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A study on pattern and predictors of junk food consumption behaviour among college students

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Abstract
Aim: Changing lifestyle, easy availability and convenience of junk food is making junk food more common among college students. Regularly eating junk food is associated with unhealthy eating habits and a higher risk of several health problems. The aim of the present study was to examine the factors influencing junk food consumption behaviour among college girls and to compare the consumption behaviour of hostlers and day scholars with respect to convenience, preference for home-cooked food, and awareness of the health problems associated with junk food consumption.
Methods: This study adopted a descriptive survey research design. A total of 220 respondents were selected by convenience sampling technique from BPSMV, Khanpur kalan. The data was gathered by a self-designed questionnaire using a five-point Likert scale and analyzed by applying different descriptive statistics (mean and standard deviation), Exploratory Factor Analysis (EFA) and Independent Samples t-test.
Results: The Exploratory Factor Analysis (EFA) identified three major factors influencing junk food consumption behaviour among college girls: Namely junk food convenience (taste, quick availability, easy accessibility and variety), comparison with home-cooked food (nutritional value and perceived superiority of home-cooked meals), and health issues (awareness of adverse health effects of junk food consumption). No significant difference was observed in the regular junk food consumption behavior between day scholars and hostlers by independent samples t-test. This hypothesis was accepted. However, significant differences were observed between day scholars and hostlers regarding consumption of junk food with home-cooked food and health issues.
Conclusion: Even though the students were aware of the adverse health effects associated with junk food consumption,factors like convenience and taste still strongly influenced their eating habits or behavior. Therefore, nutrition awareness campaigns and health education programs should be strengthened particularly focus on college girls to promote healthier eating habits and encourage informed better food choices.

Keywords: Junk food, consumption behaviour, food preferences, food choice, health

Introduction

Food is essential for good health, proper development and promoting overall well-being. A nutritious and balanced diet provides the essential nutrients that are beneficial to mental and physical health, but the food habits of teenagers and college students have a profound impact with the significant changes due to rapid urbanization, modernization and evolving lifestyle. Factors such as flavor, cost-effectiveness, ease, ready availability and forceful advertising are the primary causes for the rise in consumption of junk food among the youth. Bhavani & Prabhavathy (2020). Found that hunger was the primary motivating factor to eat junk foods. Most of the students said that flavor was the most important factor influencing their food intake. Junk food refers to food products that contain high levels of calories, fat, sugar and sodium, but lacks essential nutrients such as vitamins, minerals, and dietary fiber. According to the World Health Organization excessive intake of these foods causes the risk of diabetes, hypertension, overweight, heart disease and other health problems. Eating junk food frequently may also negatively affect on their psychological health that leading to depression, distress, anxiety, mood swings, cognitive impairments and poor concentration. Bin Islam et.al (2026) the study showed that the problem of high consumption of junk foods is increasing among the university students in Bangladesh, leading to major hazards of obesity, diabetes and hypertension. College students are more likely to develop unhealthy eating habits, due to irregular schedules, academic stress, peer pressure, emotional eating and greater independence in food choices. Despite the knowledge of the ill effects of fast food many students continue to eat fast food on regular basis due to ease, taste satisfaction and social reasons.

Students' dietary habits are also influenced by their living conditions. Day scholars live at home under parental supervision, whereas hostelers depend mainly on hostel messes, canteens, and fast-food outlets. Hostelers are more prone to junk food consumption due to limited food choices, dissatisfaction with hostel meals, irregular food habits and social food behavior. Therefore, junk food intake has become a routine dietary pattern among college students, especially hostelers. Day scholars generally take more of a home-cooked diet prepared by their families which is believed to be healthy, nutritious, hygienic and well balanced than junk food. The day scholars are influenced by their parents who encourage them to make healthy food choices and keep a check on their eating practices But, day scholars are also exposed to junk food due to peer pressure, college canteens, advertisements, social outings and changing food preferences. on the other hand, hostelers are likely to go for regular junk food consumption due to limited food choices, dissatisfaction with hostel food, irregular eating habits, and easy access to fast food outlets. Therefore, it becomes essential to study the differences in the unhealthy food consumption behaviour between hostelers and day scholars to encourage. Factors such as

convenience, taste, price, emotional satisfaction, social influence, variety of food and lifestyle changes. Junk food appeals to college students because it is easy to find, requires little time to prepare, and satisfies the craving right away. Advertising on social media and celebrity endorsements encourage young people to consume more junk food and contribute to unhealthy eating habits.Bashir Ahmad et.al. (2024). Indicated that intake of junk food among hosteler and day scholar medical students is equal.They found the most popular type of junk food they eat, followed by snacks. Taste was identified as the main determinant of junk food consumption, while availability, price, and other factors had a comparatively smaller influence on the students' meal choices. Although junk food is highly popular, home-cooked food is generally regarded as healthier because it is prepared from fresh ingredients with balanced nutrients and hygienic cooking methods

In contrast, junk food is frequently highly processed and contains a full of sugar,, unhealthy fats, synthetic additives, and preservatives. Regular in take of junk food can raise awareness of its adverse effects over time. And increase the value of nutritious home-cooked food. Deepali A., and Chaitanyaa P. (2023). Found that eating junk food was significantly associated with stress and screen time behaviour. Fast foods are not nutritious so should not eat them. Hence it is essential to study the consumption behaviour and perceived benefits of junk food among college girls. The patterns may be useful for the promotion of healthy food eating and development of nutritional awareness programs for the students (Kumar & Singh, 2017)[2] emphasized the significant role of educational institutions in implementing healthy food policies and nutrition awareness programs to promote students' overall quality of life, mental well-being, and physical health.

Objectives

1. To study the factors affecting junk food consumption behaviour among college girls (hostlers and day scholars).
2. To compare the factors affecting Junk food consumption patterns among college girls (Hostlers and Day-scholars).

Hypothesis

1. There is no significant difference between hostler and day-scholar college girls regarding their convenience as a factor influencing consumption of junk foods.
2. There is no significant difference between hostler and day-scholar college girls with respect to junk food compared with home cooked food.
3. There is no significant difference between hostler and day-scholar college girls regarding perceptions of the health effects of junk food.

Research Methodology

The present study is based on a descriptive cum exploratory research design for analysis of the junk food consumption patterns and compare the factors affecting Junk food consumption behaviour among college girls (Hostlers and Day-scholars). The current study takes up a sample size of 220 respondents were selected from BPSMV Khanpur, Sonipat, Haryana, using convenience sampling technique. Data were collected through a self-constructed questionnaire administered using Google Forms. The questionnaire was based on a five-point Likert scale. The collected data were analyzed using appropriate statistical techniques, including mean, standard deviation, Exploratory Factor Analysis (EFA), and the Independent Samples t-test.

Result and Discussion

Exploratory Factor Analysis

A total of 12 statements were asked from the respondents regarding their Junk Food Consumption behavior. First of all Exploratory Factor Analysis was conducted to extract the factors from these 12 Statements. Prior to factor extraction, the sample's sufficiency was assessed using Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin (KMO) as indicated by Table 1. Sampling sufficiency for factor analysis was indicated by the value of KMO 0.653*, which is greater than the permissible threshold value of 0.60. Also, the data were suitable for factor analysis as demonstrated by the large Bartlett's Test of Sphericity ($\chi 2$ = 1800.891, p < 0.001). There were 12 statements appropriate for factor extraction as the p value was less than 0.05. So there is a strong correlation. **

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy.		**.653***
Bartlett's Test of Sphericity	Approx. Chi-Square	1800.891
	Df	66
	Sig.	**.000****

Further, communalities of the extracted factors were also analyzed to identify the proportion of variance explained. All communalities were higher than the recommended threshold of 0.50 (0.569 to 0.915), which indicated that the factors extracted could explain the variance in the observed variables. An Exploratory Factor Analysis (EFA) was performed using Principal Component Analysis (PCA) with Varimax rotation to determine the underlying factor structure.

Table 2. Indicates that 3 factors are extracted from 12 statements, and the factor loadings of each statement for each factor are also provided.

Table 2: Rotated Component Matrix[a] (Factor Loadings)

	Component			**Reliability**			**Validity**		
	1	**2**	**3**	**1**	**2**	**3**	**1**	**2**	**3**
x3: Junk Food are very convenient to eat	.874								
x11: Junk food saves time	.871								
x1: junk food are tasty and refreshing	.825			.889			68.765		
x12: Junk Food gives different food choices	.809								
x5: Junk Food are instant energy givers	.762								
x8: Junk Food should not be taken in large quantity		.948							
x10: Junk Food is not better than home cooked food		.941		.942			88.676		

x9:Junk Food are not as good as home cooked food		.936							
x6: Junk Food are not good for students			.861						
x2: Junk Food are bad for health			.811	.807			62.919		
x7: Junk Food should be consumed occasionally			.758						
x4: Junk Food should be avoided with age			.737						
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.									
a. Rotation converged in 4 iterations.									

The first factor was named as "Junk Food Convenience" and included statements like "junk food is convenient to eat, time-saving, tasty and refreshing, offers different food choices, and serves as an instant energy giver." The factor loadings of these statements ranged from 0.762 to 0.874, suggesting a high correlation between the factor and the items.

The second factor, "Junk Food Compared to Home-Cooked Food," consisted of statements that junk food was no better and no worse than food prepared at home.The factor loading values of these items were ranging from .936 to .948 reflecting very high correlations with the extracted factor.

The third factor was "Junk Food Health Issues" which included claims such as "junk food is not good for students, bad for health, needs to be consumed occasionally, and should be avoided with age." The factor loadings for this aspect ranged from 0.737 to 0.861 indicating the satisfactory contribution of the items used for the factor.The first factor was named "Junk Food Convenience" and consisted of claims such as "junk food is convenient to eat, time-saving, tasty and refreshing, offering different food choices, and acting as an instant energy giver. Factor loadings for these statements ranged from 0.762 to 0.874, suggesting a high correlation between the factor and the items.

All these factors met the reliability (>.60) and validity (7.50) thresholds as indicated in table 2.

Independent Sample t-test

After extracting these three factors a comparison is made of these factors across Hostlers and day-scholars girl students. In order to achieve second objective and test the hypotheses an Independent sample t-test was used.

Table 3. Shows the descriptive statistics of each group (Hostlers and Day-scholars). The mean is showing negative value because it is calculated from the standardized scores of factors extracted from (EFA) Exploratory Factor Analysis. Standardized score mean a response of 3 (neutral) is taken as 0. Therefore, negative value of mean indicates that all the respondents have given their response less than 3 in that particular Category. Positive value of mean indicates that all the respondents have given their response more than 3 in that particular Category.

Table 3: Group Statistics

	status	N	Mean	Std. Deviation	Std. Error Mean
JF_convenience	Dayscholar	100	-.0679071	.92276926	.09227693
	Hosteller	120	.0565892	1.06058401	.09681763
JF_Comparision	Dayscholar	100	-.1981628	1.04797017	.10479702
	Hosteller	120	.1651357	.93068542	.08495957
JF_helath-Issues	Dayscholar	100	-.7654737	.77962594	.07796259
	Hosteller	120	.6378948	.65722860	.05999649

The independent sample t-test was used to see if perceptions of junk food intake differed significantly between day scholars and hostlers girls students.The three retrieved dimensions—Junk Food Convenience, Junk Food Comparison with Home-Cooked Food, and Junk Food Health Issues—were analyzed.

Table 4: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
JF_convenience	Equal variances assumed	.557	.456 (Hypothesis accepted)	-.919	218	.359 (Hypothesis accepted)	-.12449627
	Equal variances not assumed			-.931	217.580	.353	-.12449627
JF_Comparision	Equal variances assumed	8.903	.003 (Hypothesis Rejected)	-2.722	218	.007	-.36329850
	Equal variances not assumed			-2.693	200.019	.008 (Hypothesis Rejected)	-.36329850
JF_helath-Issues	Equal variances assumed	1.742	.188 (Hypothesis accepted)	-14.488	218	.000 (Hypothesis Rejected)	-1.40336851
	Equal variances not assumed			-14.265	194.291	.000	-1.40336851

A significant difference was observed between day students and hostlers in comparison of junk food with home cooked meal ($t = -2.722$, $p < 0.05$). The mean score of hostlers ($\bar{x} = 0.165$) was higher than that of day scholars ($\bar{x} = -0.198$) which shows that the hostlers had more belief that home cooked foods are better than fast food. This indicates that hostel residents may be more aware about the nutritional demerits of junk food, possibly because they depend on it more frequently.

Health related problems due to intake of junk food was highly significant in day scholars and hostlers ($t = -14.488$, $p < 0.001$). Hostlers had higher mean scores than day scholars, indicating greater awareness of the harmful health effects of junk food. This may be because hostel students are more likely to consume junk food regularly and, therefore, are more aware of its negative health consequences associated with excessive junk food consumption.

.No significant difference was found between day students and hostlers regarding convenience factor of junk food intake ($t = -0.919$, $p > 0.05$) as shown in Table 4. Both groups considered junk food to be tasty, easy, time saving, refreshing and providing variety in eating options. This suggests that the two clusters of students see the convenience benefits of fast food in a similar way.

Conclusion

The analysis identified three major factors influencing junk food consumption behaviour among hostler and day scholar college girls: Junk Food Convenience, Comparison of Junk Food with Home-Cooked Food, and Health Issues Related to Junk Food Consumption. No significant difference was found between hostlers and day scholars regarding the convenience of junk food, as both groups perceived it as tasty, convenient, time-saving, refreshing, and offering a variety of food choices. However, hostlers had significantly higher mean scores for the comparison of junk food with home-cooked meals, indicating a stronger belief that home-cooked food is superior. Hostlers also showed significantly greater awareness of the adverse health effects of junk food, possibly due to their greater dependence on it. Overall, the findings suggest that while the convenience and appeal of junk food are similar among both groups, hostlers are more aware of its nutritional disadvantages and health risks. The results further indicate that junk food consumption remains common among college girls irrespective of their residential status.

The study highlights the need to improve awareness of healthy dietary practices among college girls. Nutrition education programme, seminars, workshops, and awareness campaigns should be organized regularly to encourage balanced diets and healthier food choices. College canteens and hostels should provide nutritious alternatives such as fruits, salads, sprouts, and healthy snacks to reduce dependence on junk food. Regular nutrition counselling and health check-ups can further motivate students to adopt healthier eating habits and lifestyles.

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