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Research Article

**FAST FOOD CONSUMPTION AND INCREASED CALORIC
INTAKE LEADING TO OBESITY A SURVEY AMONG
PAKISTANI TEENAGERS****Dr. Javeria Ghafoor¹, Dr. Madeeha Bilal², Dr. Kaneez Fatima³**¹Ex-House Officer Nishtar Hospital Multan, ²Mobile Service Unit Lodhran City, ³Ex-House Officer Allied Hospital Faisalabad.**Article Received:** November 2020 **Accepted:** December 2020 **Published:** January 2021**Abstract:**

Background: The aim of the study was to determine obesity rate in Pakistani teenagers associated with fast food consumption.

Methods: This cross sectional study was conducted at Nishtar Hospital Multan during January 2019 to July 2019. Information was collected from teenagers of different age groups ranging from 13-19 years old. A self-structured questionnaire was designed containing four sections to gathered information from participants. BMI and %age of different variables were calculated.

Results: Total no of 1000 teenagers including male 536(53.6%) and females 464(46.4%) were approached out of which 334(34.4%) were overweight having BMI=25-29.9 and 544(54.4%) were obese having BMI>30. Mostly of them were 17 year old 425(42.5%). Obesity rate is higher both in males and females but mostly females were more prone.

Conclusion: It is concluded from our study that consumption of fast food on daily basis and increased caloric intake will leads towards obesity among teenagers now a days. Obesity rate is greater in females (refer to stage 4. of table. 3) as compared to males however both males and females were prone towards obesity due to increased consumption (thrice a day) of fast food. Other variables like residential area of participants and type of fast food eaten were also accountable in this regard.

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INTRODUCTION:

The prevalence of overweight and obesity has also increased substantially in the nutritional transition countries, and the health burden of obesity-related complications is growing. The introduction of fast-food chains and Westernized dietary habits providing meals with fast-food characteristics seems to be a marker of the increasing prevalence of obesity. The mechanisms involved are probably that the supply of foods is characterized by large portion sizes with a high energy density, and sugar-rich soft drinks.[1] Fast food can be defined as convenience food purchased in self-service or carry-out eating venues without wait service.[2]

In addition to the documented increase in fast food expenditures, many aspects of fast food make it suspect to the associated increases in overweight and obesity. Specifically, fast food tend to be energy dense, poor in micronutrients, low in fiber, high in glycemic load and excessive in portion size, causing many to exceed daily energy requirements.[2, 3]

Several dietary factors inherent to fast food may cause excessive weight gain such as massive portion size, high energy density, palatability (appealing to primordial taste preferences for fats, sugar, and salt), high content of saturated and trans fat, high glycemic load, and low content of fiber.[4]

The aims of this study was to determine whether fast food adversely affects diet quality in ways that might plausibly increase risk for obesity among teenagers.

An investigation was directed in Iran in which the national pervasiveness of overweight and heftiness, just as some related way of life practices, without precedent for Iran were assessed .Overall, 50.4% (n545 113) of the members were male and 64.6% (n557 866) were from the urban regions. The national appraisals of overweight, stoutness and bleak heftiness were 28.6%, 10.8% and 3.4%, separately. Weight list (BMI)\$25 kgm22 in men, ladies, urban inhabitants and provincial occupants were found in 37%, 48%, 46.7% and 35.5%, individually. Stomach corpulence was available in 43.4% of ladies, 9.7% of men, 28.5% of the urban inhabitants and 23% of the provincial occupants. Overweight just as summed up and stomach heftiness were increasingly common in the 45– 64-year age gathering. In spite of the fact that there was no noteworthy distinction in recurrence of utilization of the nutrition classes in subjects with various BMI classifications, different sorts of physical exercises demonstrated a consistent decay with expanding BMI.[5]

METHODOLOGY:**Study settings:**

This cross sectional study was conducted at Nishtar Hospital Multan during January 2019 to July 2019. In which data was collected from total no of 1000 teenagers ranging from age of 13-19 years.

Study design:

Data was collected from 1000 teenagers residing in Multan ,the most populated city of Pakistan .Information was gathered from teenager of different age groups ranging from 13-19 years old. Participants residing in different area of Multan Pakistan were invited to take part in our survey. We asked them a set of question written in our questionnaire, containing both open and closed ended questions.

Data collection tool:

A self- made questionnaire was used to gathered information from participants, consisting of four sections.

Section 1. It contains informed consent.

Section 2. Containing information regarding participant ID, gender, age, weight, height, residential area.

Section 3. Containing food intake questions e.g. total no of meal per day including breakfast, lunch, snacks, dinner and fast food intake per day either once ,twice or thrice, weekly or monthly .Also included question about type of fast food (burger, pizza, shawarma ,chicken wings,Bar B Q ,chicken sigi, roast,pratha rolls, pastas,potato fries,soft drinks etc)

Section 4. BMI calculation.

According to WHO criteria classified in 4 stages.

Stage1.Underweight if BMI<18.5

Stage2. Normal if BMI=18.5-24.9

Stage3. Over weight (pre obese) if BMI=25-29.9

Stage 4.Obese if BMI >30

Analysis: %age of fast food intake among male and female participants and their BMI were calculated by using SPSS version 20.

RESULTS:

A total no of 1000 respondents (teenagers) were approached. Total no of male and females in our study were 536(53.6%) and 464(46.4%) respectively. Different age groups participants ranging from13 to 19 years old were take part in study. Majority of them were 17 years old(42.5%). Other %age of respondents age groups given in table 1.

Table 1. Demographic characteristics of respondents N=1000

| Demographic variables | Frequency% |
|-----------------------|------------|
| Gender | |
| Male | 536(53.6%) |
| Female | 464(46.4%) |
| Age (y) | |
| 13-14 | 86(8.6%) |
| 15-16 | 245(24.5%) |
| 17 | 425(42.5%) |
| 18-19 | 244(24.4%) |

Table 2. BMI stages, frequency and percentages of respondents N=1000

| Stages | Frequency | Percentage |
|--|-----------|------------|
| 1. Underweight if BMI<18.5 | 37 | 3.7% |
| 2. Normal if BMI=18.5-24.9 | 85 | 8.5% |
| 3. Over weight(pre obese) if BMI=25-29.9 | 334 | 33.4% |
| 4. Obese if BMI >30 | 544 | 54.4% |

BMI calculations were given in table 2. According to that 37(3.7%), 85(8.5%),334(33.4%),544(54.4%)fall in stage 1,2,3 and 4 respectively, which shows increased fast food consumption will lead obesity among teenagers. Also table 3 gives detailed figures between BMI stages and other variables.

Table 3. BMI stages among other variables

| BMI Stages | Stage1 | Stage2 | Stage3 | Stage4 | Total |
|------------------------------|--------|--------|--------|--------|-------|
| Gender | | | | | |
| Male | 0 | 83 | 247 | 206 | 536 |
| Female | 37 | 2 | 87 | 338 | 464 |
| Age (years) | | | | | |
| 13-14 | 7 | 17 | 25 | 37 | 86 |
| 15-16 | 10 | 21 | 71 | 143 | 245 |
| 17 | 12 | 36 | 145 | 232 | 425 |
| 18-19 | 8 | 11 | 93 | 132 | 244 |
| Fast food consumption | | | | | |
| Once a day | 0 | 17 | 63 | 73 | 153 |
| Twice a day | 0 | 0 | 90 | 133 | 223 |
| Thrice a day | 0 | 0 | 125 | 271 | 396 |
| weekly | 5 | 23 | 42 | 54 | 124 |
| Monthly | 32 | 45 | 14 | 13 | 104 |
| Residential area | | | | | |
| Near restaurants | 13 | 33 | 281 | 460 | 787 |
| Far restaurants | 24 | 52 | 53 | 84 | 213 |
| Type of fast food | | | | | |
| pizza | 3 | 13 | 65 | 113 | 194 |
| Burger | 5 | 10 | 54 | 105 | 174 |
| shawarma | 2 | 15 | 45 | 97 | 159 |
| Chicken wings | 3 | 10 | 25 | 34 | 72 |
| Paratha rolls | 7 | 9 | 20 | 31 | 67 |
| Pastas | 2 | 5 | 17 | 12 | 36 |
| Potato fries | 1 | 3 | 29 | 37 | 70 |
| Soft drinks | 10 | 2 | 32 | 57 | 101 |

| | | | | | |
|--------------|---|---|----|----|----|
| Bar B Q | 2 | 2 | 14 | 33 | 51 |
| Chicken sigi | 1 | 9 | 13 | 12 | 35 |
| Roast | 1 | 7 | 20 | 13 | 41 |

DISCUSSIONS:

In this survey we found alarming situation regarding the obesity rate among teenagers. Fast food consumption becoming a fashion and easy way to eat quickly prepared food items among teenagers. Other factors like palatability and easily availability of these items also involved. In our survey we found both male and female participants were prone to obesity but mostly females (338) falls in stage 4 of BMI (refer to table 3). In accordance to the age group mostly of our participants of 17 year old were obese.

Following three issues should need to be addressed.

Firstly consumption of fast food on daily basis also in mostly cases three times a day among teenagers causes increased obesity rate.

Secondly residential area play vital role in eating habits of fast food, participants living near by the fast food restaurants would like to prefer fast food on home made dishes and in our findings having more obesity rate as compared to those which are not living near restaurants.

Thirdly type of fast (pizza ,burger, shawarma and soft drinks) consumption is higher and leads obesity as compared to other items.

CONCLUSION:

This study was conducted to find out the consumption of fast food and obesity rate among teenagers. Total no of 1000 participants take part in our study. Obesity rate is greater in females (stage4 table .3)as compared to males. No male was fall in stage 1, but majority (247) were in stage 3 of BMI. And we concluded from our study that fast food consumption in teenagers is becoming a trend and its harmful effects will lead towards obesity. Mostly of participants were 17 year old obese (42.5%).Fast food consumption on daily bases mostly thrice a day and residential area(near restaurants) and type of fast food (pizza ,burger, shawarma, soft drinks) were majorly involved in obesity rate .

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