

# An Explicative Study on Midnight Food Cravings of University and College Hostel Students *Influence of social media on Midnight Food Consumption and Sleep Cycle of University and college Hostel Students in Tamil Nadu*

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**Abstract** - Midnight food cravings are desires that occur at an unusual hour when you should be asleep. University and College Hostel Life is a pivotal stage for students' detrimental changes in eating habits. Sleep and nutritional intake may be connected, since the time and quality of dietary consumption at night may delay or decrease sleep duration. Hence, the present study focus on to assess the causes of students' late-night food cravings and to gauge the social media's impact on the sleep cycle had on their physical and emotional well-being. For this study, the data was collected by questionnaires using google forms. With the results finding, it's concluded that 30% of population is at danger of obesity based on their BMI (Body Index Index) status, indicating that their health state is obese, and overnight food intake is one of the causes. 76% of hostel students favored a non-vegetarian diet, whereas 43% preferred a diet rich in fruits and vegetables. The majority of students said they prefer deep fried foods and bakery products for their midnight food consumption. 60% of respondents' sleep cycles begin between 10:30 p.m. - 11:30p.m., while for the rest 12% begin after 12 a.m.; 40% skip breakfast due to disrupted sleep patterns.

**Index Terms** – Midnight Food Cravings, Social Media, Sleep Cycle, University and College Hostel Students, Eating Habits. (Key words)

## 1. INTRODUCTION

Midnight food cravings are desires that occur at an unusual hour when you should be asleep. Food is an enthralling part of all life, including plants and animals. When the need for food arises at any level, it cannot be suppressed. Similarly, social media is become an essential part of our everyday lives. This exemplifies how food and social media interact in the present. Dietary pattern and health are defined as a broad profile of food and nutrient consumption that is defined by eating habits. Kingsley Omege, et al. (2018) [1] Sleep and nutritional intake/quality may be connected, since the time and quality of dietary consumption at night may delay or decrease sleep duration. Kracht, C. L., et al., (2019) [2].

According to Deliens. T et al. (2014) [3], University and College hostel life is a pivotal stage for students' detrimental changes in eating habits. A lack of sleep is presently a prevalent element of today's lifestyle. According to Gerda I.J. Feunekes et al., (1998) [4] the impact of the upcoming modern social environment and social media is critical in defining an individual's eating habits, health status, and sleep cycles. Taking all of these factors into consideration, the purpose of this study was to examine the food desires around midnight and sleep cycle activities of university and college hostel students residing in various university and college hostels in Tamil Nadu based on their social media use, dinner time, and dietary preferences.

## 2. OBJECTIVES

The objectives of the present study are as follows: -

- a) Assessing the health of students living in university and college hostels by their BMI (Body Mass index) Value.
- b) To examine the nutritional preferences and eating patterns of the hostel students.
- c) To assess the causes of the students' late-night food cravings.
- d) To gauge social media's impact on the sleep cycle.

## 3. RESEARCH METHODOLOGY

### 3.1 Study Population and Design

The study was conducted in various university and college hostels of Tamil Nadu, India. The reason for selecting university and college hostel students was due to remote allocation of the campuses in the state. This study applied a descriptive, analytical study design.

### 3.2 Selection of sample and Size

For this study, the undergraduate and postgraduate students from various university and college hostels were involved. The targeted sample size was 250 out of which only 200 samples responded randomly from both groups. The samples were majorly irrespective of their age, gender and field studying.

### 3.3 Sample Collection Technique

For the proposed research, the data was collected using Google forms which were shared to particular respondents personally. The google for consisted of 3 different sections namely Individual data, Eating Habits and Diet Preferences, Midnight Food Cravings and Sleep Cycle which were consisting various questions related to title in each section.

#### 3.3.1 Individual Data

This section included questions about name, age, gender, height, weight, education, and the name of the university and college because these details are needed to determine the samples' BMI and other characteristics. Individuals' height and weight were asked to make clear for evaluating their health status by calculating the body mass index and comparing it to a BMI value table.

#### 3.3.2 Eating Habits and Diet Preferences

Figure 1 shows an example of this section, which included questions to assess respondents' eating behaviours relating to diet preferences, meal frequency, dinner time, frequency of outside food consumption, and most and least liked food groups. To assess their food consumption, the hostellers' diet preferences were questioned. The frequency of meals taken throughout the day was effective in determining the amount of food sources ingested by university and college dormitory students. The gaps of outside intake of food assist in determining the quantity of fast food ingested by the student. The individual's meal timing influences his or her late-night cravings.

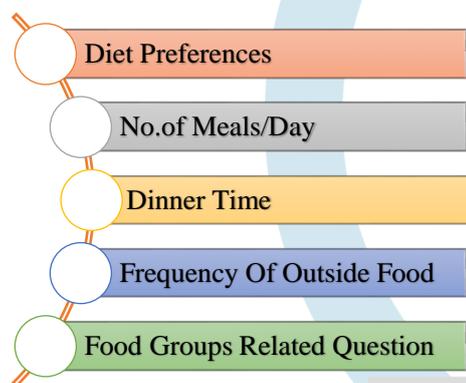


Fig.1 Eating Habits Questionnaire

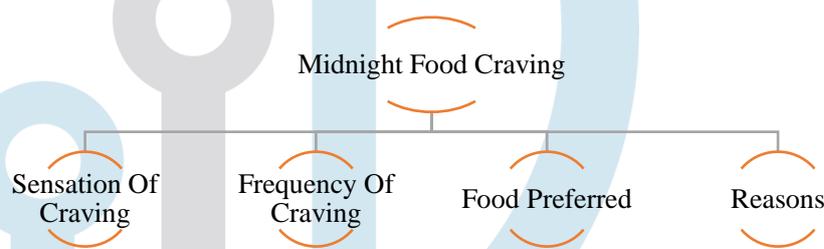


Fig.2 Survey on Midnight Food Craving

#### 3.3.3 Survey on Midnight Food Cravings and Sleep Cycle

This section, which makes up the majority of the entire Google form, contains the key inquiries regarding the study on late-night food desires, as depicted in Figure 2, as well as their impacts on the sleep cycle and breakfast as a result. It facilitates accurate data analysis.

## 4. RESULTS AND DISCUSSIONS

### 4.1 Individuals' Demographic and Anthropometric Data

#### 4.1.1 Personal Information of the University and College Hostel Students

Table 1 summarizes the personal data collected from the samples in order to identify their unique criteria and obtain a straightforward conclusion. Out of the 200 replies, 49% were male and 51% were female, a relatively equal split. The majority of hostellers (48%) were between the ages of 18 - 20 years and 21 - 23 years, with the remaining 4% being beyond the age of 24, which is similar to the findings of Al-Otaibi et al (2015) [11]. The targeted university and college hostel students were from both postgraduate (46%) and undergraduate (54%) programme, and their numbers were about equal.

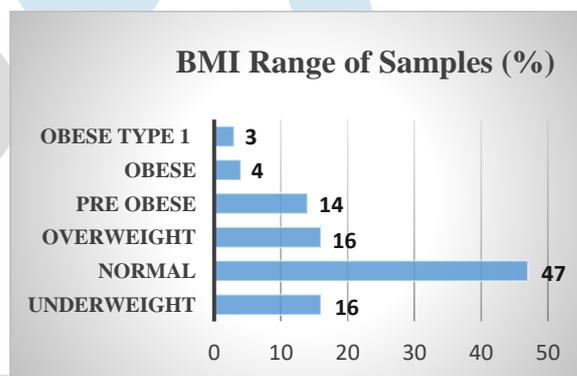
Table 1 – Individuals Personal Information

Variables	Responses	
	N=200	%
Gender		
Male	98	49
Female	102	51
Age		

18 yrs. - 20 yrs.	96	48
21 yrs. - 23 yrs.	96	48
24 yrs. and above	8	4
<b>Qualification</b>		
Undergraduate	108	54
Postgraduate	92	46
<b>BMI Range (kg/m<sup>2</sup>)</b>		
< 18.5	32	16
18.5 - 22.9	94	47
23.0 - 24.9	32	16
25 - 29.9	28	14
≥ 30	8	4
30 - 40	6	3
40.1 - 50	0	0
> 50	0	0

**Table 2 – Nutritional Status and BMI Range**

*Nutritional Status	*BMI Range (kg/m <sup>2</sup> )
Underweight	< 18.5
Normal	18.5 - 22.9
Overweight	23.0 - 24.9
Pre-Obese	25 - 29.9
Obese	≥ 30
Obese Type 1	30 - 40
Obese Type 2	40.1 - 50
Obese Type 3	> 50



\*Asian BMI Criteria - Luisito O. Llido, et al. (2011) [5]

**Fig.3 BMI Status of Respondents**

**4.1.2 Health Status and BMI Status of the University and College Hostel Students**

Figure 3 demonstrates that the majority (47%) of respondents had a BMI (Body Mass Index) between 18.5 and 22.9, indicating that they have a normal health status, which correlates to the research commissioned by Deliens, T et al. (2014) [3] and Kingsley Omage, et al. (2018) [1]. Only a handful (N=12) are obese type -1 and obese. It depicts that 14% of pre-obese and 16% of Overweight students were recorded who are in their initial stages of obesity. The data was analyzed using the Asian BMI Criteria developed by Luisito O. Llido, et al. (2011) [5].

**4.2 Diet Preference and Eating Habits of the University and College Hostel Students**

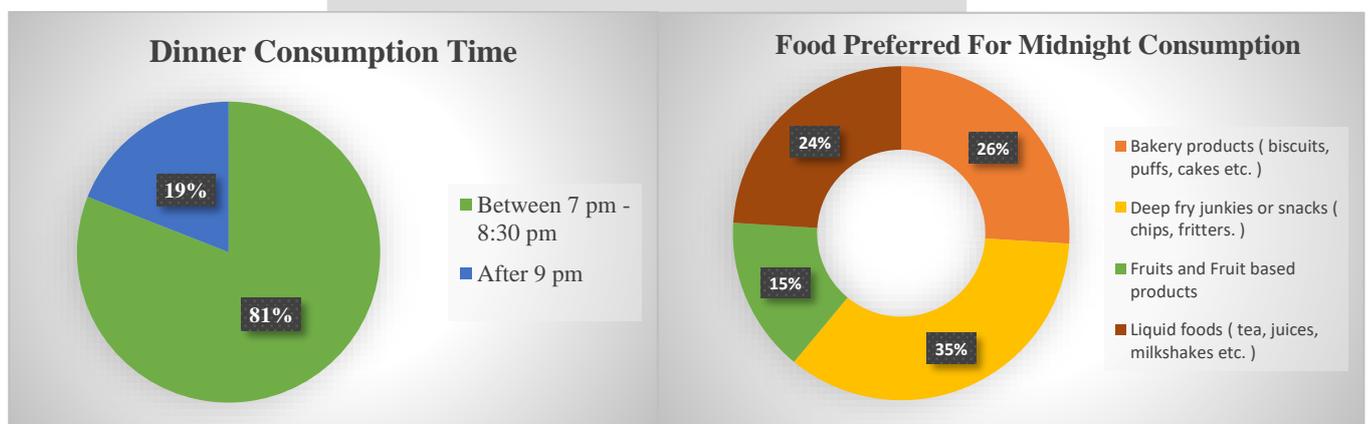
**Table 3 - University and College Hostel Students' Dietary Choices and Eating Habits**

Variables'	Responses	
	N=200	%
<b>Diet Preference</b>		
Vegetarian	36	18
Egg Eatarian	12	6
Non-Vegetarian	152	76
<b>No. Of Meals/Day</b>		
2 Meals	64	32
3 Meals	122	61
4 Meals	14	7
<b>Most Preferred Food Group</b>		

Cereal And Pulse Products'	48	24
Fats And Sugar Products	16	8
Fruits And Vegetable Products	86	43
Milk And Meat Products	50	25
<b>Least Preferred Food Group</b>		
Cereal And Pulse Products'	26	13
Fats And Sugar Products	74	37
Fruits And Vegetable Products	50	25
Milk And Meat Products	50	25
<b>Satisfactory Food</b>		
Home Food	162	81
Hostel Food	10	5
Hotel/Fast Food	28	14
<b>Dinner Consumption Time Slot</b>		
Between 7 pm - 8:30 pm	162	81
After 9 pm	38	19
<b>Frequency Of Outside Food Consumption</b>		
Daily	38	19
Frequently	80	40
Rarely	64	32
Never	18	9

The dietary and dining habit responses were recorded and summarized in the table 3. The plurality (76%) of university and college hostellers are non-vegetarians, while the remaining 18% prefer a vegetarian diet, and only a handful (6%) are eggetarian which correlates the study done by Pavitra K U et al. (2022) [6]. 61% of the samples take meals three times each day, whereas just 7% have four meals every day. According to the data, the majority (43%) of respondents' preferred food group in their diet is fruits and vegetables, preceded by 25% respondents' preferred diet which included cereals-pulses and milk-meat products, and only 8% of students preferred diet which consists primarily of fat and sugar products.

According to Table 3, the majority (37%) of people dislike fat and sugar products. Based on the data, 81% of the hostellers prefer entirely homemade cuisine, which satisfy them more than hostel food (5%). The study's core question as shown in figure 4, depicts that 81% of the samples eat dinner between 7 and 8:30 p.m., while the remaining 19% have dinner after 9 p.m. According to analyzed data, 40% of respondents often consume meals from outside vendors and hotels which corresponds to survey conducted by Yuhe Jiang et al. (2019) [7]



**Fig.4 Dinner consumption Time of Respondents**

**Fig.5 Food consumed during Midnight by Respondents'**

### 4.3 Midnight Cravings and Sleep cycle of University and College Hostel Students

#### 4.3.1 Crave for Food Consumption in Midnight (Responses)

Figure 6 shows that 69% of respondents claimed "YES," they have a midnight food craving, while the remaining 31% remarked "NO," they don't crave food in his/her late-night schedules.

**4.3.2 Frequency of the Food craving in Midnight of Students**

Figure 7 demonstrates that the majority (46%) rarely experience food cravings, whereas 19% and 20% of hostellers' experience food cravings in their late-night schedules often and frequently, respectively.

**4.3.3 Food Preference for Midnight Consumption by Respondents**

Figure 5 reveals that 35% of students chose deep fried addicts for their midnight cravings. While 26% of students' favor's bakery goods, 24% choose cold and hot beverages. Only a few (15%) choose fruit and fruit-based items as late-night snacks.

**4.3.4 Reasons for Midnight Food Consumption of University and College Hostellers'**

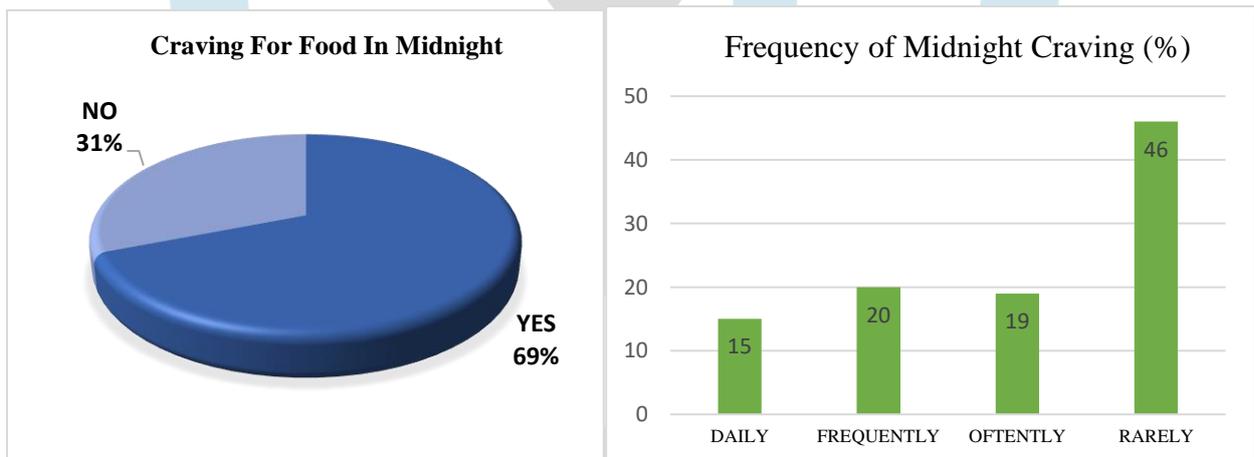
Figure 8 illustrates that 40% of the 200 recorded replies stated that viewing appealing food videos on social media is the main reason for food cravings during late-night activities. Only 8% of students said that peer pressure from colleagues and roommates led to late-night food intake. The early intake of their meal was cited as the explanation for hunger and yearning for food around midnight by 27% of the total. While the remaining students reported boredom and easy access to stores and hotels as explanations for their midnight food intake.

**4.3.5 Sleep Start Time of University and College Hostellers'**

According to figure 9, 60% of the total start time to bed of university and college hostel students is between 10:30 p.m. and 11:30 p.m. Following that, 12% of respondents begin sleeping late at night after 12 a.m. Only a small percentage of the samples (10%) go to bed before 10 p.m. relates to research study done by Renee Garrett, et al. (2018) [8].

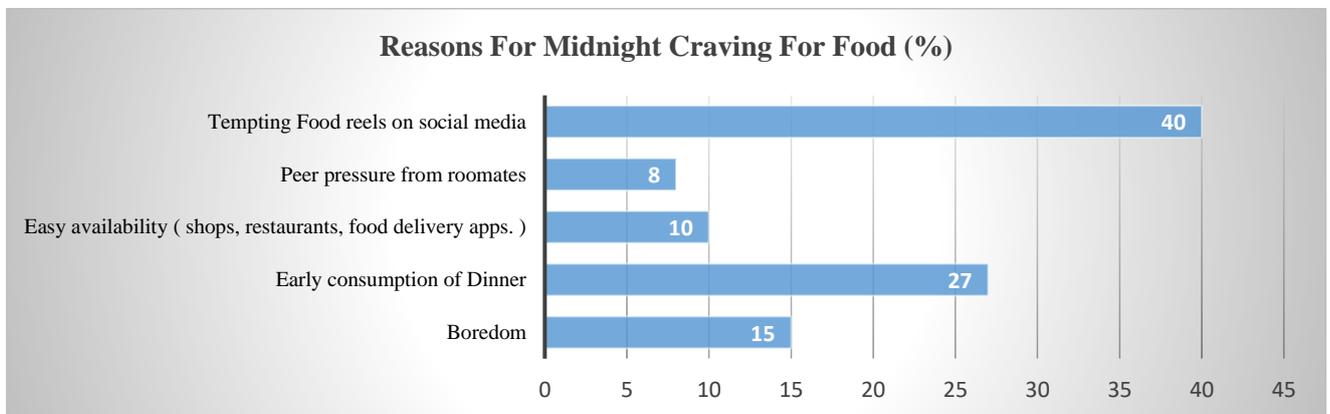
**4.3.6 Skipping of Breakfast by University and College Hostel Students**

Figure 10 shows that the vast majority (60%) of university and college students do not miss breakfast, whereas the minority (40%) students skip breakfast owing to irregular sleep cycles, which is consistent with the findings of Amel Meki, et al. (2019).[9] and Ayyıldız, F. and Şahin, G. (2022) [10]

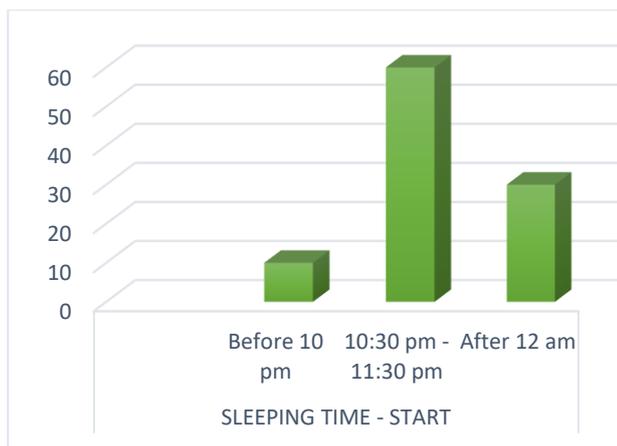


**Fig.6 Response of Food cravings in Midnight**

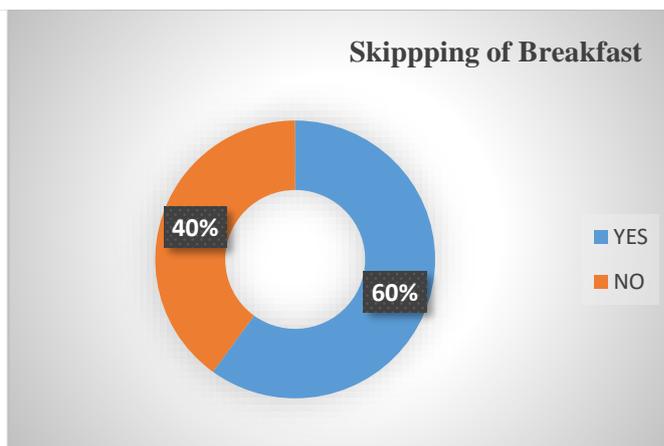
**Fig.7 Frequency of the Craving of Hostellers'**



**Fig.8 Reasons for Midnight Food Cravings University and College Hostellers'**



**Fig.9 Starting time of Sleep of Respondents**



**Fig.10 Skipping of Breakfast of Samples**

## 5. CONCLUSION

According to the findings of this study, it is concluded that 30% of the population is at danger of obesity based on their BMI status, indicating that their health state is obese, and overnight food intake is one of the causes. The remaining 47% have a Normal BMI. 76% of hostel students favored a non-vegetarian diet, whereas 43% preferred a diet rich in fruits and vegetables. They feel satisfied when they consume home-made foods. 81% of university and college hostel students eat dinner between 7 p.m. - 8:30 p.m., which has led to late night food consumption by 27% of respondents.

In line with the results of the study, 69% of university and college hostel students have midnight food cravings, with 40% citing appealing Food videos on social media as the primary source of these food desires. The majority of students said they prefer deep fried foods and bakery products for their midnight food consumption. Due to excessive use of social media around midnight, 60% of respondents' sleep cycles begin between 10:30 p.m. - 11:30 p.m., while for the rest 12% begin after 12 a.m. Breakfast is skipped by 40% of university and college students due to their disrupted sleep pattern.

## 6. ACKNOWLEDGMENT

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