



## Dietary Habits Among Government and Private Hostlers (Young Adults) A Comparative Study

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### ABSTRACT

Nutritional status is a critical determinant of overall health, academic performance, and long-term well-being. It is influenced by several factors, particularly dietary habits, food consumption patterns, and meal-related behaviours. Understanding these factors is essential for promoting optimal nutrition and preventing health complications related to undernutrition or overnutrition, especially among young adults residing in institutional settings. The present study aimed to assess factors affecting the nutritional status of female students residing in government and private hostels in Hyderabad, with emphasis on dietary habits, meal consumption patterns, frequency of meal skipping, and plate wastage.

Female subjects aged 18–25 years from selected government and private hostels were included in the study. Data were collected using structured questionnaires administered through online and offline modes to gather information on dietary practices and meal behaviours. A 24-hour dietary recall method was employed to estimate actual food intake and assess plate wastage. Anthropometric measurements were used to calculate Body Mass Index (BMI). Statistical analysis involved calculation of mean and standard deviation to compare caloric intake and plate wastage between the two groups.

The results revealed that most subjects from government hostels were underweight ( $n=28$ ), while most subjects from private hostels exhibited a normal BMI ( $n=34$ ). Meal skipping was reported more frequently among private hostel residents compared to those in government hostels. Although the mean caloric intake in government hostels (1500.53 kcal) was higher than that in private hostels (1210.13 kcal), plate wastage was greater among government hostel residents. This finding indicates inefficient food utilization and suggests that increased food provision alone does not ensure improved nutritional outcomes.

The study highlights the significant influence of behavioural factors such as meal skipping and food wastage on nutritional status. It emphasizes the need for targeted interventions including nutrition education, improved meal planning, and sustainable food management practices within hostel food systems. Addressing these issues can improve nutritional security, reduce food wastage, and enhance human well-being, contributing to Sustainable Development Goals related to health, nutrition, and responsible consumption.



**Keywords:** Nutritional status, BMI, Dietary habits, Meal skipping, Plate wastage, Hostel residents, Food security.

## INTRODUCTION

A balanced diet can be defined as one that includes a wide variety of foods in appropriate quantities and proportions to meet the body's requirements for energy, macronutrients (proteins, carbohydrates, fats), micronutrients (vitamins and minerals), and other essential compounds necessary for maintaining optimal health, vitality, and general well-being. In addition, a balanced diet allows for a small buffer of extra nutrients to compensate for periods of insufficient intake or mild nutritional deficiencies, ensuring the body remains resilient to short-term fluctuations in diet (Badiger S et al., 2017).

The transition to college life often significantly alters students' food habits. Before entering college, dietary practices are largely regulated by parents or guardians and, to some extent, school authorities. With the newfound autonomy in college, students gain the liberty to choose from a wide range of food options. While this independence promotes personal preference and exploration of new foods, it also exposes students to the risk of adopting poor dietary habits. Such habits, if consistent, can lead to negative health outcomes including micronutrient deficiencies, imbalanced macronutrient intake, and susceptibility to chronic diseases (Dr. Monoj Gogoi, 2019).

In recent years, the frequency of eating out-of-home has increased substantially, particularly among young adults and college students (Yui Sakai et al., 2022). Restaurants, fast-food chains, and snack outlets have become a prominent part of students' daily diet. However, many of these foods are high in calories, saturated fats, added sugars, and sodium, while being low in essential micronutrients such as vitamins and minerals. The frequent consumption of fast foods has been linked to obesity, insulin resistance, cardiovascular disorders, and other metabolic complications (Shree V et al., 2018).

Another critical dietary concern among students is meal skipping, defined as either underconsumption or complete omission of one or more main meals such as breakfast, lunch, or dinner. Research indicates that skipping meals, particularly breakfast, is associated with lower dietary quality, insufficient intake of energy and essential nutrients, and imbalanced macronutrient consumption. Regular meal skipping can increase the risk of central obesity, insulin resistance, and other cardiometabolic disorders, highlighting the importance of structured meal patterns (Yashi Gupta et al., 2022).

Plate wastes the portion of food left uneaten after serving—is another significant aspect of dietary behavior and food management. Plate waste is often influenced by consumer preferences, appetite, portion sizes, and adequacy of servings, and is considered largely preventable. It represents not only an economic loss but also a waste of valuable nutrients that could have contributed to nutritional adequacy. Plate waste occurs at multiple levels, including wholesale or production-level waste, purchased food waste, cooking or preparation waste, and plate-level waste, with the latter being most directly influenced by the consumer's choices (Nicol Martinho et al., 2022). Proper portion control, nutrition education, and mindful eating practices are critical strategies to reduce plate waste and improve overall dietary efficiency.



By combining concepts from nutrition science, human health, and sustainability, this research highlights how evidence-based life science approaches can contribute to improved well-being and sustainable food systems.

## METHODOLOGY

A comparative non-experimental study was conducted to assess dietary patterns and behaviors among young adult females aged 18–25 years. Using simple random samplings, 100 participants were selected, 50 from government hostels and 50 from private hostels—to ensure representativeness and minimize sampling bias.

The study was carried out in Hyderabad, Telangana, encompassing diverse residential settings. Data was collected via a structured self-administered questionnaire: paper-based for government hostel participants and online (Google Forms) for private hostel participants, ensuring convenience and accessibility.

Dietary intake was measured using the 24-hour recall method, capturing all foods and beverages consumed during the previous day. Additional information on meal patterns and lifestyle factors was collected to provide context.

Data were analyzed using descriptive statistics, including mean and standard deviation, to compare dietary behaviors between the two groups. This approach provided a clear, systematic understanding of young adult females' nutritional habits across different hostel settings, highlighting potential areas for dietary interventions.

## RESULTS AND DISCUSSION

The data analysis of the 100 participants revealed notable differences between students residing in government and private hostels. Among government hostel residents, the majority ( $n = 44$ , 88%) were in the younger age group of 18–21 years, whereas private hostel residents were predominantly older, with most ( $n = 32$ , 64%) in the 22–25 years age range. Regarding educational qualifications, most government hostel students ( $n = 30$ , 60%) had completed graduation, while a larger proportion of private hostel students ( $n = 32$ , 64%) had attained post-graduation. In terms of occupation, all government hostel participants ( $n = 50$ , 100%) and nearly all private hostel participants ( $n = 48$ , 96%) were students.

Parental education and occupation also differed between the two groups. The mothers of most private hostel students ( $n = 28$ , 56%) had education up to the Secondary School Certificate (SSC) level, whereas most mothers of government hostel students ( $n = 29$ , 58%) had no formal education. Similarly, the occupation of mothers in private hostels was largely housewife ( $n = 42$ , 84%), while most mothers of government hostel students ( $n = 21$ , 42%) worked as farmers. Regarding fathers' education, the majority of private hostel students' fathers ( $n = 19$ , 38%) had completed graduation, whereas most fathers of government hostel students ( $n = 20$ , 40%) had no formal education. Occupationally, private hostel students' fathers were mainly private employees ( $n = 20$ , 40%), whereas most fathers of government hostel students were engaged in farming ( $n = 28$ , 56%).



Annual family income was generally low for both groups, with the majority of government hostel students (n = 48, 96%) and private hostel students (n = 30, 60%) reporting an income of less than 3 lakh per annum. The type of family was predominantly nuclear among both groups, comprising 74% (n = 37) of government hostel students and 86% (n = 43) of private hostel students.

Regarding social engagement, the frequency of returning home varied between the groups: most government hostel students (n = 32, 64%) visited home quarterly, whereas most private hostel students (n = 30, 60%) visited monthly. The primary reason for visiting homes reported by students in both groups was homesickness, accounting for 34% (n = 17) of government hostel students and 60% (n = 30) of private hostel students.

These findings provide a comprehensive socio-demographic profile of young adult females in hostel settings, highlighting differences in age, education, parental background, family income, and social practices between government and private hostel residents.

**Table 1. General Information**

Particulars	Government n (%)	Private n (%)
<b>Age:</b>		
18-21 years	44 (88)	18 (36)
22-25 years	6 (12)	32 (64)
<b>Education Qualification:</b>		
SSC	-	-
Intermediate	-	1 (2)
Graduation	30 (60)	17 (34)
Post Graduation	20 (40)	32 (64)
<b>Occupation:</b>		
Student	50 (100)	48 (96)
Employed	-	2 (4)
<b>Annual income:</b>		
<3 lakh	48 (96)	30 (60)
3-5 lakh	2 (4)	13 (26)
>5 lakh	-	7 (14)
<b>Type of family:</b>		
Nuclear	37 (74)	43 (86)
Joint	13 (26)	7 (14)
<b>Frequency of going home:</b>		
Monthly once	6 (12)	30 (60)
Once in 2 months	5 (10)	13 (26)



Quarterly	32 (64)	7 (14)
Annually	7 (14)	-
<b>Reasons for going home:</b>		
Home sick	17 (34)	30 (60)
No good food	5 (10)	7 (14)
Health issues	3 (6)	5 (10)
Holidays	13 (26)	6 (12)
Others (festivals)	12 (24)	2 (4)

### Anthropometric Measurements

According to the Body Mass Index (BMI) classification established by the World Health Organization (WHO), the distribution of nutritional status among the study participants differed notably between government and private hostel residents. Among the subjects residing in government hostels, the largest proportion, 56% (n = 28), were classified as underweight, indicating a potential risk of inadequate nutritional intake within this group. This was followed by 42% (n = 21) of participants falling within the normal BMI range, suggesting satisfactory body weight relative to height for this subgroup. A small minority, 2% (n = 1), were categorized as overweight, highlighting that excess body weight was relatively uncommon in government hostel residents.

In contrast, participants residing in private hostels demonstrated a higher prevalence of normal nutritional status, with 68% (n = 34) classified within the normal BMI range, reflecting better overall nutritional balance. Among this group, 20% (n = 10) were underweight, indicating that a significant portion still experienced insufficient body mass. Additionally, 10% (n = 5) were overweight, and 2% (n = 1) fell under the category of obesity class I, suggesting that issues related to excessive body weight were more evident in private hostel residents compared to those in government hostels.

Overall, these findings highlight the disparities in nutritional status between young adult females living in government and private hostels, with undernutrition being more prevalent among government hostel residents and a wider range of BMI categories, including overweight and obesity, observed among private hostel residents. This suggests the influence of factors such as dietary availability, lifestyle practices, and socioeconomic status on the nutritional well-being of students in different residential settings.

**Table 2. Anthropometric Measurements (BMI Classification)**

BMI Ranges (kg/m <sup>2</sup> )	Government n (%)	Private n (%)
<18.5 (Underweight)	28 (56)	10 (20)
18.5-24.9 (Normal)	21 (42)	34 (68)
25.0-29.9 (Overweight)	1 (2)	5 (10)
30.0-34.9 (Obese)	-	1 (2)



35.0-39.9 (Obesity class I)	-	-
>40 (Obesity class II)	-	-

## DIETARY PATTERN

The data indicates that most participants from both government and private hostels preferred a non-vegetarian diet. Specifically, 86% of subjects from government hostels (n=43) and 80% of subjects from private hostels (n=40) reported non-vegetarian dietary preferences, highlighting a strong inclination toward animal-based foods among young adult females in this population.

Regarding the number of meals consumed at home, most participants reported taking three meals per day. Among government hostel residents, 56% (n=28) consumed three meals at home, while 64% (n=32) of private hostel residents followed the same pattern. Similarly, the number of meals consumed within the hostel environment was also three for the majority. In government hostels, 94% (n=47) of participants consumed three meals per day, whereas 76% (n=38) of private hostel participants did the same, indicating that most young adults maintained a consistent meal frequency across home and hostel settings.

The study also examined whether the food consumed at home met the personal preferences of participants. It was observed that 56% (n=28) of government hostel participants and 82% (n=41) of private hostel participants reported that home-prepared foods aligned with their individual tastes and dietary preferences. Accessibility and availability of alternative food options near the hostels differed significantly between the two groups. Participants residing in government hostels reported no availability of other food options near their accommodations (100%, n=50), whereas most private hostel participants (96%, n=48) had access to additional food outlets nearby. Among these private hostel residents, half of the participants (50%, n=25) indicated that the prices of the available foods were sometimes reasonable, suggesting that while food options were accessible, cost remained a consideration in their dietary choices.

Overall, these findings suggest that non-vegetarian foods dominate the dietary preferences of young adult females in both government and private hostels, with three meals per day being the most common pattern. Home food largely meets personal preferences, particularly among private hostel residents, while accessibility and cost of alternative foods vary depending on the hostel setting.

**Table 3 Dietary Habits and Preferences**

Particulars	Government n (%)	Private n (%)
<b>Dietary preference:</b>		
Vegetarian	7 (14)	10 (20)
Non-vegetarian	43 (86)	40 (80)
<b>No-of meals (at home):</b>		



1	-	-
2	20 (40)	3 (6)
3	28 (56)	32 (64)
>3	2 (4)	15 (30)
<b>No-of meals (in hostel):</b>		
1	-	-
2	3 (6)	12 (24)
3	47 (94)	38 (76)
>3	-	-
<b>Home food according to preference:</b>		
Yes	28 (56)	41 (82)
No	2 (4)	-
Sometimes	20 (40)	9 (18)
<b>Availability of other foods near hostel:</b>		
Yes	-	48 (96)
No	50 (100)	2 (4)
<b>Reasonable price of those foods:</b>		
Yes	-	18 (36)
No	-	7 (14)
Sometimes	-	25 (50)

### Skipping meals and Plate Wastage

The data indicates clear differences in meal-skipping habits between students residing in government and private hostels. Among the private hostel residents, the majority (n=35, 70%) reported regularly skipping meals, whereas in the government hostel group, most participants (n=19, 38%) did not skip meals. For those who skipped meals, the frequency differed between the two groups: most students in government hostels (n=14, 45.16%) reported skipping meals twice a week, while most private hostel students (n=15, 42.86%) skipped meals once weekly.

The specific meals most frequently skipped also varied between the groups. Breakfast was the most skipped meal among government hostel residents (n=22, 70.97%), whereas lunch was the meal most often skipped by students from private hostels (n=15, 42.86%). The primary reason for skipping meals in both groups was food preference, specifically disliking the taste of certain foods, reported by 58.07% (n=18) of government hostel students and 54.28% (n=19) of private hostel students.



Regarding the consumption of meals served, approximately half of the participants from both hostels reported completing their meals: 50% (n=25) in government hostels and 46% (n=23) in private hostels. Among those who left portions of their meals uneaten, the main reason cited was again taste, with 97.83% (n=45) of government hostel students and 86.36% (n=38) of private hostel students indicating they did not like the food. The frequency of leaving food on the plate was reported as “sometimes” by most participants in both groups, including 86% (n=43) of government hostel students and 80% (n=40) of private hostel students.

Overall, these findings suggest that food preferences and taste play a significant role in influencing both meal-skipping behaviors and plate wastage among young adult females in hostel settings, with noticeable differences observed between government and private hostel residents.

**Table 4 Skipping of meals and Plate Wastage**

Particulars	Government n (%)	Private n (%)
<b>Skipping meals:</b>		
Yes	12 (24)	35 (70)
No	19 (38)	15 (30)
Sometimes	19 (38)	-
<b>If yes, how often:</b>		
Daily	-	3 (8.57)
Twice weekly	14 (45.16)	11 (31.43)
Weekly once	11 (35.48)	15 (42.86)
Fortnight	6 (19.36)	6 (17.14)
<b>Most skipped meal:</b>		
Breakfast	22 (70.97)	14 (40)
Lunch	1 (3.22)	15 (42.86)
Dinner	7 (22.59)	6 (17.14)
Others (both breakfast and dinner)	1 (3.22)	-
<b>Reasons for skipping meals:</b>		
Mess closed	-	2 (5.71)
No time to eat (due to work)	3 (9.68)	8 (22.86)
Do not like to eat (taste)	18 (58.07)	19 (54.28)
No appetite	8 (25.81)	5 (14.29)
Because of last meal (large meal)		
Others (fasting)	1 (3.22)	1 (2.86)
	1 (3.22)	-



<b>Completion of total amount of food served:</b>		
Yes	4 (8)	6 (12)
No	21 (42)	21 (42)
Sometimes	25 (50)	23 (46)
<b>If no, reasons for leaving the food:</b>		
No time to complete		
Do not like to eat (taste)	1 (2.17)	1 (2.28)
No appetite/ loss of appetite	45 (97.83)	38 (86.36)
Others	-	5 (11.36)
	-	-
<b>Frequency of leaving the plate empty:</b>		
Always	4 (8)	7 (14)
Sometimes	43 (86)	40 (80)
Never	3 (6)	3 (6)

### Mean and standard deviation for the plate waste of government and private hostels

From the data presented in the table, it is observed that the mean caloric content of meals provided in government hostels was 1500.53 kcal, whereas the mean caloric content in private hostels was comparatively lower at 1210.13 kcal. This indicates that the meals served in government hostels were higher in energy content than those provided in private hostels.

However, despite the higher caloric provision in government hostels, it was also noted that plate wastage was greater among residents of government hostels compared to their counterparts in private hostels. This suggests that although the quantity and energy of food offered in government hostels were greater, the actual consumption by the students was lower, possibly due to portion size, food preferences, or meal acceptability. In contrast, students in private hostels consumed a larger proportion of the food served, reflecting either better food acceptance or smaller portion sizes.

These findings highlight that simply providing higher-calorie meals does not guarantee higher intake, and factors such as meal portion, palatability, and food preferences play a critical role in actual dietary consumption. The results underscore the importance of not only ensuring adequate nutritional provision but also minimizing plate wastage through menu planning and consideration of students' dietary habits.

**Table 5 Mean and standard deviation for the plate waste of government and private hostels**

	Calories provided	Calories consumed	Calories wasted	% consumed	% wasted
<b>For government hostel</b>					



<b>Mean</b>	1500.53	1217.279	283.2492	81.1012	18.8988
<b>SD</b>	0	228.8372287	228.8389407	15.2600156	15.2600156
<b>For private hostel</b>					
<b>Mean</b>	1210.131	1094.3966	115.7256	90.524	9.4612
<b>SD</b>	81.40139452	87.85921987	74.24913605	5.801381257	5.824199214

## SUMMARY

Among 100 subjects, most government hostel residents (88%) were aged 18–21, while most private hostel residents (64%) were 22–25. Annual income was <3 lakhs for 96% of government and 60% of private hostel subjects. Going home due to homesickness was reported by 34% (government) and 60% (private). Based on WHO BMI classification, 56% of government hostel subjects were underweight, whereas 68% of private hostel subjects were normal. Meal-skipping was higher in private hostels (70%) compared to government hostels (38%), with breakfast most skipped in government hostels and lunch in private hostels. Taste was the main reason for skipping meals.

The mean calories provided were higher in government hostels (1500.53 kcal) than private hostels (1210.13 kcal), but plate wastage was also greater in government hostels.

## CONCLUSION

According to the study's findings, a notable difference in nutritional status was observed between participants from government and private hostels. Most of the participants residing in government hostels were found to have a lower Body Mass Index (BMI), indicating undernutrition or suboptimal nutritional status, whereas participants from private hostels predominantly exhibited normal BMI ranges, reflecting comparatively better nutritional health. Interestingly, even though the mean caloric content of meals provided in government hostels was higher than that in private hostels, the effectiveness of nutrient intake appeared compromised. This discrepancy can be attributed to higher levels of plate wastage among the government hostel participants, suggesting that the quantity of food provided alone does not guarantee adequate nutritional status.

The findings highlight those multiple behavioral and environmental factors, including individual dietary habits, patterns of food consumption, frequency of meal skipping, and food wastage—play a crucial role in influencing the overall nutritional health of hostel residents. For instance, even when meals are calorie-dense, irregular consumption or discarding of food can lead to nutrient deficits. Additionally, social, cultural, and personal preferences may contribute to selective eating, further affecting the adequacy of nutrient intake. Therefore, the study emphasizes the importance of not only ensuring sufficient food provision but also promoting proper dietary practices, reducing meal skipping, and minimizing plate wastage to improve the nutritional well-being of young adults living in hostel environments.



## FUTURE RESEARCH AND LIMITATIONS

- The study is limited to young adult girl subjects in the age group of 18-25 years residing in government and private hostels of Hyderabad, Telangana. Thus, the result may not be representative of other locations.
- This study provided enough data regarding dietary habits, various consumption patterns and preferences of the subjects residing in hostels, which will help to provide research areas in the future.

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