

ASSESSMENT OF NUTRITIONAL STATUS AMONG UNIVERSITY HOSTEL GIRLS

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ABSTRACT:

Nutritional assessments are organized procedures of data collection and analysis that should be carried out in order to facilitate the making of well-informed judgments on the origin and nature of nutrition-related problems that have a detrimental influence on the health of an individual. Objective: To assess the nutritional status of university going Hostel girls in Bihar city. Methods: Through the use of a cross-sectional survey, researchers at the University of Bihar were able to collect information from female students who were residing in on-campus dormitories over the course of a period of four months. The nutritional condition of 272 Hostel girls who were enrolled in university was evaluated with the use of a pretested questionnaire using non-probabilistic convenient sampling. Results: Only 15 individuals (5.51%) were obese, whereas 134 people (49.26%) were of normal weight, 75 participants (27.57%) were overweight, and 26 participants (9.56%) were underweight. The body mass index (BMI) was used to determine the participants' weight. There were 46 women who reported consuming fast food five times a week, which is 16.91 percent of the total. A deficiency in the intake of vegetables was observed across the various females. The majority of the girls who participated in the study had a decent nutritional status, and only a tiny fraction of them were overweight or obese due to the fact that they led sedentary lives. It is more common for ladies living in college dorms to consume junk food than any other population.

Keywords: Nutritional Status, Food eating habits, Physical activity

INTRODUCTION

An organized process for obtaining and evaluating data for the goal of making choices on the origin and kind of nutrition-related problems that adversely influence a person's health is referred to as a nutritional assessment. This approach is used to make decisions about the health of a person. For the purpose of nutritional assessment, food intake, laboratory results, anthropometric measures, and clinical findings are all considered to be important criteria. Students are need to



travel significant distances in order to get a degree. Both the students' physical well-being and their academic performance are strongly influenced by living in a hostel. Nutritional deficiencies have the potential to be the root cause of a wide range of illnesses, including but not limited to cardiovascular disease, diabetes, dental difficulties, obesity, and many more. All of these issues may be traced back to the fundamental causes, which include smoking, drug abuse, and poor food habits. A sedentary lifestyle and bad eating habits are the primary contributors to the prevalence of overweight and obesity among girls who live in hostels. The fundamental cause of obesity, which in turn promotes a variety of other chronic illnesses, is a lifestyle that is characterized by a lack of physical activity.

The fact that at least half of the 253 women who were polled by Shori AB et al., 2017 admitted to consuming junk food at least once per week is a significant element that contributes to the problem. It was discovered that around 149 women were overweight. An additional research study was carried out by Al-Otaibi HH and colleagues (2015). Based on the findings of this study, the prevalence of overweight and obesity was found to be 29.7 percent. The students claimed that they consumed fast food more than twice a week, which is less than one-third of the total number of students (276). There are a lot of students who suffer from gastrointestinal (GI) disorders, which are problems that affect the digestive system and may progress to other stomach-related ailments. This is especially true for female students who live in housing facilities. The purpose of the study that was carried out by Niranjana A et al., 2016 was to ascertain the frequency of gastrointestinal symptoms that were experienced by both males and females who were living in the dormitory of the Medical College of Central India. It was established, on the basis of the data that was obtained, that the illness was more prevalent in men (69.10%) and less prevalent in females (54.23%). Girls who live in hostels often struggle with polycystic ovary syndrome. In order to conduct their study, Srivastava R et al., 2018 recruited a total of 150 participants from the educational institutions and dormitories located in Allahabad. In accordance with the results, the majority of individuals with PCOS had moderate to severe levels of neuroticism, independent of their socioeconomic background. People who had completed higher levels of schooling had a tendency to be more seriously neurotic, maybe as a consequence of the increased stress brought on by the many challenges they faced in their interpersonal relationships. Young girls are more likely to suffer from a variety of health problems as a consequence of inadequate food intake. These problems include bone deformities, as well as illnesses such as iron deficiency anemia and a shortfall in supplements of vitamins A, D, and E.



According to the findings of research conducted by Ghaffar F et al., 2018, only 61% of the young women who participated in the study had a hemoglobin level that was below the normal range, 85% of them had a low haematocrit percent, and 82% of them had low serum iron. The most noteworthy range for substandard Hb 9 levels was between 9-11 g/dl, which accounted for 48% of the cases. The range for hematocrit was between 25-29.9%, which accounted for 52% of the cases, and the range for serum iron was between 26-35 µg/dl, which accounted for 34% of the cases. Iron-deficiency anemia is a health problem that often affects Bangladeshi mothers and children. The examination revealed that 55.3% of the understudies had a shortage in iron, with 36.7% of the males and 63.3% of the females having the condition, as stated by Shill KB et al., 2014. Among the top causes of mortality on a worldwide scale, physical inactivity ranks as the fourth leading cause. When it comes to lowering the risk of non-communicable diseases (NCDs), the World Health Organization (WHO) recommends that individuals engage in physical activity for a duration of seventy-five minutes on a daily basis. This is because an unhealthy diet and a lack of physical activity are two of the most significant risk factors for NCDs. At the College of Colombo, researchers Ranasinghe C et al., 2016 discovered that out of 113 participants, 48.7 percent were physically inactive, and 14.9 percent were in the "Extremely dynamic" category. This was determined by measuring the participants' level of physical activity. The failure to effectively handle stress may result in significant mental health issues such as depression and anxiety, both of which are seen much too often among women who live in dormitories. Regarding the study conducted by Beiter R et al., 2015, there were 374 participants, and some of them supplied replies. It was clear from the manner in which they responded to the questions that they were all experiencing a sense of being overburdened. Obtaining good marks, persuading someone to get a score better than 15, and making preparations for future academic endeavors were the three primary causes of stress. Poor eating habits may have a negative impact on a person's general health, not to mention the fact that they can lead to weakness and financial burden.

The inclination to sustain oneself begins at an early age and continues all the way through the process of maturation. This research found a number of health issues that the girls were experiencing, and as a method of addressing those issues, nutrition education and health guidelines for healthy eating habits were going to be provided to the girls. Because of this, it is essential for their health not only when they are living in the hostel but also during their whole life.

OBJECTIVES

1. To study nutritional status among university hostel girls
2. To study assessment of nutritional status among university hostel girls

METHODS

A cross-sectional study was conducted with female university hostel inmates who were selected from the residence halls at the University of Bihar. The findings of this study were collected over the course of four months. A pretested questionnaire was used to analyze the participants' nutritional status and lifestyle choices, in addition to the questions that were asked about their socioeconomic position, family history, and medical history. Following that, the data was recorded. Participants in this study were young women who were between the ages of 18 and 25 decades old. The analysis of the data was carried out using SPSS 21.0. In order to determine the nature of the connection that exists between body mass index (BMI) and physical activity, the data were tabulated using a Pearson chi-square test, the mean standard deviation for the quantitative variable, and frequencies. Results were considered significant if the p-value was less than 0.05.

RESULTS:

Table 1: Distribution of Anthropometric measurement frequencies

Anthropometric measures	Mean±SD	Minimum	Maximum
Age	21.46±1.643	18	27
Height	160.30±7.420	121	180
Weight	59.48±10.423	35	95

The ages of the 272 girls varied from 18 to 27 years old, as shown by the data presented in Table 1. The average age of the group was 21.46±1.643 years old. Each of the 272 ladies had a height that ranged from 121 centimeters to 180 centimeters. In terms of height, they measured an average of 160.30±7.420 inches. In all, there were 272 ladies whose weights varied from 35 to 95 kg. The average weight of these individuals was 59.48±10.423 pounds.

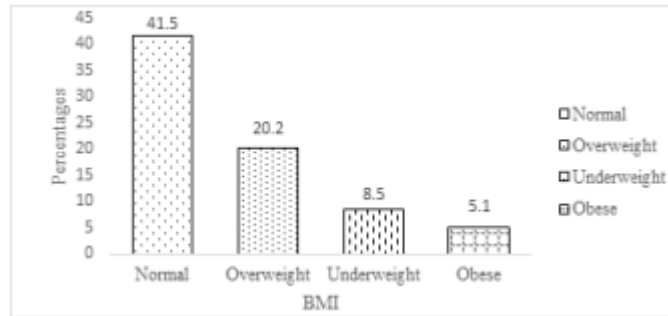


Figure 1: Body Mass Index (BMI) Frequency Distribution Among Hostel Girls

The results for the 272 girls who took part in the research are shown in Figure 1. The data show that 41.5% of the girls had a normal weight, 20.2% were overweight, 8.5% were underweight, and 5.1% were obese.

Table 2: Distribution of the frequency of daily food group consumption

Food Groups	Mean±SD	Frequency	%ages
Servings of grains	4-5 servings	33	12.1%
	3-4 servings	53	19.5%
	6-11 servings	15	5.5%
	2-3 servings	171	62.9%
Meat consumption	1-2 servings	111	40.8%
	0 serving	103	37.9%
	2-3 servings	49	18.0%
	4 servings	8	2.9%
Fruits Consumption	2-3 servings	53	19.5%
	3-4 servings	29	10.7%
	1 serving	93	34.2%

	0 serving	97	35.7%
Vegetables Consumption	1-2 servings	85	31.3%
	2-3 servings	53	19.5%
	0 servings	52	19.1%
	1 servings	82	30.1%
Dairy products consumption	Once in a week	93	34.2%
	Daily	64	23.5%
	2-4 times in a week	61	22.4%
	Never	54	19.9%
Lentils consumption in a week	1 time	76	27.9%
	2 times	84	30.9%
	I don't like lentils	83	30.5%
	3 times	29	10.7%

In the poll of 272 young women, 33 (12.1%) reported eating four to five servings of grains on a daily basis, 53 (19.5%) reported eating three to four servings, 15 (5.5%) reported eating six to eleven servings, and 171 (62.9%) reported eating two to three servings more often. Out of the 272 females who were examined, 111 (40.8%) were eating between one and two servings of meat per day, 103 (37.3%) never ate any meat at all, and the lowest concentration of eaters was 49 (18.0%) who ate two to three servings of meat per day, with just four (2.9%) consuming eight servings of meat per day. Among the 272 young women who participated in the research, it was discovered that 53 (19.5%) of them consumed two to three servings of fruits on a daily basis, 29 (10.7%) consumed three to four servings, 93 (34.2%) consumed one serving, and 97 (35.7%) consumed no portions at all. According to the poll, out of the 272 girls, 85 (31.3%) were consuming one to two servings of vegetables on a daily basis, 53 (19.5%) were consuming two to three servings, 52 (19.1%) were not consuming any vegetables at all, and 82 (30.1%) were

consuming just one serving. The results showed that out of 272 females, 93 (34.3%) consumed dairy products on a weekly basis, 64 (23.5%) consumed dairy products on a daily basis, 61 (22.4%) consumed dairy products on a bi- or quad-weekly basis, and 54 (19.9%) never consumed dairy products. From the group of individuals who said that they consumed lentils on a weekly basis, 76 (or 27.9%) stated that they consumed them twice a week, 83 (30.5%) stated that they did not like them, and 29 (10.7%) stated that they consumed them three times a week.

Table 3: The distribution of fast food consumption frequencies amongst hostel girls

Fast Food patron	Behavior	Frequency	%ages
Fast food eating times in week	Two times	118	43.4%
	Three times	57	21.0%
	Four times	51	18.8%
	Five times	46	16.9%
Preferring time to eat fast food	Breakfast	10	3.7%
	Lunch	49	18.0%
	Evening times	96	35.3%
	Dinner	111	43.0%
Fast food likes	Burger	53	19.5%
	Pizza	133	48.9%
	Sandwich	51	18.8%
	Fried chicken	35	12.9%

Out of a total of 272 females, 118 (43.4%) were eating twice a week, 57 (21.0%) were eating three times a week, 51 (18.8%) were eating four times a week, and 46 (16.9%) were eating five times a week. While the majority of the females preferred to consume fast food during the evening, 111 (43.0%) of them were eating it at dinner, and 96 (35.3%) were doing it in the evening. During lunch, there were 49 (18.0%) and during breakfast, there were 10 (3.7%).

girls, or 48.9%, like pizza, 53 girls, or 19.5%, enjoy burgers, 51 girls, or 18.8%, enjoy sandwiches, and 35 girls, or 12.9%, enjoy fried chicken.

Table 4: Relationship between Hostellite Girls' BMI and Physical Activity

BMI	Physical Activity					
	Sedentary lifestyle	Lightly active	Moderately active	Very active	Total	P-value
Normal	22	51	55	21	149	0.094
Overweight	16	33	28	4	81	
Underweight	4	6	10	6	26	
Obese	6	3	6	1	16	
Total	48	93	99	32	272	

99 out of 272 girls were considered to be moderately active, with 55 girls having a body mass index (BMI) that was considered to be normal, 28 girls being overweight, 10 girls being underweight, and 6 girls being obese. This information is shown in table no. 3. Also, there was no significant connection between the body mass index (BMI) and the amount of physical activity that hostellite girls engaged in (p-value >0.05).

DISCUSSION:

A hostel is a location where students reside and establish diverse habits, which might have an effect on their eating habits, physical activity, and lifestyle. The focus of the current research was on the nutritional quality of college students who live in dorms. Specifically, students were asked about how they manage their meal time, eating habits, and physical activity. In the current investigation, it was discovered that the average age was 21.46 years, with a standard deviation of 1.643 years. Among the 272 girls, the shortest height was 121 centimeters, and the highest height was 180 centimeters. They had a mean height of 160.30 ± 7.420 inches. There were 272 females, and the lowest weight was 35 kilograms, and the highest weight was 95 kilograms. The average weight of the individuals was 59.48 ± 10.423 . The same findings were discovered in a



research conducted by Krishna J et al. in 2016, which indicated that the average weight was 40.09 kilograms with a standard deviation of 7.26 kg. There was a mean height of 16150.02 cm, with a standard deviation of 8.09 cm.

In a further study that was carried out by Fazli GR et al., 2019, the researchers found that the average height was 170.33 centimeters, and the average weight was 61.26 kilograms. It was determined via the analysis of the present research that out of a total of 272 female students, 26 students were underweight, 134 students were normal, 75 students were overweight, and 15 students were obese based on their body mass index. The same research was carried out by Roy S. et al. in 2016, and the findings showed that out of a total of 2765 female students, 1515 were considered to be normal, 364 were considered to be overweight, and only 143 were considered to be obese. According to the findings of another research conducted by Gupta D et al. in 2017, sixty percent of the respondents were underweight, thirty-eight percent of the respondents had a normal body mass index, and two percent of the respondents were overweight. It was not discovered that any of the respondents were obese.

According to the findings of another research carried out by Fazli GR et al., 2019, out of a total of one hundred girls, fifty were underweight, thirty-five were normal, and fifteen were obese at a body mass index of two. Based on the findings of another research conducted by Wehigaldeniya WG et al., 2017, it was discovered that out of a total of 449 female students, 75 were underweight, 348 had normal weight, and 26 were overweight. It is obvious from the present research that 111 Hostel females prefer to miss supper and switch to eating junk food. This is because the consumption of fast food and junk food is a very prevalent issue among girls who are living in hostels. One of the reasons for this is that they avoid eating nutritious meals. Shree et al., 2018 did a research that revealed that 58 students were substituting junk food products for supper. The findings of this study were published in 2018. Twenty-six students were consuming it as a substitute for lunch, while thirty-two students were taking it in the evening. 68 of the pupils like drinking carbonated beverages. Nearly ninety-one kids consume junk food on a frequency that is more than twice per week. It was determined that pizza was the item that practically all of the students enjoyed the best. Most of the time, girls who live in hostels have a sedentary lifestyle since they do not have access to a gym, stairs, or walking opportunities within their environment.

Among the 272 girls who participated in this research, 99 were determined to be moderately active. Of these girls, 55 had a body mass index (BMI) that was considered to be normal, 28



were considered to be overweight, 10 were considered to be underweight, and 6 were considered to be obese and overweight. It was also shown that there was no significant connection between body mass index and physical activity (pvalue greater than 0.05). According to the findings of a research that was carried out by Ranasinghe C et al., 2016, 48.9 percent of the population did not engage in any kind of physical exercise, only 15.9 percent engaged in greater physical activity, and the other individuals had sedentary lifestyles.

CONCLUSION

A tiny fraction of the girls experienced medical concerns such as food allergies, irritable bowel syndrome (IBS), obesity brought on by a sedentary lifestyle, constipation, and diarrhea, according to the results of the research. However, the majority of the girls had appropriate nutritional status with regard to their nutritional status. According to the findings of the study, the Hostel females should make it a priority to consume a diet that is balanced, to engage in regular physical activity, and to sign up for a gym membership in order to maintain a healthy lifestyle.

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