International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Assessment of Nutrition Status of Hostelite and Non Hostelite Girls of Vanita Vishram Women's University (15-30 Years of Age) of Surat City

Dr. Manisha Vyas[1], Dr. Shilpee Agrawal[2], Ms. Krupal Patel[3]

[1,2,3]Vanita Vishram Women's University

ABSTRACT

Hostelite and non-hostelite students often face unique challenges in maintaining optimal nutrition due to factors such as living arrangements, dietary habits, and lifestyle choices. This study aimed to assess and compare the nutritional status, dietary patterns, and health-related factors of hostelite and non-hostelite girls aged 15-30 years in Surat City, Gujarat. A cross-sectional, non-experimental, survey-based study was conducted involving 500 participants (250 hostelites and 250 non-hostelites) from December 2023 to June 2024. Data were collected through a structured questionnaire covering demographic information, anthropometric measurements, nutritional assessment, dietary patterns, and food frequency. Descriptive and inferential statistics were employed for data analysis, including mean, standard deviation, percentage, frequencies. It was observed that a higher proportion of non-hostelites were underweight, while a higher proportion of hostelites were overweight and obese. Three meals per day was the most prevalent pattern, with hostelites more likely to consume two meals and non-hostelites more likely to consume four meals. Traditional Indian foods were commonly consumed by both groups, but non-hostelites had a more diverse food consumption pattern. Physical inactivity was prevalent in both groups, with non-hostelites being slightly more inactive. Non-hostelites were more likely to skip meals, particularly breakfast, while hostelites tended to skip lunch more frequently. The study highlights significant differences and similarities in the nutritional assessment, dietary patterns, and health-related factors between hostelite and non-hostelite girls.

Keywords: Nutrition Assessment, Hostelites, Non-hostelites, Dietary Patterns, Anthropometric Measurements, Physical Activity, Food Frequency.

INTRODUCTION

Students go great distances to complete their education. The academic success and health of the students are greatly impacted by hostel living. Numerous disorders, including CVD, diabetes, dental problems, obesity, and others, can be brought on by nutritional inadequacies. These all result from harmful eating behaviour such as smoking, drug usage, and eating too much, social influence. Hostel females are more likely to be obese or overweight due to unhealthy lifestyle choices such as ready to eat food, package food, easy excess to street Food which mainly contains fast food. **(Pallavi et al., 2020)**

The following objectives were proposed to be accomplished:

a) To study the socio-demographic profile of hostelites and non hostelites.
b) To assess the nutritional status through anthropometry measurements.

c) To evaluate their dietary intake and compare it with the RDA.
d) To find out the inter relationships between dietary profile and nutrition status of hostel girls and compare it with the non hostelite.

MATERIALS AND METHODS

This cross-sectional, non-experimental survey study involved 500 adult female subjects aged 15-30 years from Vanita Vishram Women's University (VVWU) in Surat, Gujarat. The research was conducted from December 2023 to June 2024, with participants completing questionnaires both online via Google Forms and offline in hostels, taking 15-20 minutes to fill out. The study focused on adult females within the specified age range as its target population.

RESULTS AND DISCUSSION

Table 1: Anthropometric Data of Participants

Sr. No	Anthropometric measurement	Hostelite (Mean ± SD)	Non Hostelite (Mean ± SD)
1	Height (cm)	158.204 ± 9.33676	157.486 ± 7.801565
2	Weight (kg)	55.628 ± 8.029165	53.892 ± 11.45904
3	BMI (kg/m²)	22.31298 ± 3.365824	21.80047 ± 4.869263

Table 1 reveals the anthropometric measurements of participants in which the mean height of both hostelites (n=250) is 158.204 ± 9.33676 and non hostelites (n=250) is 157.486 ± 7.801565. The mean weight of both hostelites (n=250) is 55.628 ± 8.029165 and non hostelites (n=250) is 53.892 ± 11.45904. The mean BMI of both hostelites (n=250) is 22.31298 ± 3.365824 and non hostelites (n=250) is21.80047 ± 4.869263.

Table 2 BMI (kg/m²) Classification of participants

BMI (kg/m²)	**Category**	**Hostellite**		**Non- Hostellite**	
		N	%	N	%
>18.5	Underweight	23	9	52	21
18.5-22.9	Normal	136	54	123	49
23-24.9	Overweight	44	18	29	12
25-29.9	Obese	40	16	27	11
<30	Obese Class I	7	3	19	8

Table 2 shows that more than half of the respondents from hostelites is 54% (136) ,followed by non – hostelites 49%(123) having BMI in normal category, followed by 18% (44) hostelites ,non-hostelites 12%(29)who have BMI in the category of overweight, 9% (23) hostelites are underweight as non – hostelites 21% (52) fall under underweight ,3% (7) hostelites fall under the category of obese class - 1,non hostelites 8% (19) and no 16% (40) hostelites who fall under the category of while non –

hostelites 11% (27).

Table 3 Food Frequency (Hostelite)

Food items	Everyday		Once a week/ Twice a week		More than a week		Never	
Canned food	n=108	%=43	n=53	%=21	n=89	%=36	n=1	%=0.4
Fried food	n=24	%=10	n=160	%=64	n=66	%=26	n=0	%=0
Sprouts	n=54	%=22	n=125	%=50	n=70	%=28	n=1	%=0.4
Fast food [Pizza, burger, fries etc.]	n=42	%=17	n=127	%=51	n=81	%=32	n=0	%=0
Deserts [Cake, pastry etc.]	n=50	%=20	n=114	%=46	n=86	%=34	n=0	%=0
Sweets	n=48	%=19	n=113	%=45	n=87	%=35	n=2	%=0.8
Chocolate	n=72	%=29	n=118	%=47	n=59	%=24	n=1	%=0.4
Ice-cream	n=66	%=26	n=117	%=47	n=67	%=27	n=0	%=0
Packet food [Chips, Wafers]	n=97	%=39	n=94	%=38	n=59	%=24	n=0	%=0
Ready to eat food	n=80	%=32	n=85	%=34	n=84	%=34	n=1	%=0.4
Beverages [Tea, coffee, milkshakes]	n=119	%=48	n=84	%=34	n=45	%=18	n=2	%=0.8
Biscuits	n=100	%=40	n=108	%=43	n=40	%=16	n=2	%=0.8
Fruits [Citrus]	n=110	%=44	n=103	%=41	n=37	%=15	n=0	%=0
Curd/Buttermilk	n=144	%=58	n=73	%=29	n=32	%=13	n=1	%=0.4
Nuts	n=102	%=41	n=92	%=37	n=55	%=22	n=1	%=0.4
Street food (vada pav, puffs etc.)	n=36	%=14	n=146	%=58	n=68	%=27	n=0	%=0
Chinese food	n=38	%=15	n=120	%=48	n=92	%=37	n=0	%=0
Maggie	n=33	%=13	n=127	%=51	n=89	%=36	n=1	%=0.4
Jam/ spreads	n=36	%=14	n=124	%=50	n=88	%=35	n=2	%=0.8
Cheese/ butter	n=22	%=9	n=153	%=61	n=73	%=29	n=2	%=0.8

Table 4 Food frequency (Non hostelites)

Food items	Everyday		Once a week/ Twice a week		More than a week		Never	
Canned food	n=24	%=10	n=49	%=20	n=90	%=36	n=87	%=35
Fried food	n=23	%=9	n=114	%=46	n=94	%=38	n=19	%=8
Sprouts	n=37	%=15	n=106	%=42	n=74	%=30	n=33	%=13
Fast food [Pizza, burger, fries etc.]	n=8	%=3	n=97	%=39	n=128	%=51	n=17	%=7
Deserts [Cake, pastry etc.]	n=9	%=4	n=81	%=32	n=134	%=64	n=26	%=10
Sweets	n=25	%=10	n=91	%=36	n=116	%=46	n=18	%=7
Chocolate	n=43	%=17	n=122	%=49	n=70	%=28	n=15	%=6
Ice-cream	n=22	%=9	n=113	%=45	n=101	%=40	n=14	%=6
Packet food [Chips, Wafers]	n=39	%=16	n=106	%=42	n=83	%=33	n=22	%=9
Ready to eat food	n=39	%=16	n=70	%=28	n=90	%=36	n=51	%=20
Beverages [Tea, coffee, milkshakes]	n=115	%=46	n=70	%=28	n=45	%=18	n=20	%=8
Biscuits	n=59	%=24	n=105	%=42	n=59	%=24	n=27	%=11
Fruits [Citrus]	n=113	%=45	n=96	%=38	n=29	%=12	n=12	%=5
Curd/Buttermilk	n=97	%=39	n=87	%=35	n=52	%=21	n=14	%=6
Nuts	n=88	%=35	n=84	%=34	n=65	%=26	n=24	%=10
Street food (vada pav, puffs etc.)	n=21	%=8	n=106	%=12	n=100	%=40	n=23	%=9
Chinese food	n=9	%=4	n=83	%=33	n=127	%=51	n=31	%=12
Maggie	n=12	%=5	n=84	%=34	n=117	%=47	n=37	%=15
Jam/ spreads	n=13	%=5	n=58	%=23	n=112	%=45	n=67	%=27
Cheese/ butter	n=26	%=10	n=89	%=36	n=107	%=43	n=28	%=11

Table 5 Association Between Body Mass Index and Frequency of Meal

	Variable(hostile)	**Chi-square**	**p-value**
BMI(kg/m2)	Number of meal consumption	439.161	.000
	Variable (Non-hostelite)		
BMI(kg/m2)	Number of meal consumption	525.626	.000

*p-value = ≤ 0.05 is Significant

Table 5 display that the results of a chi-square test of association between Body Mass Index (BMI) and the frequency of meal consumption, separately for hostelites (those living in hostels/dormitories) and non-hostelites. The chi-square value for the association between BMI and the number of meals consumed is 439.161. The p-value corresponding to this chi-square value is 0.000, The chi-square value for the association between BMI and the number of meals consumed is 525.626. The p-value corresponding to this chi-square value is also 0.000, which is highly significant. which is highly significant..Numerous studies have found a significant relationship between BMI and meal frequency, particularly in terms of the number of meals consumed per day. Research suggests that individuals who consume fewer meals per day tend to have a higher BMI or increased risk of obesity, while those who consume more frequent, smaller meals tend to have a lower BMI or better weight management.

CONCLUSION OF THE STUDY

The study aimed to observe the nutritional assessment of hostelite and non-hostelite girls aged 15-30 years in Surat City, Gujarat. The major findings suggest several differences and similarities between the two groups in terms of demographic profile, anthropometric assessment, nutritional assessment, dietary patterns, and food frequency. Overall, both groups had a predominantly younger, unmarried population, with a higher proportion of unmarried individuals among hostelites. Gujarati ethnic background and nuclear families were prevalent in both groups, although non-hostelites had a slightly higher representation in these categories.In terms of anthropometric assessment, a higher proportion of non-hostelites were underweight, while a higher proportion of hostelites were overweight and obese, indicating differences in their nutritional status. Concerning nutrition assessment, three meals per day were the most common pattern, with hostelites more likely to consume two meals and non-hostelites more likely to consume four meals. Traditional Indian foods like roti-sabji and dal-chaval were commonly consumed by both groups, but non-hostelites had a more diverse food consumption pattern, including international cuisine. Physical inactivity was prevalent in both groups, with non- hostelites being slightly more inactive. Among those who were active, yoga, cardio, cycling, and sports were popular, with some differences in preferences between the groups. Regarding dietary patterns, the preference for three meals per day was highest, followed by four meals for hostelites and two meals for non-hostelites. Non-hostelites were more likely to skip meals, particularly breakfast, while hostelites tended to skip lunch more frequently. The study also found differences in water consumption, with hostelites consuming higher quantities (3-4 liters per day) compared to non-hostelites, who had a higher concentration in the 1-2 liter range.In terms of food

frequency, hostelites tended to consume traditional Indian foods and snacks more frequently, while non-hostelites had a higher frequency of consuming processed, packaged, and international cuisine items. In conclusion, the study highlighted both similarities and differences in the nutritional assessment, dietary patterns, and food consumption habits between hostelite and non-hostelite girls in Surat City. These findings can contribute to a better understanding of the nutritional needs and challenges faced by these groups and inform the development of targeted interventions to promote healthier lifestyles and dietary practices.

REFERENCES

1. Arigo, D., Rohde, P., Shaw, H., & Stice, E. (2017). Psychosocial Predictors of Physical Activity Change Among College Students in an Obesity Prevention Trial. Journal of Physical Activity and Health, 14(7), 513-519. https://doi.org/10.1123/jpah.2016-0515
2. Cheema, S., Maisonneuve, P., Abraham, A., Chaabna, K., Yousuf, W., Mushannen, T., . . . Mamtani, R. (2021). Dietary patterns and associated lifestyle factors among university students in Qatar. Journal of American College Health, 71(9), 2795–2803. https://doi.org/10.1080/07448481.2021.1996374
3. Dars, S., Sayed, K., & Yousufzai, Z. (1969). Relationship of menstrual irregularities to BMI and nutritionalstatus in adolescent girls. Pakistan Journal of Medical Sciences, 30(1). https://doi.org/10.12669/pjms.301.3949
4. Kushwaha, A. (2019). Assessment of direct and indirect factors affecting the nutrition status of hostel girls in Pantnagar (India). International Journal of Current Microbiology and Applied Sciences, 8(8), 1034–1044. https://doi.org/10.20546/ijcmas.2019.808.120
5. Pallavi, R., Deepa, R., & Devaki, R. S. (2020). A study on assessment of nutritional status and nutritional knowledge of working women residing in hostels at Mysuru City. Journal of Food Processing and Technology, 11(8), 1–5. https://doi.org/10.35248/2157- 7110.20.11.841
6. Saha, S., Biswas, R., Dutta, A., &Mohanta, V. (2022b). Assessment of nutritional status and eating behavior among undergraduate nursing female students of Birbhum district of West Bengal: A cross-sectional study. Research Square (Research Square). https://doi.org/10.21203/rs.3.rs-2246236/v1
7. Udayar, S. E., Deepthi, K., & Prasad, D. V. (2016). Study of nutritional status and its relation to morbid conditions among adolescent girls residing in social welfare hostels in the Kuppammandal of Chittoor district, Andhra Pradesh, India. International Journal of