

Table 4.1: shows distribution of respondents as per class. It reveals that majority i.e. 26.7% were from $9^{th}$& $10^{th}$ class each. However, 25.3% were from $8^{th}$ class & 21.3% from $7^{th}$ class.

**Table 4.2: Distribution of respondents as per age**

| Age group(years) | Frequency | Percentage |
|---|---|---|
| 12-13 | 16 | 21.3 |
| 13-14 | 19 | 25.3 |
| 14-15 | 20 | 26.7 |
| 15-16 | 20 | 26.7 |
| Total | 75 | 100.0 |

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Table 4.2: shows distribution of respondents according to age. The respondents are distributed in 4 age groups. Majority of the respondents i.e. 26.7% belonged to 14-15yrs& 15-16yrs age group each, followed by 13-14yrs age group (25.3%).

**Table 4.3: Distribution of respondents as per gender**

| Gender | Frequency | Percentage |
|---|---|---|
| Female | 37 | 49.3 |
| Male | 38 | 50.7 |
| Total | 75 | 100.0 |

Table 4.3: shows distribution of respondents based on gender. It was revealed that 50.7% of the respondents were males and rest were females (49.3%).

**Table 4.4: Distribution of respondents based on Body Mass Index (BMI)**

| BMI Classification | Gender | | | | | |
|---|---|---|---|---|---|---|
| | Male | | Female | | Overall | |
| | Frequency | Percentage | Frequency | Percentage | Frequency | Percentage |
| **Under weight (<18.5)** | 8 | 21.6 | 7 | 18.4 | 15 | 20.0 |
| **Normal-weight (18.5-24.99)** | 21 | 56.8 | 24 | 63.2 | 45 | 60.0 |
| **Over-weight (25 – 25.99)** | 1 | 2.7 | 2 | 5.3 | 3 | 4.0 |
| **Pre-obese (26.0 – 29.99)** | 7 | 18.9 | 5 | 13.2 | 12 | 16.0 |
| Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |

Table 4.4: shows distribution of respondents as per body mass index (BMI). It shows that majority of the respondents (60.0%) were having normal BMI. In addition to this, 20.0% were underweight, 16.0% were pre obese & only 4.0% were overweight. In a similar study carried out by Nicholaus et al (2020) it was found that 64.5% adolescents were normal, while 3.2% were underweight, 29% & 3.2% were overweight & obese respectively.

**Table 4.5: Distribution of respondents as per dietary habits**

| Dietary Habits | | Gender | | | | | |
|---|---|---|---|---|---|---|---|
| | | Female | | Male | | Overall | |
| | | F | Percentage | F | Percentage | F | Percentage |
| Fast food consumption | Yes | 28 | 75.7 | 31 | 81.6 | 59 | 78.7 |
| | No | 9 | 24.3 | 7 | 18.4 | 16 | 21.3 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |
| Frequency of consuming fast foods | Never | 9 | 24.3 | 7 | 18.4 | 16 | 21.3 |
| | Daily | 6 | 16.2 | 12 | 34.2 | 18 | 24.3 |
| | 2-3 times a week | 9 | 24.3 | 10 | 26.3 | 19 | 25.3 |
| | 4-6 times a week | 6 | 16.2 | 6 | 15.8 | 12 | 16.0 |
| | 1-3 times per month | 1 | 2.7 | 0 | 0.0 | 1 | 1.3 |
| | 3-4 times per month | 6 | 16.2 | 3 | 7.9 | 9 | 12.0 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |

Table 4.5: shows distribution of respondents as per their dietary habits. It shows that 78.7% of respondents consumed fast food, with 24.3% consuming it daily. The results of study conducted by Gupta et al (2022) revealed that more than 20% of students consumed fried food/pizza/burger/fast food more frequently (more than 4 days a week) in a week & only few students were not consuming these foods or consuming less frequently.

**Table 4.6: Distribution of respondents as per snacking pattern**

| | | Gender | | | | | |
|---|---|---|---|---|---|---|---|
| | | Female | | Male | | Overall | |
| | | F | Percentage | F | Percentage | F | Percentage |
| Type of snacking | Packeted salty snacks | 9 | 24.3 | 11 | 28.9 | 20 | 26.7 |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Nuts | 9 | 24.3 | 5 | 13.2 | 14 | 18.7 |
| | Soft drinks | 2 | 5.4 | 2 | 5.3 | 4 | 5.3 |
| | Chocolates | 6 | 16.2 | 11 | 28.9 | 17 | 22.7 |
| | Sweets & candies | 6 | 16.2 | 4 | 10.5 | 10 | 13.3 |
| | Samosas | 5 | 13.5 | 5 | 13.2 | 10 | 13.3 |
| | Cholay (chick peas) | 0 | 0 | 0 | 0 | 0 | 0 |
| | Nadir monj(Fried lotus stem) | 0 | 0 | 0 | 0 | 0 | 0 |
| | Masaal tchot(flatbread with pulses) | 0 | 0 | 0 | 0 | 0 | 0 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |
| Liking towards excessive snacking | Yes | 15 | 40.5 | 17 | 44.7 | 32 | 42.7 |
| | No | 22 | 59.5 | 21 | 55.3 | 43 | 57.3 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |
| Reason for increased snacking | None | 22 | 59.5 | 21 | 55.3 | 43 | 57.3 |
| | Boredom | 3 | 8.1 | 4 | 10.5 | 7 | 9.3 |
| | Hunger | 8 | 21.6 | 11 | 28.9 | 19 | 25.3 |
| | Stress | 1 | 2.7 | 0 | 0.0 | 1 | 1.3 |
| | Others | 3 | 8.1 | 2 | 5.3 | 5 | 6.7 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |

Table 4.6: shows distribution of respondents as per their snacking pattern. It shows that majority (26.7%) consume packeted salty snacks, followed by chocolates (22.7%). However, none of the respondents consume cholay (chick peas), nadir monj (Fried lotus stem) & masaal tchot(flat bread with pulses).

A study carried out by Thamarai et al (2019) showed that about 42% of the selected students preferred their snacks in sweet taste. 38% of them were ready to accept salt and spicy snacks. However, minimum percentage of 8% preferred the snacks in plain salt taste.

**Table 4.7: Distribution of respondents as per the pattern of skipping meals**

| | | **Gender** | | | | | |
|---|---|---|---|---|---|---|---|
| | | **Female** | | **Male** | | **Overall** | |
| | | **F** | **Percentage** | **F** | **Percentage** | **F** | **Percentage** |
| Skip meals | Yes | 21 | 56.8 | 18 | 47.4 | 39 | 52.0 |
| | No | 16 | 43.2 | 20 | 52.6 | 36 | 48.0 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |
| Type of meal mostly skipped | None | 16 | 43.2 | 20 | 52.6 | 36 | 48.0 |
| | Breakfast | 11 | 29.7 | 4 | 10.5 | 15 | 20.0 |
| | Lunch | 9 | 24.3 | 11 | 28.9 | 20 | 26.7 |
| | Dinner | 1 | 2.7 | 3 | 7.9 | 4 | 5.3 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |
| Skipping Breakfast | Never | 26 | 62.2 | 34 | 89.5 | 60 | 80.0 |
| | Sometimes | 3 | 16.2 | 1 | 2.6 | 4 | 5.3 |
| | Most of the times | 8 | 21.6 | 3 | 7.9 | 11 | 14.7 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |
| Skipping Lunch | Never | 28 | 62.2 | 27 | 68.4 | 55 | 73.3 |
| | Sometimes | 6 | 16.2 | 3 | 7.9 | 9 | 12.0 |
| | Most of the times | 3 | 21.6 | 8 | 23.7 | 11 | 22.7 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |
| Skipping Dinner | Never | 36 | 94.6 | 35 | 86.8 | 71 | 94.6 |
| | Sometimes | 1 | 5.4 | 3 | 13.2 | 4 | 5.4 |
| | Total | 37 | 100.0 | 38 | 100.0 | 75 | 100.0 |

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Table 4.7: shows distribution of respondents as per their skipping meal pattern. It shows that 52% of the respondents skip their meals and the meal mostly skipped by the respondents is the lunch (26.7%), followed by breakfast (20%). Jogi R et al (2021) conducted a study to assess the snacking pattern among adolescents & young adults. The study revealed that 44% of the participants skipped breakfast, 84. 5% skipped lunch & 16.2% dinner.

**Discussion**

In this study an attempt was made to assess the **"**THE NUTRITIONAL PATTERN OF ADOLESCENTS (13-16 YEARS) STUDYING UNIVERSITY OF KASHMIR SRINAGAR". The total number of the respondents was 75. They were in the age group of 13-16 years. 50.7% were males and 49.3% were females. 14.7%, 25.3%, 33.3%, 26.7% belonged to 13, 14, 15 & 16 years of age group respectively. 26.7%, 21.3%, 25.3% & 26.7% were studying in $10^{th}$, $7^{th}$, $8^{th}$ & $9^{th}$ class respectively. In terms of BMI of boys, the majority (56.8%) was having normal body mass index whereas only 21.6% & 2.7% were underweight & overweight respectively. In case of girls, the majority (63.2%) were having normal body mass index, however 15% & 3% were underweight and overweight respectively.

Dietary habits of the respondents shows that majority of them, (78.8%) consume fast food whereas a certain number (24.3%) consumes fast food daily. The fast foods that are most liked by the respondents are chips, chocolates, sweets & samosas.

As far as the snacking pattern is concerned, majority (26.7%) consume packeted salty snacks, followed by chocolates (22.7%). However, none of the respondents consume cholay (chick peas), nadir monj (Fried lotus stem) & masaal tchot (flat bread with pulses).

52.0% of the respondents were skipping meals. 22.7% were skipping lunch, 14.7% respondents were skipping breakfast and only 9.3% were skipping dinner.

**Conclusion**

The study revealed that a significant proportion of boys (56.8%) had normal BMI, with fewer being underweight (21.6%) and overweight (2.7%). Among girls, 63.2% had a normal BMI, while 15% were underweight and 3% were overweight. Dietary habits indicated that a high percentage (78.8%) of respondents consumed fast foods, with chips, chocolates, sweets, and samosas being the most preferred choices. More than half (52.0%) of the respondents reported skipping meals, with lunch being skipped by 22.7%, breakfast by 14.7%, and dinner by 9.3%.

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