

# Impact of Stress on Eating Behavior Among College Students

**Chanchal Rajput**

Assistant Professor (Ph.D. Scholar), Sunrise University, Rajasthan

## **ABSTRACT:**

The study explores the impact of stress on eating behavior among college students, noting that stress can lead to unhealthy dietary choices. The transition from school to college life is highlighted, emphasizing the influence of factors like parental expectations, peer pressure, and adjusting to a new environment on students' eating habits. The research, to unhealthy dietary choices. The transition from school to college life is highlighted, emphasizing the influence of factors to unhealthy dietary choices. A variety of dietary behaviors, with differences based on living arrangements. Notably, 39.3% of participants reported under eating during stress, and coping strategies varied, including phone use and emotional eating. Lack of social activities and poor academic undereating during stress, and coping strategies varied, including phone use and emotional eating. performance were identified as common stressors. The study suggests a need for college support and interventions, advocating for mandatory psychological counseling and stress management seminars to promote healthier eating habits among students, especially those in hostels or living alone. In conclusion, the study explores the correlation between stress and dietary habits among students, revealing diverse patterns influenced by living conditions. Recognizing the impact of living environment on long-term health, the study emphasizes the need for college support and interventions to address unhealthy eating habits, particularly among hostel-dwelling and solitary students. Advocating for mandatory psychological counseling in colleges and conducting seminars on stress management and healthy eating habits, the study emphasizes the importance of initiating stress management before college to safeguard students' ability to adopt and maintain healthy dietary practices for long-term well-being.

**Keywords:** Stress, Eating behavior, unhealthy dietary choices, parental expectations

## **INTRODUCTION**

Stress is defined as a disturbance to one's "physiological homeostasis or psychological well-being" [1]. Stress is also defined as any circumstances or event that threatens to disturb the day-to-day functioning of an individual and force them to make adjustments[2]. Stressors are classified into three types depending on their tenure as acute but of relatively short period of time, for example, sickness, school transformation, or loosing loved member of family. Another type is the everyday problems of life, such as hassles in dealing with crowds on a bus, waiting in a line, or having an argument with a store clerk while the third type is enduring life strain the chronic, long-term pressures[3]. Stress can have major impact on dietary

habits. A direct co-relation is observed between stress and dietary habits. Study shows that when under stress, people chose "unhealthy food" (eg. high calorie, high fat-snack food, sweets and carbohydrate rich food) rather than healthy food [4]. However, it is important to note that not all stress is bad stress. Eustress commonly referred to as good stress can be beneficial for the physical and mental health of body[5]. With increase in number of daily hassels within an individual's life, there is increased in the consumption of foods with higher sugar content, higher fat and refined flours while the consumption of fruits and vegetables is decreased [6]. This pattern of eating habit is commonly found in college students[6]. When it comes to stress and eating habits, the transition of students from an undemanding, effortless school life to demanding burdensome college life has been the focus. The transition to college life can be difficult for many students as it involves the adjustment to adulthood and the acceptance of increased responsibility [6]. College students tend to change their lifestyle leading to either healthy dietary habits or unhealthy dietary habits. Parents expectations, peer pressure and adjusting to new environment increases their stress leading to often change in eating habits[7]. The various common aggravating stressors in the life of college students include poor sleeping habits, poor academic performance and lack of social activities[8]. According to some study, the major stressors are found to be financial difficulties, parental troubles and speech anxiety[9]. Students cope up with increased consumption of energy drinks, caffeine and soda when faced with stress[10]. Possible coping strategies include emotional eating, use of phone, travelling and exercise. Majority of students live in college campus and hostels therefore they rely on instant food that is convinient yet detrimental to their health[6]. Lifestyles and dietary habits of college students differ from those of general population[11]. As a consequence of absence of parental influence they often rely on meals that are quickly accessible[12]. Among them, convinience is the most important motivator for food choices. Under stress some tend to overeat or undereat while others eating habit is not affected. Perhaps this difference depends on individuals level of perceived stress[12]. Hence the association between eating behavior and stress is inconclusive[7]. Recent research has recognised the importance of the analysis of dietary pattern for assessing the overall diet. Therefore, this study investigates the college students dietary habits and perceived level of stress in order to offer suggestions that supports a healthier diet who are lacking sufficient nutrient intake.

## METHODOLOGY

A cross-sectional questionnaire study was conducted to assess the impact of stress on eating behaviour among college students in Pune city of Maharashtra. A pilot study was done on 20 subjects to check for the reliability and validity of the questionnaire, and to calculate the sample size. Reliability of questionnaire was assessed using Chronbach's alpha value that was 0.84. The sample size was calculated to be 250 using the formula  $n = \frac{Z^2 P(1-R)}{d^2}$ . This close-ended, self structured questionnaire was designed that complies the demographic details along with 30 questions that assessed the knowledge, attitude, awareness with regards to the effects of stress on eating behaviour. Questionnaire was circulated among college students in Pune. A brief introduction was given to the participants about the study followed by sharing the google forms via google form link. The data/ responses collected were entered in Excel spreadsheet. The data was analyzed by means of statistical analysis using statistical product and service solution (SPSS) version 21 for windows.

## RESULT

A total of 247 participants were included in the study amongst which 66% of the participants were females and the remaining 34% of the participants were males. Majority of the participants were residing in hostel (49.8%), whereas 40.5% of the participants lived with their families, and only 9.7% of the participants living alone. Equal proportion of the participants consume a non-vegetarian and mixed diet (38.5%), with the vegetarian diet being consumed the least by the study participants (13.9%). Majority of the participants reported that they consume 3 meals per day and eat fast food at least thrice per week. A large proportion of the participants (41.5%) reported that they get 6-8 hours of sleep every night, but despite this 56% participants have experienced disruption in their sleep pattern in the past 3 months. Majority of the participants reported that they tend to over consume caffeinated products when they are stressed (30%), followed by 23.5% participants who indulge in self-inflicting injury in any way. Majority of the participants in the survey were aware about the factors associated with stress; i.e., the signs and symptoms of stress, meaning of acute and chronic stress, effects of cortisol on food craving, effects of healthy food on the body, and effects of stress-induced sickness on the body. The study shows that amongst the study participants 41.2% of the participants agreed that stress has a major impact on an individual's dietary habits, and 44.1% of the participants agreed that eating a healthy diet can reduce the negative effects of stress on the body. 39.3% of the participants reported that they tend to under eat when stressed, in contrast to 23.8% of the participants who reported that they tend to over eat when stressed. Majority of the participants (38.9%) tend to indulge in sugary foods when stressed. The most common aggravating factor for stress in college was reported to be a lack of social activities (29.9%) and poor academic performance (28.3%). The most common method to reduce stress among the participants was using phone (26%). Majority of the participants reported that they do not include meditation (35.4%) as a part of their daily lives.

### Gender:

Male	66%
Female	33.6%

### Place of residence:

Alone	9.71%
Hostelite	49.7%
With family	40.48%

### Diet:

Mixed	38.8%
Veg	6.5%
Non-veg	40%
Vegan	7.3%

**Frequency:**

4meal	6.9%
3meal	47%
2 meal	40.9%
1meal	7.1%

Total :- 247 response

**DISCUSSION**

This study focuses on the knowledge, attitude and practice of eating behaviours among college students in relation to stress. The study found several characteristics of college students dietary behaviours including a strong reliance on eating outside food and skipping meals. The observed dietary behaviours differed based on student's residence type which is similar to the Choi [7]. Majority of participants around 39.3% under eat during stress while least of the participants restore to other methods at time of stress. The participants who under eat usually skip meals and are more stressed according to the perceived stress scale. The highest frequency of meals reported per day by 47% is 3 meals followed by 2 meals per day by 41% of participants. In addition, Shinsugi and Takimoto says that skipping meals is associated with stress and depressed mood which advocates with this study [13]. In this study, it is found that 50% respondents live in hostel, 10% live alone while 40% respondents live with family. However, Brevard and Ricketts noted that great differences was observed in the dietary behaviours of the respondents living with parents [14]. Similarly Choi highlighted that students who lived with parents displayed much healthier dietary behaviours than those who live in hostels or live alone [7]. Skipping meals is more commonly seen among hostelites compared to those who live with their parents that lines with Choi [7]. Among majority of the respondents possible coping strategies include use of phone while most of them displayed emotional eating (22%). Female students tended to eat to release stress, which supports the Zellner and Zuleyma that females are more likely to be emotional eaters than males [4]. Around 36% do not meditate at all while 17.6% reported 15 minutes of meditation per day to cope up with stress. A lack of social activities and poor academic performance was displayed as the common stressors/aggravating factors for stress among college students. Dietary behaviours does not significantly differ based on academic year. Therefore, this study does not support the dietary behaviours among participants in different academic year which is in contrast to Choi [7]. According to perceived stress scale, it is found that the participants who ate breakfast regularly as well as those who ate meals 3 times a day reported the highest level of happiness and good undisturbed quality of sleep. It was fascinating to see that students were not consuming large quantities of aerated drinks. The majority of respondents said that they consume sugary foods such as candies, cakes, pastries which is contrast to Telfer [6]. Interestingly, Morse and Driskell have suggested that females eat more fresh fruit [11]. While Wansink and cheney emphasized that females consume more snack related comfort food than males [15]. Overall, the male students in this study tended to exhibit healthier dietary behaviors than the females, in contrast to Papier and Ahmed [16]. The study shows that first year students display low frequency of regular exercise and meditation similar to Crombie and Abood which suggest that first year students fail to adjust to the new environment [17]. Our study investigates that there is

sufficient knowledge among college students about eating behaviours and it's ill effects on the body but lack of acceptance and implementation of healthy dietary habits in their day-to-day life.

**Behaviour of study population under stress**

Stress	Diabetes	7%	
Induced and disease	Heart disease	16.8%	
In study population	Obesity	18.9%	
	Diabetes, heart disease, obesity	57.4%	

Activity done by study	Overeat	23.8%
	Undereat	39.3%
	Normal eating behavior	20.9%

Preference of food of study population under stress	Fast food	25.4%	
	Sugary food	38.91%	
	Acted drinks	25%	
	Fruits and vegetables	107%	

Measurrs taken by study population to cope up stress	Emotional Eating	21.51%
	Meditation	21.1%
	Travelling	19.5%
	Use of phone	26%
	Any other thing	11.8%

Time spent during meditation to cope stress by study population	15 min in a day	17.6 %
	30 min in a day	19.3%
	30 mins a week	20.5%
	1 hour everyday	7%
	Not at all	37.5%

**CONCLUSION**

This study evaluate co relation between stress and dietary habit, students exhibited a diverse pattern of dietary habits. Differences were also noted in dietary habits based on where the students live. It is important to analyze and comprehend the effects of where an individual lives on diet, because eating pattern during this phase can impact long-term health and dietary habits in adulthood. College support and t intervention are necessary to combat unhealthy eating habits, specially among students living in hostels and ones living alone. Psychological counselling should be made mandatory in every college, and seminars regarding stressrends and Innovation ([www.ijrti.org](http://www.ijrti.org)) 537 management and healthy eating habits should be conducted. Initiating stress management before college is crucial, ensuring stress doesn't disrupt student's ability to adopt healthy eating habits and in turn affect their health in the long run.

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