



A Study of Impact of Exam Stress on Dietary Habits among Adolescents

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Abstract

Aim: The aim of the study was to observe the impact of exam stress on dietary habits among adolescents. **Materials and Methods:** Sample of 100 students (50 males and 50 females) who were hostellers selected from various degree colleges. Questionnaire was developed to collect information regarding the food habits, food choices and food preferences normally and during examination. Questions were asked regarding meal timings, skipping of meals, snacking and types of snacks consumed. **Results:** was found that males having more craving for junk food and feeling of thirst during exams as compared to females. **Conclusion:** it was concluded that there is a gender difference in food cravings and feeling of thirst during exams.

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Introduction

Exam stress is the feeling of worry and tension that comes from test typing situations. It is normal to feel some stress about exams, as it can challenge you and motivate you to work harder however, too much stress about can interfere with your daily life and your performance. Exam stress can you come from the pressure to do well, worries about the future, or uncertainty about the outcome. Some signs of exam stress may include feeling sad overwhelmed unmotivated or having physical symptoms like stomach aches or nail biting. Academic stress can be conceptualized as students interactions between environmental stressors, the students cognitive appraisal of and coping with the academic related stressors, and psychological or physiological response to the stressors Lee and Larson,2000; Lou & Chi, 2000). Academic stress is a pervasive problem across countries, cultures and ethnic groups and must be viewed in its context (Wong Wong, and Scott, 2006). Every student aspires to pursue academic success to achieve respect Thomas family pride and social mobility (Gow et al., 1996).This results in extremely high academic demands add extraordinary pressure on

students and especially adolescents. Consequence of stress and demands to perform well in examination the students are not able to enjoy their academic life and it becomes joyless and burden for them. Several studies have shown that there is an association between stress and health. For example, chronic stress can lead to increased blood pressure, cardiovascular diseases, diabetes, suppress immunity and increased incidence of depression (Schneiderman et al 2005). Furthermore chronic stress is also found to be associated with increased risk of obesity which is an underline factor that contributes to the chronic diseases such as cardiovascular disease and diabetes. There is evidence to support that stress can affect an individual's health not only through direct physiological processes but also by altering behaviours which can affect health. Change in diet some studies have shown that stressed individuals tend to increase consumption of high calorie and high fat snacks foods which may culminate in weight gain and obesity. While there is widespread scientific acceptance of a relationship between psychological stress and eating habits the findings are inconsistent. Individuals have been found to respond to stress with either reduced (hyperphagia) or increased food intake (hyperphagia). Research has shown that most of the university students experience academic stress (Elias et al, 2011). Inner study on cardiovascular health of university students, (Nguyen et al., 2006) found that more than half of students read their stress level as high or very high. Exams have been identified as the primary source of academic stress for many university students (Chapell et al., 2005). Furthermore high levels of examination anxiety can lead to delay or abandonment of university studies (Schneiderman et al., 2005). Other potential sources of academic stress include work overload, organizational problems, inadequate teaching supervision, teaching students conflictual interactions and poor health habits (Pozos et al., 2014). Moreover high levels of academic stress have been associated with lower well being anxiety depression changes in eating site sleeping difficulty and poorer academic performance (Baste and Gadkari 2014). High calorie dense foods that individuals tend to consume during stressful times contribute to the increasing trend of obesity. Past research concluded that stress induced eaters are consuming foods higher in sugar and fat content as well as greater portion sizes, within the adult population. Inner study conducted by Liaitinen et al., (2000). Stress driven eaters and drinkers 8 sausages pizza hamburgers and chocolate more often than those who are not stressed driven eaters repeated consumption of these foods and I will call it beverages can account for long term weight gain (Dinger et al., 1997). It was also found that chocolate cravings were more common among women during times of stress (Tam et al., 2017). In the prevention of obesity it is important to distinguish the reason behind consumption of these foods. Finally the link between stress and eating has been investigated mostly in single countries. In such studies, participants usually share the same eating habits and other psychological and environmental characteristics that would be linked to stress making it difficult to compare studies conducted in different nationalities. In this regard in a cross sectional study among universities students from 3 year European countries, Mikolajczyk et al., 2009 Found that the relationship between stress depressive symptoms, and unhealthy eating significantly deferred by country, showing that eating patterns depend not only on the individual but also social and political behaviours full in light of these results it could be useful to compare individuals from different nationalities and to examine whether nationality moderates the relationship between stress and food choice. As a whole the current literature highlights the influence of stress on eating behaviour, both in relation to the amount of food consumed and the choice of specific foods. However, few studies have specifically analyse the impact of academic stress on eating behaviour and we have not found any studies that have simultaneously examined all the variables discussed above therefore the present study was conducted to understand the relationship between academic stress and unhealthy eating among undergraduate.

Materials & Methods

A sample of 100 students (50 males and 50 females) who were hostlers selected from various degree colleges. Questionnaire was developed to collect information regarding the food habits, food choices and food preferences normally and during examination. Questions were asked regarding meal timings, skipping of meals, snacking and types of snacks consumed.

Results

Table 1 show that 80% of females experience stress due to exams as compared to males 78%. More females (50% out of 40 responses) felt sleepless than males (25.65% out of 39 responses). Majority of males 51.28% feel tense as compared to 25% females. Irritability is less common in females as compared to males.

Table 1. Distribution of Respondents on the Basis of Mental & Physical Symptoms Experienced During Exam Days & Medication to Control these Symptoms

S.No.	Experience Stress due To Exams	Males (N=50)	Females (N=50)
		n (%)	n (%)
1	Yes	39 (78.00)	40 (80.00)
2	No	11 (22.00)	10 (20.00)
Mental Symptoms Experienced			
S.No.	Mental Symptoms Experienced	Males (N=39*)	Females (N=40*)
		n (%)	n (%)
1	Get Nightmares	0	7 (17.1)
2	Irritability	5 (12.82)	3 (7.5)
3	Feel tense	20 (51.28)	10 (25.00)
4	Sleeplessness	10(25.65)	20 (50.00)
5	Any other	4 (10.25)	0
Physical Symptom Experience During Exam Days			
S.No	Physical Symptom Experience During Exam Days	Males (N=39*)	Females (N=40*)
		n (%)	n (%)
1	Stomach ache/Headache	18 (46.15)	20 (50.00)
2	Nervous diahorrea	10 (25.64)	12 (30.00)
3	Constipation	8 (20.51)	8 (20.00)
4	Any other	3 (7.29)	0
Medication to Control Symptoms			
S.No	Medication to Control Symptoms	Males (N=50)	Females (N=50)
		n (%)	n (%)
1	Yes	19 (38.00)	13 (26.00)
2	No	31(62.00)	37 (74.00)

*39 responses by males and 40 responses by females were given for experiencing stress during exam days.

The most common physical symptom experienced by both groups (50% out of 40 responses & 46.15% males out of 39 responses) was headache. Nervous diahorrea and constipation were experienced by more number of females than males. Fever, nausea & other problem were experienced by 3 males out of 39 responses.

This shows that these all physical symptoms could be one reason for sleeplessness during exam days. The distress due to examination could have accounted for the psychosomatic symptoms experienced by both males and females.

Table 2. Distribution of Respondents based on Eating Behaviour during Stress

S.No	Eating Behaviour During Problem	Normal Days		Exam Days	
		Males(N=50)	Females(N=50)	Males(N=50)	Females(N=50)
		n (%)	n (%)	n (%)	n (%)
1	More	13(26.00)	12(24.00)	9(18.00)	10(20.00)
2	Less	35(70.00)	30(60.00)	21(42.00)	13(26.00)
3	Not at all	2(4.00)	8(16.00)	20(40.00)	27(54.00)
Distribution of Respondents based on during Problem food gives to males and females					
S.No	During Problem Food Gives	Males (N=59*)		Females (N=64*)	
		n (%)	n (%)	n (%)	n (%)
1	Relaxation	6(10.16)		8(12.5)	
2	Satisfaction	23(38.98)		19 (29.68)	
3	Mental & physical stimulation	14 (23.72)		15(23.43)	
4	Take your mind off your problem	12 (20.33)		20 (31.25)	
5	Any other	4 (6.77)		2 (3.12)	

Table 2 reveals that majority of males 70% ate less than normal as compared to females 60% during facing some problem during normal days. Comparatively in exam days both groups (40% males & 54% females) do not eat at all. During normal days as compared to exam days males 26% ate more while facing some problems, while only 18% females eat more during exam days. Common reason for overeating/under eating for majority of males 38.98% were that they felt satisfied after change in their eating while majority of females 31.25% felt their mind free of problem after overeating/under eating. 23.43% females felt mental and physical stimulation as compared to 23.72% males. More number of females 90% skipped meals as compared to males 74%, under examination stress. Breakfast was the most common meal skipped by both males and females. This complete table shows that females eat not at all when facing some problem or during stress but males are not like females they eat but lesser in quantity of normal meal. And, this behavior of overeating/ under eating provides satisfaction to majority of males & females felt free from stress.

Table 3. Distribution of Respondents according to Food Craving & Feeling of Thirst developed during Exams

S.No	Special Food Craving During Exam Days	Males(N=50)	Females(N=50)
		n (%)	n (%)
1	Yes	31 (62.00)	43(86.00)
2	No	19(38.00)	7 (14.00)
S.No	Types of Food Crave	Males(N=43*)	Females(N=46*)
		n (%)	n (%)
1	Junk food	19 (44.18)	13 (28.26)
2	Fried food	5(11.62)	20(43.47)
3	Sweets and chocolates	7(16.27)	10 (21.73)
4	Fruits/Dry fruits	8(18.60)	3(6.52)
5	Salads	3(6.97)	0
6	Any other	1(2.32)	0-
S.No	Excessive Thirst during Exam Days	Males(N=50)	Females(N=50)
		n (%)	n (%)
1	Yes	39 (78.00)	29 (58.00)
2	No	11(22.00)	21 (42.00)
S.No	How Pacify Thirst	Males(N=39*)	Females(N=35*)
		n (%)	n (%)
1	Plain water	14(35.90)	16(45.71)
2	Cold drink	15(38.46)	13(37.14)
3	Squashes	10(25.64)	6 (17.14)
4	Any other	0	0

*In these responses there were overlapping of responses because these questions had multiple choices.

Table 3 shows that more females 86% as compared to males 62% reported food craving during exam days. Most commonly food craved by males 44.18% was junk food (Burger, pizza etc.) followed by fruits, sweets & chocolates. Comparatively most commonly, females 43.57% craved for fried food (channa bhatura, bread rolls etc.) followed by junk food, sweets & chocolates. Only

6.97% males craved for salads but no female respond for salad craving. Weingarten et.al., (1991) has reported in their studies that most frequent food craving among women is for chocolate comparatively men had similar craving for pizza. Earlier studies have reported that although males generally feel good after acting on their food cravings, many females have negative feeling. Chocolate contains several bioactive substances, but the effect of consuming chocolate itself on mood is unknown. Some individuals reportedly use carbohydrate (Wurtman et. al., 1986) or chocolate to self medicate for stress. Since, with a rise in level of stress, body craves for higher levels of serotonin (a chemical meant to calm a person) carbohydrate concentrated food stuffs and chocolates are rich in serotonin. Majority of both groups 78% males & 58% females felt excessive thirst during exam days. But number of males was larger than females who felt excessive thirst during exam days. Majority of females 45.71% used plain water while majority of males 38.46% used cold drink to pacify their thirst. Comparatively more males 17.14% consumed squashes & fruit juices than females 20.69%. Increased cold drink consumption during exam days could be due to presence of bioactive substance caffeine, which appears to act on adenosine receptors in brain. It is tough to improve motor performance and increase alertness and enhanced sensory activity. Single low doses of caffeine, equivalent to those found in cola beverages have been beneficial effect on human performance and self reported mood states (Lieberman et al., 1987).

Conclusion

It was concluded that there is a gender difference in food cravings and feeling of thrust during exams.

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