Pattern of Junk Food consumption Among Hostelite and Day Scholar Medical Students of Peshawar

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Abstract

Background: Junk foods are considered to have low nutritional value, however, young people, especially students are particularly more attracted, because of its more readily available food options..

Objectives: This study aimed to explore the frequency of junk food consumption among undergraduate medical students in Peshawar and analyze the difference among Hostelite and day scholar medical students as well as to determine the factors responsible for it.

Material and Methods: In this cross-sectional analytical study data was collected from 207 MBBS students from five different medical colleges in Peshawar, Khyber Pakhtunkhwa. Random sampling technique was used to collect the data from January to July 2023. A structured questionnaire was used to interview the students about various aspects of their junk food consumption and results obtained were statistically analyzed for level of significance.

Results: The results showed that weekly consumption (n=102, 49.3%) of junk food was the highest. Fast foods (50.5%) and snacks (27.1%) were the most consumed junk foods. The biggest reason for junk food consumption was 'taste' (n=178 62.7%). Gender showed a significant association (p<0.05) with increasing frequency of junk food with females consuming more. Differences in residential status and institution classes were not statistically significant effect (p>0.05). Comparison of Hostelite and day scholars for various factors like 'taste', 'convenience', affordability, social and 'peer pressure', 'craving' and 'availability' did not yield a significant difference either (p>0.05).

Conclusions: We concluded that the most commonly consumed junk food among medical students is 'fast food', citing 'taste' as the biggest reason. Availability affordability and other factors do not contribute as much. Both, Hostelite and day scholar medical students consume junk food at an equal rate. Females were found to have higher consumption as compared to male students.

Key words: Junk Food, Medical Students, Eating Habits, Food And Nutrition, Hostelite, Day Scholar, Eating Behavior, Fast Food

Introduction

As the world population grows, the need for faster and more efficient food production is also growing. Organic food is being replaced by non-nutritious and fast-prepared "Junk Food". Junk food contains fast foods like burgers, pizzas etc., sugary drinks, confectionery items, sweets, and other snacks. Such foods have little to no nutritional value and contain processed meat, refined carbohydrates, and large amounts of sodium, fats, saturated and trans-fatty acids, and higher quantities of cholesterol. [1]Junk foods have been linked to obesity[2,4] and its role as a risk factor for several other non-communicable diseases like cardiovascular diseases [5,6] and hypertension. [7,8] has been shown by any studies. Junk and fast food consumption has been positively associated with anxiety[9]depression and suicide attempts. [10]Studies have also

found its effect on sleep quality and duration. [11] This effect goes both ways: unhealthy food consumption deteriorates mental health, and perceived stress can increase unhealthy eating, as reported bya study at the Rawalpindi Medical University[12.]Unfortunately, such foods are very popular because of their taste, cost and easy availability.[13]Studies have found factors like gender[9]younger age, low nutrition knowledge, high BMI and higher socioeconomic class to be the positive determinants of frequent fast-food consumption. [14]Medical students are often found negligent of their health. Consumption of junk foods in medical students is found even though most of them are aware of the consequences. [8,15.] An Indian-based study found that Hostelite were more prone to diet-linked diseases owing to their schedule and food availability issues. [16..] In this study, we have investigated the pattern of such junk foods consumption among medical students in Peshawar, Pakistan. We have also aimed to figure out as well as if living away from home has any effect on the frequency and prevalence of junk and food consumption among these students. A comparison between the eating habits of students staying in hostels with those who stay with their families has been made. Further, various factors responsible were also investigated.

Materials and Methods:

This cross-sectional analytical study was conducted on the MBBS students of five medical colleges from Peshawar city including Northwest School of Medicine, Rehman Medical College, Khyber Medical College, Kabir Medical College, Peshawar, and Pak International Medical College. The sample size was calculated to be 207 based on the prevalence (16%) found ina previous study done in Karnataka, India.[13]Ethical Approval Certificate (IRBC&EC/2023-SM/0103) was provided by the Institutional Review Board and Ethical Committee of Alliance Healthcare Pvt Ltd.Consent from all participating students was also taken during the process. The sample size was picked using a simple random sampling technique. A structured questionnaire was used to interview the students about various aspects of their junk food consumption. Data collected was analyzed using Microsoft Excel and SPSS v21.

Results:

Demography & Pocket Money:
207 MBBS students from five different medical colleges including 103(49.8%) male and 104 (50.2%) female participated in the study. The mean age of the study participants was 21.49 years (SD = 1.736) with a range of 18 to 25 years (Table 1). 92 (44.4%) lived in hostels while the rest (115, 55.6%) lived as day scholars with their families. (Table 1)

Table 1 - Age, gender, residence and pocket money of the respondents		
Age		
Mean	21.49	
Median	21.00	
Std. Deviation	1.736	
Minimum	18	
Maximum	25	
Gender		
	Frequency (N)	**Percent (%)**
Male	103	49.8%
Female	104	50.2%
Total	207	100.0%
Residence		
Hostelite	92	44.4%
Day Scholar	115	55.6%
Total	207	100.0%
Monthly Pocket Money		
	Frequency (N)	**Percentage (%)**
Rs 5000 - Rs 10,000	78	37.7
Rs 10,000 - Rs 15,000	27	13.0
Rs 15,000 - Rs 20,000	50	24.2
Rs 20,000 - Above	52	25.1
Total	207	100.0

49 (23.7%) were from Northwest School of Medicine, 29 (4.0%) from Rehman Medical College (RMC), 32 (15.5%) from Khyber Medical College (KMC), 50 (24.2%) from Kabir Medical College and 47 (22.7%) from Pak International Medical College (PIMC).

78 (37%) were receiving pocket money in the range of Rs.5000 to Rs. 10,000. Only 27 people (13%) got Rs. 10,000 to Rs. 15,000 in monthly pocket money. These mark a cumulative percentage of 50.7 of the total participants. The remaining half of the participants belonged to the category exceeding Rs. 15,000 with 50 participants (24.2%) receiving Rs. 15,000 to Rs. 20,000 and the last 52 (25.1%) getting more than Rs. 20,000.

Consumption Behaviour:
Only 42 participants (20.3%) consumed junk food daily. Along with another102 (49.3%) eating it every week. These made up 69.6% of the total.22 (10.6%) reported monthly use while the rest 41(19.8%) were rarely eating any junk food. Most of the students i.e. 138(50.5%) were consuming fast foods followed by 74 participants (27.1%) consuming snacks. 'Confectionery items' and 'Sweets and chocolates' had 25(9.2%) and 36(13.2%) consumers of the total 207 participants, respectively. A chi-square test performed to explore the association between gender and frequency of fast food consumption revealed a significant association (p=0.013), with females having a higher percentage of junk food consumption as compared to males. Residential status, whether Hostelite or not, of the students, however, did not yield a significant result (p=0.195). A one-way ANOVA test was conducted that showed, indicating that there was no statistically significant difference (p=0.493)

in junk food consumption frequency among students from different medical colleges.

Factors Affecting Consumption:

For 178(62.7%) 'taste' turned out to be the biggest reason for consumption, followed by availability, convenience, and social and peer pressure accounting for 33(11.6%), 27(9.5%) and 22(7.7%), respectively. 19 students (6.7%) thought that cravings would compel them to eat junk food. Affordability was the least favored reason for consumption as only 5(1.8%) of respondents answered. (Figure 1)
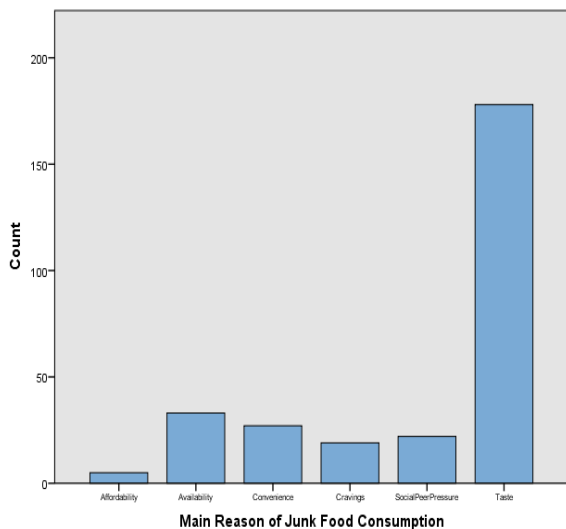

Figure 1 – Main reason for fast food consumption

Further investigation into the causes revealed that social media's portrayal 147(71%), peer pressure 112(54.1%), availability 103(49.8%), pricing 101(48.8%) and low mood 101(48.8%) did play a significant role in pushing students to consume junk foods. (Figure 2)
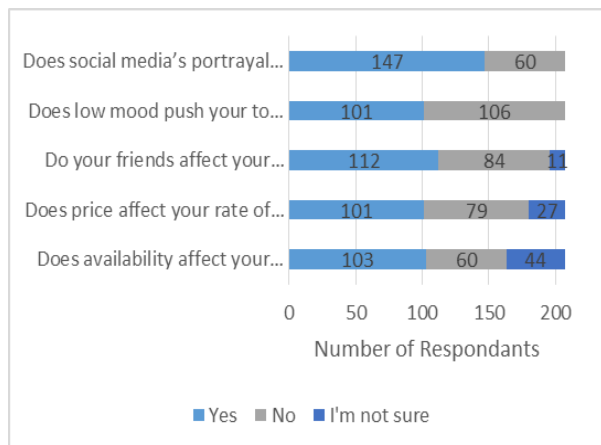

Figure 2 – Factors Affecting Junk Food Consumption 1

Other factors like lack of time, lack of access to healthy food, catchy marketing campaigns and lack of knowledge of healthy food also contributed to a certain degree as shown in Figure 3.
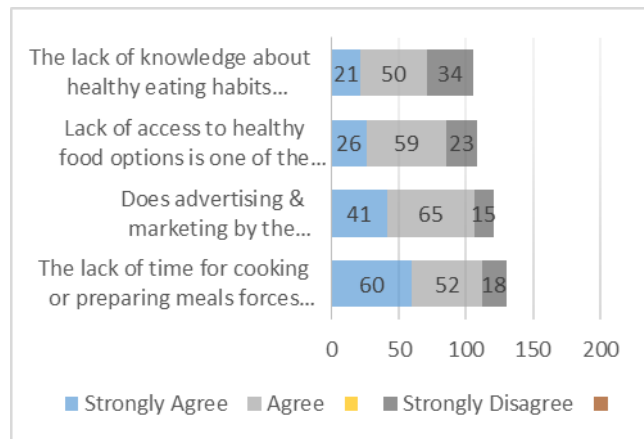

Figure 3– Factors Affecting Junk Food Consumption 2

Comparative analysis performed among Hostelite and day scholar students shows that none of the above-mentioned factors have any statistically significant effect on the difference in choice of junk food among Hostelite and day scholars. (Table 2)

Table 2: Comparison of factors affecting junk food consumption among Hostelite and day scholar Medical

Factor	Hostelite	Day Scholar	P Value
Convenience	14 (15.2%)	13 (11.3%)	0.406
Taste	83 (90.2%)	95 (82.6%)	0.117
Affordability	2 (2.2%)	3 (2.6%)	0.840
Social & Peer Pressure	7 (7.6%)	15 (13.0%)	0.207
Cravings	6 (6.5%)	13 (11.3%)	0.236
Availability	17 (18.5%)	16 (13.9%)	0.373

students

Discussion:

This study found that almost half of the participants (49.3%) consumed junk food every week, with an extra 20.3% consuming daily, making a total of 69.6%, which is consistent with the findings of a study done in Patna (82%) exploring the dietary patterns of local medical students and Madan et al. and another in Dammam (91.3%) by Al Qahtani et al.and Rahmatullah and M.(8,17–19)School-going children also showed the same attitude towards junk food consumption in a study by Aziz et al. in the Sindh province.[20]

The widely preferred junk food items were fast foods (50.5%) followed by snacks (27.1%) and in lesser quantities confectionary items and sweets. This is

opposed to the findings of Veena et al. and Nayak where 'chocolates and ice creams' were preferred by 47% of the participants.[13,12]

The biggest factor influencing "junk food" choice was found to be the "taste" (86.0% of the cases) just as reported (80.5%) by Veena et al. and in Pushkar et al.'s study based in Poland (88.9%). [21,22]

Tariq et al. found that the biggest reason students consumed fast foods was because "they liked it", followed by "easy availability"[23]

Factors like affordability, availability, and convenience were all found to be secondary even when compared to taste for both, day scholars and those living in the hostels. This confirmed the observations of Mira N. et al. But this is in contrast to the findings of Ismail, who found that the main reason (55.3%) for junk food consumption for university girls was convenience and Mokhtar et al. who reported 'stress' (82%) as a big contributing factor among undergraduate students in Malaysia[24,26]

Females had a significantly higher frequency of junk food consumption like Ayushree and Tarai found in Odisha, India (2021), which revealed that more females (72%) than boys consumed fast food.[27]

No statistically significant effect of residential status (hostelite vs. day scholars) of the students was found on increased consumption of junk food just as reported by other researchers like Pushkar et al. and Khan et al[22,28]

A weak positive correlation was found between age and junk food consumption suggesting that younger students were more

likely to consume junk food. This is in line with the findings of Ayushree and Tarai.[27]

Conclusion:

This study concludes that hostelite and day scholar medical students consume junk foods at an equal rate. The most consumed junk food is 'fast food' followed by 'snacks'. The biggest reason why students consume junk food is the taste. Availability affordability and other factors do not contribute as much. Females are found to have more junk food consumption as compared to male Medical students.

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