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Research Article

**EFFECTS OF FAST FOOD ON BMI AND PSYCHOLOGICAL
HEALTH OF MEDICAL STUDENTS OF CENTRAL PARK
MEDICAL COLLEGE LAHORE****Dr. Qurrat ul Ain, Dr. Abdul Samad, Dr. Hafiz Ahmad Atiq ur Rehman Siddiqui**

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Abstract:

Background: The trend of increasing fast food consumption among people especially among students is raising serious health related issues which includes obesity, increased BMI and other psychological issues. The objective of this study was to determine the effects of fast food consumption on the physical and psychological health status of medical students of CPMC.

Objectives: To study the effects of fast food on BMI of medical students and to evaluate the effects of fast food on the different aspects of psychological health of medical students.

Material and Methods: Study Design: Cross sectional study

Study Setting and duration: The study was conducted in Central Park Medical College situated in Lahore. The study lasted for one month 25th April to 25th May, 2014.

Inclusion criteria: Medical students from 1st year to 5th year. Both genders. Both day scholars and hostilities.

Data Collection and analysis: We will approach those students in Central Park Medical College, Lahore who fulfilled our inclusion criteria. Verbal informed consent will be taken and students will be assured to have confidentiality. Data will be collected according to pretested structured questionnaire from students. The data will be entered and analyzed by computer software SPSS version 14. The qualitative variable will be presented as frequency and percentage. The quantitative variable will be presented as mean and standard deviation. The independent variables will be cross tabulated with dependent variables to find out any association using Chi square chart. The value $p > 0.05$ will be taken as statistically insignificant.

Results: Out of sample of 200 medical students, 153 (76.5%) have normal BMI, 20 (10%) are underweight, 24 (12%) are overweight and 3 (1.5%) are obese. 45.5% prefer homemade food, 29.5% prefer fast food and 25% have inclination towards healthy food. 40% people think that weight is increased due to fast food.

Keywords: BMI, obesity, fast food, medical students.

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INTRODUCTION:

Easily prepared processed food served in snack bars and restaurants as quick meal or to be taken away. The increased prevalence of fast food intake among students has led to various hazards at a very early age like obesity, hypertension and other psychological health issues. The high frequency of fast food consumption showed a significantly higher risk of failing to meet the dietary requirement intake and had a higher risk of developing obesity. H.Schloder et al stated that the BMI increased with the amount of fast food consumption among medical students [1]. There was a significant association between fast food consumption and the increased BMI of female medical students. Students are aware of the fact that increased consumption of such food results in adverse health disorders [2]. The increasing intake of fast food, increased intake of soft drinks and lesser physical exercise has a strong association with BMI. Strong evidence on the association between increasing energy density of the diet associated with unhealthy eating behaviors like snacking, binge eating promotes unhealthy weight gain [3]. Fast food consumption coupled with lack of physical exercise has resulted in increased weight trends over the past few decades. Positive association between increased fast food consumption and BMI [4].

In females the increased stress was associated with increased consumption of sweets / fast foods with less frequent consumption of fresh fruits and vegetables. Positive association between fast food consumption and mental health indicators in female students [5]. The increased use of sugar sweetened carbonated beverages is associated with increased BMI and waist circumference in boys. The increased use of SSCB is also associated with poor dietary choices⁶. Participants

SAMPLE SELECTION:**Inclusion criteria:**

1. Medical students from 1st year to 5th year.
2. Both genders
3. Both day scholars and hostilities.

Exclusion criteria:

1. Students who are not ready to give consent.
2. Students suffering from metabolic disorders.
3. Students with autoimmune disorders.

of this study with higher consumption of fast food and baked products were more likely to be single, less active and a unhealthy dietary profile. Strong association was found between increased consumption of fast foods are depressive symptoms [7]. The frequency of eating fast food is associated with weight dissatisfaction, insulin resistance and resulting obesity. It is also associated with poor self rated health, perceived difficulties of ordering and preparing healthy meals. Study also revealed that increased intake of fast food is also associated with lower intake of healthful nutrients and resulting health concerns [8]. Increase frequency of fast food consumption is associated with twin epidemic of obesity and insulin resistance. Fast food is the primary etiological agent in the genesis of current obesity epidemics [9].

OPERATIONAL DEFINITION:

Fast food is easily prepared processed food served in snack bars and restaurants as a quick meal or to be taken away.

BMI is an attempt to quantify the amount of tissue mass in an individual and then categorized that person as underweight, normal weight, overweight or obese based on that value.

MATERIAL AND METHODS:

STUDY DESIGN: Cross sectional study

STUDY SETTING: The study was conducted in CPMC Lahore. The study lasted for one month 25th April to 25th May, 2014.

DURATION OF STUDY: The study lasted for one month 25th April to 25th May, 2014

SAMPLE SIZE: 200 medical students of CPMC, Lahore (1st year-5th year).

SAMPLING TECHNIQUE: Non probability purposive sampling.

DATA COLLECTION PROCEDURE:

We will approach those students in CPMC, Lahore who fulfilled our inclusion criteria. Verbal informed consent will be taken and students will be assured to have confidentiality. Data will be collected according to pretested structured questionnaire from students.

will be presented as frequency and percentage. The quantitative variable will be presented as mean and standard deviation. The independent variables will be cross tabulated with dependent variables to find out any association using Chi square chart.

DATA ANALYSIS PROCEDURE:

The data will be entered and analyzed by computer software SPSS version 14. The qualitative variable

The value $p > 0.05$ will be taken as statistically insignificant.

RESULTS AND MAIN FINDINGS:**Statistics****Table No.1: Age of respondents**

Mean	22.25
Standard Deviation	1.502
Maximum	27
Minimum	19

Table No.2: Statistics of BMI

Mean	21.8995
Standard Deviation	3.09182
Maximum	34.29
Minimum	15.43

Table No.3: BMI of respondents

	Frequency	Percentage
Underweight	20	8.4
Normal	153	64.3
Overweight	24	10.1
Obese	41	17.2
Total	238	100

Table No.4: Fast food preference among students

Food preference of respondents		Fast food preference		Drinks Ordered with Fast food	
Response	Frequency	Response	Frequency	Response	Frequency
Healthy Food	50	Very Strong	26	Carbonated beverages	141
Fast Food	59	Strong	75	Bottled water	38
Homemade Food	91	Neutral	78	Fruit juices	16
		Dislike	7	Coffee/Tea	5
		Strong dislike			

Table No.5: Reason for eating fast food

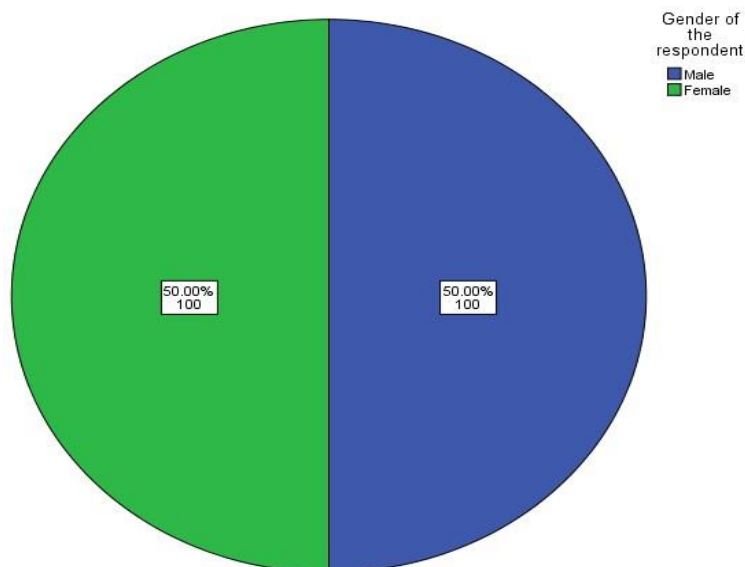
Fast food unhealthy		Reason for eating fast food		Visiting restaurants each week	
Response	Frequency	Response	Frequency	Response	Frequency
yes	175	Delicious	99	Everyday	15
no	25	Peer support system	26	Once a week	61
		Non availability of home made foods	51	Once a month	114
		Easy to get	24	Not very often	10

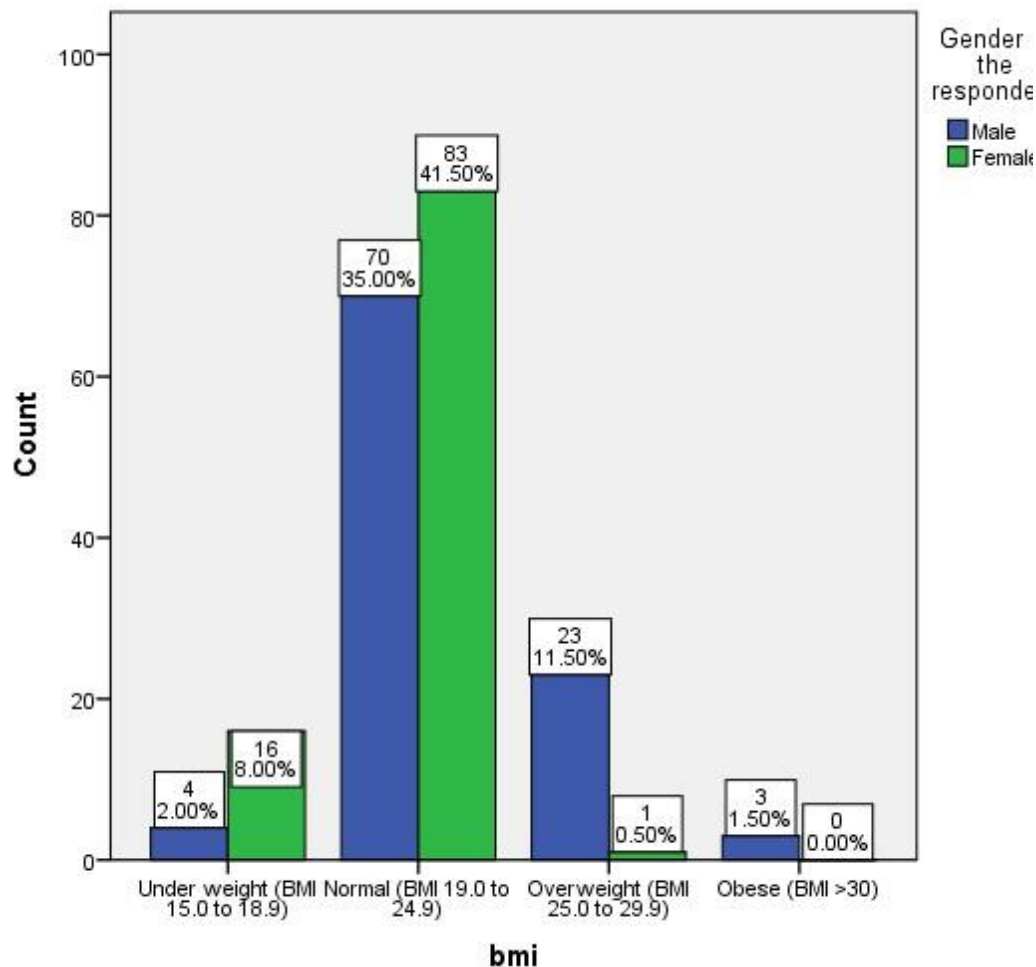
Table No.6: Effect of fast food on psychosocial health

Effect of weight		Obesity due to fast food effects social interactions		Feelings after eating fast food	
Response	Frequency	Response	Frequency	Response	Frequency
Weight is increased	80	yes	24	Energetic	20
Weight is decreased	7	no	176	Happy	93
No effect on weight	68			Lethargic	40
Never noticed	45			Refreshed	47

Table No.7: BMI of respondents' food preference-Tabulation

	Food preference			Total
	Healthy Food	Fast Food	Homemade Food	
Underweight	7 (35.0%)	6 (30.0%)	7 (35.0%)	20 (100.0%)
Normal	36 (23.5%)	46 (30.1%)	71 (46.4%)	153 (100.0%)
Overweight	7 (29.2%)	6 (25.0%)	11 (45.8%)	24 (100.0%)
Obese	0 (0.0%)	1 (33.3%)	2 (66.7%)	3 (100.0%)
Total	50 (25.0%)	59 (29.5%)	91 (45.5%)	200 (100.0%)





RESULTS:

We conducted our research on 200 medical students of CPMC. The aim of our study was to find out the effect of fast food on body mass index and psychological health of medical students of CPMC, Lahore. We collected data by distributing questionnaire among 200 medical students out of which 100 (50%) are male and 100 (50%) are female. The mean age of respondent was 22.25 with maximum and minimum age of 27 and 19, respectively. Out of these 200 medical students, 153 (76.5%) have normal BMI, 20 (10%) are underweight, 24 (12%) are overweight 3 (1.5%) are obese. Talking about the food preference 91 (45.5%) prefer homemade food, 59 (29.5%) prefer fast food and 50 (25%) have inclination towards healthy food. Fast food preference rate is neutral among 78 (39%) students, strong among 75 (37.5%) students and is disliked by 14 (7%) students. 114 (57%) students visit fast food restaurants once a month and 61 (30.5%) students once a week. 175 (87.5%) people consider fast food as unhealthy food while 25 (12.5%) have an opposite opinion. The reasons for eating fast food

because of its delicious taste (99 (49.5%) students), nonavailability of homemade food (51 (25.5%) students) and peer support system (26 (13%) students). 141 (70.5%) students order carbonated beverages with fast food. When we asked them about the intention of changing fast food consumption, 69 (34.5%) students have no such plan, while 66 (33%) students want to avoid fast food. 80 (40%) students think their weight is increased due to fast food while 68 (34%) students said that the fast food have no effect on their weight. 176 (88%) students said that obesity due to fast food has no effect on their social interaction. Talking about the feelings after fast food, 93 (46.5%) students said that they feel happy after having fast food, 47 (23.5%) feel refreshed and 40 (20%) students feel lethargic.

DISCUSSION:

A lot of researches have been carried out nowadays on the increasing fast food consumption and its effects on BMI, obesity and psychological health of people. To check its effects particularly on medical students we carried out a research in which we

selected 200 medical students. According to our research, majority of students have normal weight while a small percentage of students are overweight and obese. One study conducted among the female students of Saudi Arabia Taibah University 63.7% students have normal weight, overweight and obese are 11.6% and 6.6% respectively. These Findings are close to our finding [2].

We compared our study with research conducted on medical students of a private university in Mangalore about food preferences of students we came up with almost same results as mostly students in both researches have preferences for homemade food [1]. Our research showed the reasons for eating fast food are because of its delicious taste 49.5%, non-availability of home made food 25.5% and peer support system 13% while the research conducted in the department of biochemistry, SBKS MI and RC and Sumandeep Vidyapeeth showed 34% students consumed fast food due to non-availability close to the percentage of students and the remaining consumed it because of their lifestyle [3]. In our study 34.5% students have no plan of changing their consumption of fast food, 33% wants to avoid it while a study conducted in a private medical university 29.1% students have no such plan which is close to our results and 23.0% students wants to reduce their consumption¹. According to our research 87.5% people consider fast food as unhealthy food while 12.5% have opposite opinion while a research conducted at Nutrition and food science department King Saud University, Saudi Arabia 85.5% know its unhealthy, 2.1% thinks its healthy [8].

According to our research 70.5% students ordered carbonated beverages with fast food while a research conducted in department of biochemistry, SBKS MI and RC indicated 61.5% students ordered soft drinks with fast food while 38.5% did not order soft drinks with fast food [3]. According to our research 57% students visit fast food restaurant once a month while 30.5% students visit fast food restaurant once a week while a research conducted at a private medical college gave the results of 42.8% students visiting restaurants once or twice a week, 23.75% visit it three or four times a week, 9.1% visit it two or more times a day and 10% students visit it two or more times a day [1]. According to a research conducted among the first year students in Germany, Poland and Bulgaria for male students fast food was not associated with stress or depressive symptoms however stress in females was positively associated with increased intake of fast food while the research conducted by us surprisingly shows that 46.5%

students feel happy after eating fast food, 23.5% feel refreshed and 20% felt only lethargic after eating fast food [5].

CONCLUSION:

The conclusion of my study is:

- Students should adopt healthy diet routine healthy and should be guided to maintain normal weight for good physical and psychological health.

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PERFORMA

Describing medical student curiosity across a four year curriculum: An exploratory study.

Name: _____ (Optional) Age: Sex: M¹ F² Year:

MELBOURNE CURIOSITY INVENTORY – STATE FORM

A number of statements which people have used to describe themselves are given below. Read each statement and circle the appropriate number to the right of statement to indicate how you feel 'right now, that is at this moment'. There are no rights or wrong answers. Do not spend much time on any statement but give the answer what seems to describe how you feel right now

	Not at all (1)	Somewhat (2)	Moderately so (3)	Very much so (4)	
1.	I want to know more	1	2	3	4
2.	I feel curious about what is happening	1	2	3	4
3.	I am feeling puzzled	1	2	3	4
4.	I want things to make sense	1	2	3	4
5.	I am intrigued by what is happening	1	2	3	4
6.	I want to probe deeply into things	1	2	3	4
7.	I am speculating about what is happening	1	2	3	4
8.	My curiosity is aroused	1	2	3	4
9.	I feel interested in things	1	2	3	4
10.	I feel inquisitive	1	2	3	4
11.	I feel like asking questions about what is happening	1	2	3	4
12.	Things feel incomplete	1	2	3	4
13.	I feel like seeking things out	1	2	3	4
14.	I feel like searching for answers	1	2	3	4
15.	I feel absorbed in what I am doing	1	2	3	4
16.	I like to explore possibilities	1	2	3	4
17.	My interest has been captured	1	2	3	4
18.	I feel involved in what I am doing	1	2	3	4
19.	I want more information	1	2	3	4
20.	I want to inquire further	1	2	3	4

MELBOURNE CURIOSITY INVENTORY – TRAIT FORM

A number of statements which people have used to describe themselves are given below. Read each statement and circle the appropriate number to the right of statement to indicate 'how generally feel'. There are no rights or wrong answers. Do not spend much time on any statement but give the answer what seems to describe how you feel right now

	Almost never (1)	Sometimes (2)	Often (3)	Almost Always (4)	
1.	I think learning about things is interesting and exciting	1	2	3	4
2.	I am curious about things	1	2	3	4
3.	I enjoy taking things apart to 'see what makes them tick'	1	2	3	4
4.	I feel involved in what I do	1	2	3	4
5.	My spare time is filled with interesting activities	1	2	3	4
6.	I like to try and solve problems that puzzle me	1	2	3	4
7.	I want to probe deeply into things	1	2	3	4
8.	I enjoy exploring new places	1	2	3	4
9.	I feel active	1	2	3	4
10.	New situation capture my attention	1	2	3	4
11.	I feel inquisitive	1	2	3	4
12.	I feel like asking questions about what is happening	1	2	3	4
13.	The prospects of learning new things excite me	1	2	3	4
14.	I feel like searching for answers	1	2	3	4
15.	I feel absorbed in things I do	1	2	3	4
16.	I like speculating about things	1	2	3	4
17.	I like to experience new sensations	1	2	3	4
18.	I feel interested in things	1	2	3	4
19.	I like to inquire about things I don't understand	1	2	3	4
20.	I feel like seeking things out	1	2	3	4