



LACK OF IMPLEMENTATION DESPITE AWARENESS OF IMPORTANCE OF NUTRITION IN YOUNG ADULTS

Nutrition

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ABSTRACT

The selection of foods for consumption results from a number of factors, such as sensory, physiological, psychological, social, environmental and economic factors. Besides physiological determinants or nutritional needs, what we choose to eat is also determined by other factors that influence food choice such as being concerned about health, knowledge, peer pressure, parental control, economic factor and stress. Some of these changes coincide with the dietary recommendations, such as, decrease in red meat consumption and increase in vegetable consumption, but others do not. This study was designed to determine how the influencing factors affected the food choices of male and female students.

Aim: To study the influence of determinants of food selection.

Methodology: It was a survey based study of college students comprising of 100 females and 100 males. A questionnaire was used for sample collection.

Results: Females were more influenced by the media and had influence of parental control. Males preferred non-vegetarian foods. Both genders mostly skipped breakfast. Females were consuming for fatty foods. Food cost was an important determinant in food choice. Water consumption was more in males.

Conclusion: Males were more health conscious as compared to females. They engaged themselves in physical activity and were aware about the importance of nutrition. Therefore, it is recommended to bring up the awareness of nutrition in females.

KEYWORDS

Food choice, gender difference, knowledge, stress, peer pressure, media, exercise.

Introduction-

The selection of foods for consumption results from a number of factors, such as sensory, physiological, psychological, social, environmental and economic factors. Besides physiological determinants or nutritional needs, what we choose to eat is also determined by other factors that influence food choice such as being concerned about health, knowledge, peer pressure, parental control, economic factor and stress. Food choice is a complex behaviour and varies according to stage of life and from person to person. Over the past several decades, there have been significant changes in food choice pattern. Some of these changes coincide with the dietary recommendations, such as, decrease in red meat consumption and increase in vegetable consumption, but others do not. The influence of social media sometimes tends to confuse people about which foods are healthy and which are not. Those possessing knowledge about nutrition tend to make wise food choices. This study was designed to determine how the influencing factors affected the food choices of male and female college students.

Methods and Materials –A self-administered, semi-quantitative food based questionnaire (Appendix 1) was designed to assess the food choice of college students. A total of 200 students (aged 18 to 28 years) attending a college in Ludhiana, India participated in the survey from March 2017 – December 2017.

Statistical Analysis –

In the descriptive analysis, continuous variables were expressed as Mean±S.D and categorical variables were expressed as count (percentage). To obtain the comparison between two groups, for continuous variables Independent t-test was used for normally distributed data or Mann-Whitney U test was used for non-normally distributed data. And to obtain the comparison between categorical variables Chi-square test was used. The significance level was set at $p < 0.05$. All statistical analysis was performed using SPSS, version 21.0. Armonk, NY: IBM corp.

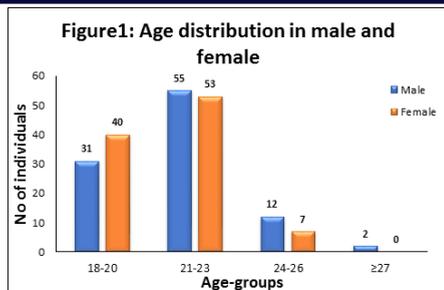
Results

- In comparison to female gender male gender preferred non-vegetarian diet.
- Both genders skipped breakfast frequently. Preferred meal by male gender was dinner and lunch by female gender.
- Our data showed male gender to be more figure/health conscious and engaged themselves in exercise than females 38 (38%) and males 59 (59%).
- Since last few years the fashion of eating junk food has increased

but strangely in our study 89 to 90% of students who were taking junk food knew the ill effects.

- Females were much more aware of the nutritional value of food. Constituting 75 (75%) in females and 52 (52%) in males.
- When asked about any parental control in eating behaviour, females were more influenced, constituting 48 (48%) and males 33 (33%). Similar finding was seen when role of peer pressure on selection of food was asked, especially 40 (40%) females agreed to have peer pressure which was far less in male gender.
- Role of cost of food in selection was almost same in both genders and when asked about the role of media in food selection female gender was found more influenced with the media, though in both genders percentage was less than 50%.
- 72 (72%) female gender agreed that there is impact of stressful situations on selection of food in comparison of male gender 50 (50%).
- Among the non-vegetarian diet chicken (67% in males and 47% in females) was preferred in both genders when given choice between chicken, mutton and fish, followed by fish 49 (49%) (males) and 37 (37%) (females).
- 99% of both genders preferred fruits over normal routine meal.
- Female gender 65 (65%) took soft drinks and sweetened fruit juice was preferred by 84 (84%) male gender.
- To our surprise female gender was found to take more chocolates 92 (92%), fast food 88 (88%) and pizza 88 (88%).
- Sweetened coffee was preferred by females 80 (80%) in comparison to unsweetened tea preferred by 72 (72%) males.
- Water consumption was more in males (2.1 ± 1.34) in comparison to females (1.55 ± 0.71).
- Pulses (99%) and vegetables (97%) were preferred by males in comparison to females.
- Milk and milk products were preferred by both the genders with more preference by females.

Demographic profile of students according to gender			
	Male (n=100)	Female (n=100)	p-value
Age Mean±S.D	21.3±2.10	20.7±1.64	0.046
Body Mass Index (BMI)	23.2±3.16	21.0±3.24	<0.001
Eating habits			
Veg	34 (34.0)	51 (51.0)	0.015
Non-veg	66 (66.0)	49 (49.0)	
Preferred Meal			
Breakfast	32 (32.0)	35 (35.0)	0.473
Lunch	32 (32.0)	37 (37.0)	
Dinner	36 (36.0)	28 (28.0)	



	Male (n=100) n (%)	Female (n=100) n (%)	p-value
Are you figure/health conscious? (Yes)	72 (72.0)	71 (71.0)	0.876
Do you exercise?	59 (59.0)	38 (38.0)	0.003
Do you know the ill effects of junk food? (Yes)	89 (89.0)	90 (90.0)	0.818
Do you have knowledge about nutrition of specific foods?	52 (52.0)	75 (75.0)	0.001
Do you know the importance of nutrition?	89 (89.0)	87 (87.0)	0.663
Is there any parental control in eating behaviour?	33 (33.0)	48 (48.0)	0.031
Is there any peer pressure on selection of foods?	22 (22.0)	40 (40.0)	0.006
Is there any role of food cost in selection of foods?	47 (47.0)	50 (50.0)	0.671
Is there any role of media in food selection?	34 (34.0)	39 (39.0)	0.463
Is there any impact of food selection in stressful situations (exam etc.)?	50 (50.0)	72 (72.0)	0.001

Discussion-

This study was designed to determine how different influencing factors affect the food choices of male and female students and to find out which factor was most influential and in which gender.

In our study male gender preferred non-vegetarian foods which are high in fat content. Similar findings were seen by Mooney and Walbourn¹, females more significantly than males avoided certain foods for their concern for weight, health and ethical reasons especially meat. According to Greaney et al², and LaCaille et al³ cost of food was an important influencing factor in selection of food. Our study also had the similar findings where cost of food did matter in food choice in both the genders. Even though the fashion of fast food consumption has increased in past few years, but strangely in our study large majority of subjects knew the ill effects of junk food. Similarly Marquis⁴ showed that students mostly buy foods that are fast, convenient and inexpensive. Clusky et al⁵ showed that students lack the knowledge and skills to make healthful food choices.

In our study female gender was more influenced by parental control than males and similar finding was seen for role of peer pressure on selection of food. Larson⁶ also showed that parents and household influence the food intake. And Contento et al⁷ showed peer influenced adolescents' food choices. In our study a large majority (72%) of females agreed that stressful situations do have an impact on their food selection. Similarly, MacKinnon et al⁸ also showed that exams/stressful condition has role in selection of food.

In our study 99% of both genders preferred fruits over normal meals. Racette et al⁹ in their study showed that students consume good amount of vegetables and fruits. In our study pulses were preferred by male students as a source of protein. Also it was seen milk and milk products were preferred by both the genders with more preference by females. Similar findings were seen in study done by Horacek et al¹⁰ where higher energy from protein was more prevalent among men.

In our study female gender was found to take more chocolates, fast food and pizza. Contrast findings were seen in study by Mooney and Walbourn¹ where females avoided foods associated with weight gain in comparison with males. In our study sweetened coffee was preferred by females (80%) and unsweetened tea was preferred by male gender (72%). According to Hearn et al¹¹ showed that college students

consume excessive amounts of sugar sweetened beverages. In our study 65% of female gender took soft drink. Similarly high intake of fast food, soft drink, coca cola, tea in adolescent female diet was seen in studies done by Duffy KJ, et al¹². In our study 39% females and 34% males were influenced by the media. Similar studies were done by Wadsworth and Hallam¹³ and same was observed by Feldwick¹⁴.

Conclusion-

Based on the results of this study, it is evident that food selection of females was influenced by several factors in a negative way. Consumption of fatty foods was more in females which can precipitate many heart ailments and other lifestyle disorders. Females are the future mothers and it is very important that they themselves meet their own nutritional needs first so that later in life they can look after their families and give better nutritional care. Males were more conscious about their health and consumed more water, could be because they engaged themselves in physical activity.

Appendix 1 SELECTION OF FOOD (A QUESTIONNAIRE)

Personal Information-

Male _____ Female _____
 Age _____ years
 Height _____ Weight _____ BMI _____ Kg/m2
 Vegetarian _____ Non-vegetarian _____
 Preferred meal – Breakfast _____ Lunch _____ Dinner _____

- 15. Are you figure/health conscious? Yes/No
- 16. Do you exercise? Yes/No
- 17. Do you know the ill effects of junk food? Yes/No
- 18. Do you have knowledge about nutrition of specific foods? Yes/No
- 19. Do you know the importance of nutrition? Yes/No
- 20. Is there any parental control in eating behaviour? Yes/No
- 21. Is there any peer pressure on selection of foods? Yes/No
- 22. Is there any role of food cost in selection of foods? Yes/No
- 23. Is there any role of media in selection of foods? Yes/No
- 24. Is there any impact of food selection in stressful situations (exam etc.)? Yes/No

Do you choose foods from the list given below?

S. No.	Food Items	Yes/No
1.	Pulses	
2.	Paneer (cottage cheese)	
3.	Chicken	
4.	Mutton	
5.	Fish	
6.	Milk and milk Products	
7.	Fruits	
8.	Vegetables	
9.	Soft Drinks (No?)	
10.	Fruit Juice sweetened	
11.	Fruit juice, unsweetened	
12.	Chocolates	
13.	Fast foods	
14.	Pizza	
15.	Coffee sweetened	
16.	Coffee, unsweetened	
17.	Tea, sweetened	
18.	Tea, unsweetened	
19.	Water consumption/day	

Bibliography-

- Mooney, K. M., & Walbourn, L. (2001). When college students reject food: Not just a matter of taste. *Appetite*, 36, 41-50.
- Greaney ML, Less FD, White AA, Dayton SF, Riebe D, Blissmer B, Shoff S, Walsh JR, Greene GW. College Students' barriers and enablers for healthful weight management: a qualitative study. *J Nutr Educ Behav*. 2009;41(4):281-286.
- LaCaille LJ, Dauner KN, Krambeer RJ, Pedersen J. Psychosocial and environmental determinants of eating behaviours, physical activity, and weight change among college students: a qualitative analysis. *J Am Coll Health*. 2011;59(6):531-538.
- Marquis M. Exploring convenience orientation as a food motivation for college students living in residence halls. *Int J Consum Stud*. 2005;29(1):55-63.
- Clusky M, Grobe D. College weight gain and behaviour transitions: male and female differences. *J Am Diet Assoc*. 2009;109(2):325-329.
- Larson N, Story M. A review of environmental influences on food choices. *Ann Behav Med*. 2009;38(Suppl 1):S56-S73.
- Contento IR, Williams SS, Michela JL, Franklin AB. Understanding the food choice process of adolescents in the context of family and friends. *J Adolescent Health*. 2006;38(5):575-582.
- MacKinnon DP, Fairchild AJ, Fritz MS. Mediation analysis. *Annu Rev Psychol*. 2007;58:593-614.
- Racette, S. B., Deusinger, S. S., Strube, M. J., Highstein, G. R., Deusinger, R. H. (2005).

- Weight changes, exercise, and dietary patterns during freshman and sophomore years of college. *Journal of American College Health*. 53,245-251.
10. Horacek, T. M., & Betts, N. M. (1998). Students cluster into 4 groups according to the factors influencing their dietary intake. *Journal of the American Dietetic Association*, 98, 1464-1467.
 11. Hearn MD, Baranowski T, Baranowski, J, Doyle C, Smith M, Lin LS, Resnicow K. Environmental influences on dietary behaviour among children: availability and accessibility of fruits and vegetables enable consumption. *J Health Ed*. 1998;29:26-32.
 12. Duffy KJ, Gordon-Larsen P, Jacobs DR, Williams OD, Popkin BM. Differential associations of fast food and restaurant food consumption with 3-y change in body mass index: the coronary artery Risk Development in Young Adult Study. *Am. J. Clin. Nutr.*, 2007;85(1):201-208.
 13. Wadsworth DD, Hallam JS. Effect of a web site intervention on physical activity of college females. *Am J Health Behav*. 2010;34(1):60-69.
 14. Feldwick P. Food advertising and the nation's diet: what are the real issues? *Business Strategy Reviews* 1995; 6(1):61-9.