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Review Article

Fast Food Consumption Pattern and its Awareness among Youth

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Abstract

Fast food consumption has become prevalent among the youth, driven by factors such as convenience and affordability, especially for students studying away from home. This study focuses on analyzing the behavioural patterns of fast food consumption among college students. Key findings include 59.6% of respondents consuming fast food, mainly driven by taste and variety. Weekly consumption averages Rs.200, with some individuals having fast food daily. Despite high awareness (94.7%) that fast food is unhealthy, its consumption persists, particularly among females. Non-consumers exhibit greater awareness and engage in more physical activity. Digestive issues and overweight problems associated with excessive fast food consumption underscore the need for healthier dietary habits and regular exercise among young students. The study emphasizes the importance of creating healthy and appealing alternatives to shift consumer preferences away from fast food.

Keywords: Fast Food; Lifestyle; Awareness; Health and Diseases

Introduction

Survival relies on the consumption of food, as it furnishes essential nutrients for the human body. In contemporary times, fast food has become a pivotal component of our diet, often referred to as food away from home (FAFH). Coined by Merriam-Webster in 1951, the term 'fast food' denotes edibles that can be swiftly prepared and served. It encompasses any food with a short preparation time, commonly sold in restaurants for quick takeout. Fast food is specifically crafted for rapid accessibility and includes specialized items like hamburgers, pizzas, fried chicken, and sandwiches [4].

Many fast foods are high in fats and lacking in essential nutrients. Typical fast food items encompass instant meals, chips, candy, gum, sweet desserts, and alcoholic beverages. The consumption of energy-dense foods, particularly sweetened beverages like fruit drinks, carbonated soft drinks, and energy drinks, has been linked to the development of type 2 diabetes and cardiovascular risks. During the transition to adulthood, there is a notable increase in trends such as fast food consumption and skipping breakfast, and these dietary habits are associated with heightened weight gain from adolescence to adulthood. Excessive intake of fast foods containing high levels of salt can negatively impact health by elevating blood pressure and reducing calcium absorption. The prevalence of high-salt content in foods poses a significant concern in modern society. Nutrient profiling, a method that categorizes foods based on their nutritional quality, is both practical and feasible in promoting public health by encouraging better dietary choices. The advancement of nutrient profiling represents a commendable step in supporting strategies aimed at addressing obesity and other non-communicable diseases [12].

Excessive consumption of phosphorus-containing food additives in the diet can have severe health repercussions for individuals with renal disorders. On occasion, fast food incorporates food additives to extend shelf life, enhance taste, and safeguard against microbial contamination. Internal obstacles to adopting a

healthier diet include unfavorable perceptions of nutritious eating, diminished taste satisfaction, challenges in altering familiar dietary habits, reliance on food for comfort, and prioritization of mental health concerns. Foods with high salt content may possess addictive qualities, stimulating dopamine receptors in the brain and intensifying cravings and hunger. This can lead to heightened appetite, increased calorie intake, overeating, and the development of obesity and related health issues.

Watching television is a contributing factor to bingeing on fast food, fostering unhealthy dietary habits, particularly among children. In contemporary times, social media has a significant influence, especially on the youth, as enticing videos and appealing images lead to cravings for unhealthy food varieties [12].

The prevalence of fast food culture has surged in recent times, primarily driven by the hectic schedules and routines of parents. With the need to depart early, they often resort to preparing instant, unhealthy meals. Alternatively, if they are unable to prepare lunch, students find themselves spending money at college canteens or nearby restaurants to satisfy their hunger.

Fast food consumption in world

The inception of fast food culture dates back to the 1950s in the United States, with the establishment of the first fast food restaurant, White Castle, in 1916. Today, multinational corporations like McDonald's, KFC, and Pizza Hut have global outlets. Fast food restaurants constitute a significant segment of the food industry, with over 200,000 establishments and $120 billion in sales in the U.S. alone [4].

Studies reveal a global increase in fast food consumption, particularly in Europe, the United States, and Australia, with expenditures surpassing those on higher education, personal computers, software, or new cars among Americans. In the United Kingdom, about 22% of residents purchase takeaway foods at least once a week, while in Australia, 28% consume takeaway meals at least twice a week. In the U.S., an estimated 33% of children and adolescents consume fast food daily, and adolescents, in particular, show high weekly intake. Fast food is linked to health issues such as obesity, heart diseases, and diabetes due to its high levels of saturated fats, trans fats, calories, cholesterol, sugar, and sodium. Awareness of the potential harm posed by fast food is crucial, as a single burger meal with fries and a drink can exceed half of the recommended daily calorie intake.

Fast food consumption in India

India, with its diverse culture across regions and states, has traditionally valued home-cooked meals. However, urbanization and the influence of Western culture have led to a shift in food consumption patterns, with an increasing acceptance of global delicacies. The fast-food industry in India is expanding at a rapid rate, growing by 40% annually.

Adolescence, a vulnerable period for obesity, is characterized by insufficient physical activity and the consumption of high-fat 'junk' foods, leading to health issues. Common dietary patterns among adolescents include snack eating on energy-dense foods, irregular meals, widespread fast-food consumption, and low intake of fruits and vegetables [7].

The prevalence of fast-food consumption among adolescents includes items like noodles, burgers, sandwiches, pastries, chocolates, and soft drinks. Studies in Baroda and Lucknow highlighted significant consumption of junk food items among school-age children. The impact of regular junk food intake includes low energy levels, poor concentration, obesity-related complications, and various health issues.

Adolescent dietary habits are shaped by various social factors, including family, peers, schools, advertising, religion, and knowledge. The surge in obesity rates among adolescents is attributed to the excessive consumption of processed foods and high-fat diets [1].

Physical activity assumes a pivotal role in sustaining overall health, averting non-communicable diseases, and enhancing mental well-being. Globally, a substantial number of adults fall short of meeting recommended physical activity levels, resulting in heightened health risks. It is imperative to promote physical activity in adolescents, as it is crucial for their growth, development, and overall well-being, positively impacting mental health and reducing the risk of diverse diseases.

This study aims to inspect into multiple aspects, including the consumption patterns of fast food among youths (ages 15 to 30), awareness regarding the health hazards associated with fast food, and the level of awareness concerning physical activity.Top of Form

Literature Review

Amin., *et al*. (2017) observed that a significant number of respondents did not adhere to regular meal times, a factor potentially contributing to obesity among adolescents. Additionally, a considerable proportion of participants reported consuming snacks approximately three times a week. The study findings suggest that adolescents are teetering on the border of the body mass index, moving toward obesity. Notably, adults were found to surpass recommended daily allowances (RDAs) for calories and fats while falling short on proteins, vitamins, iron, and dietary fiber-an alarming trend that raises concerns about obesity. Furthermore, the study highlights a worrisome imbalance in macronutrient intake, with carbohydrates constituting the highest proportion of total energy intake, followed by fats, and a comparatively lower contribution from proteins [1].

Baig and Saeed (2012) determined that individuals are inclined to visit various fast food establishments not solely for the appealing taste but also because of the convenience they offer. The study's conclusion highlighted that fast food was particularly popular among college students and employed individuals who maintained tight schedules and valued the convenience it provided. Conversely, many college students and others tended to overlook or attribute the rise in adiposity to fast food centers [2].

Geethika and Yamani (2021) noted an escalating trend in the consumption of fast food and soft drinks among youth, particularly in medical students. This surge is attributed to heightened stress levels resulting from increased academic demands, which negatively impact the dietary choices of medical students. Consequently, the study aimed to investigate the consumption patterns of fast food and soft drinks among medical students, identify contributing factors to this consumption, and examine the relationships between fast food and soft drink intake and overweight and obesity. Despite a significant majority (95%) being aware of the potential health hazards associated with consuming fast food, the persistence of this behavior, particularly driven by taste, was observed among the respondents [3].

Gopal., *et al.* (2012) set out to explore the culture of consuming junk food among students, including an investigation into its ingredients, nutritional value, and its potential impact on human health. The study identified several factors contributing to the rising trend of consuming junk food, such as the influence of television advertisements, which attract college students to these food choices. Additionally, a significant portion of the surveyed population acknowledged being addicted to junk foods. Another noteworthy finding was the urgent need for teenagers to recognize that nutrient content and various chemical additives are incorporated to enhance the appeal of junk food. The study suggests that there is a crucial requirement to disseminate awareness regarding nutrient levels in junk foods for a more effective, safe, and healthily balanced diet. Despite this, the results indicated that respondents tended to be diplomatic in their responses, with only a minority acknowledging the potential serious health effects associated with continuous consumption of junk foods [12].

Jhan., *et al.* (2020) discussed the implications of Fast-Food Consumption on health. The paper highlights the fast-paced expansion of the fast-food industry, which has evolved into a public health concern due to its adverse effects on health, particularly the risks associated with obesity. To address this issue, it is crucial to educate children, parents, and the general public about the detrimental health impacts of fast foods through various means. A key solution involves promoting a healthier lifestyle by ensuring the availability of a diverse range of nutritious food options in markets or restaurants, providing better choices for the general public [4].

Joseph., *et al*. (2015) conducted a study aiming to assess the awareness of health hazards and the consumption patterns of fast foods, as well as to identify their association with overweight among high school students in Mangalore. The study's conclusion emphasizes the responsibility of schools to educate students about the health risks associated with fast food and encourage minimal consumption. Additionally, it underscores the parental role in discouraging children from consuming fast food, promoting a healthy diet at home, and setting an example by avoiding such foods themselves. These measures are crucial in significantly reducing lifestyle disorders among children [6].

Mason., *et al.* (2020) conducted a study to investigate the independent associations of the number of formal physical activity facilities and the presence of fast-food outlets near an individual's place of residence with objectively measured obesity. The researchers also explored whether these associations varied based on sex or income and considered the potential impact of residual confounding on the results. The study revealed robust associations, indicating that high densities of physical activity facilities were correlated with lower obesity rates among adults. Although the relationship with access to fast food was weaker, it is likely underes-

timated due to limitations in the food environment measure. The findings suggest the importance of policy interventions aimed at addressing the obesogenic built environment [8].

Parikh (2020) fast food, while convenient and tasty, is often prepared using low-nutrient or unhealthy ingredients. Ingredients that are artificial, high in sugar, and rich in fat are not recommended for regular consumption. Consistent intake of such foods can lead to health issues such as obesity, heart disease, diabetes, and even certain cancers. Fast food companies employ extensive promotional strategies, tempting recipes, discounts, and attractive advertisements to target the youth, who may be unaware of the potential health risks. It is advisable for individuals to avoid consuming fast food regularly and incorporate traditional meals featuring a variety of fresh foods and fruits into their diet. This approach can contribute to better health, improved appearance, and disease prevention resulting from a more balanced and nutritious diet [9].

Shree., *et al.* (2018) demonstrated that every participant occasionally consumes fast food, and awareness about fast food is nearly universal among medical students. A significant portion of students (48.3%) opts for fast food as a substitute for dinner, while 32 (26.6%) consider it as an evening snack, and 26 (21.6%) use it as an alternative to lunch. Carbonated drinks were the preferred beverage for the majority (56.6%), and pizza emerged as the top choice for fast food (45%). A considerable 75.6% of students reported consuming fast food 1-2 times a week. The primary reasons for fast food consumption were eating in the company of others (58.3%) and the appeal of taste (55%). Despite the majority (88.3%) being aware of the association between fast food consumption and numerous diseases and disabilities, all subjects continued to consume fast food, primarily driven by taste, social factors, and a desire to save time [10].

Singh., *et al*. (2014) conducted this study in the Lucknow District focusing on obese school-going children aged 9-13 years, with a specific emphasis on understanding fast food preferences across genders. The study indicates that the significant surge in the number of fast-food outlets with affordable prices and effective marketing strategies since the late 1990s may be the primary reason for the heightened consumption of fast food. According to the findings, a substantial 98% of respondents express a preference for fast food, highlighting a strong inclination among school-going children. The study suggests that parents play a crucial role by offering healthy food options at home and promoting physical activity, such as limiting their children's recreational television, video game, and computer time to less than two hours a day [11].

Data and methodology

For the current study, we utilized a cross-sectional study design to analyze data collected from a representative subset at a specific point in time. We formulated research goals and crafted straightforward, unambiguous questions, including both single and multiple response formats. The data collection tool, a Survey Questionnaire, comprised two sections: one focused on fast food consumption patterns and related causes, and the other on people's awareness of health hazards from regular consumption and physical fitness.

To ensure the reliability of our questionnaire, we conducted tests using Cronbach's Alpha and the Split-Half Method. The Cronbach's Alpha reliability coefficient yielded a value of 0.799, surpassing the acceptable threshold of 0.7, indicating the data's reliability. The Split-Half Method, assessed through Spearman's Brown Coefficient, demonstrated a reliability value of 0.702, reinforcing the questionnaire's reliability. Validity testing using SPSS confirmed the questionnaire's validity. We collected responses, analyzed the results, and compiled them into a comprehensive report.

The primary data source was obtained through face-to-face interviews and online Google Forms. The sampling design employed Non-Probability Sampling, specifically Purposive Sampling, due to the unavailability of a complete list of college-going students. The chosen sample size of 294 was determined based on a chi-square test for equality of two proportions, considering a 5% level of significance.

Results and Discussion

In the present study, the total number of participants was 302, out of which the number of female participants are more than the Male participants. Numerically, the number of females participated in the survey are 165, i.e. 54.64% while there are 137 males, i.e. 45.36%. The age of the participant students ranged from 15 years to 30 years, yielding the median age 22 years. 95 students (31.46%) are Day Scholar, 82 students (27.15%) are Hostellers while 125 students (41.39%) have their different means of Accommodation.

Out of 302 students, 59.60% i.e. 180 students consume Fast Food while 40.40% i.e., 122 students do not. Main reasons for their preference for Fast Food were: Great Taste (73%), Quickly Prepared (46%), Not Expensive (27%), Offers a variety (73%), Attrac-

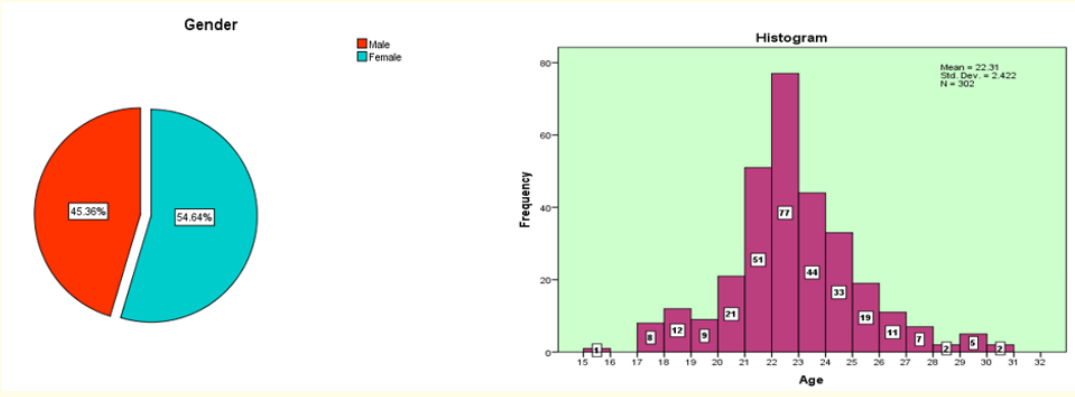

Figure a

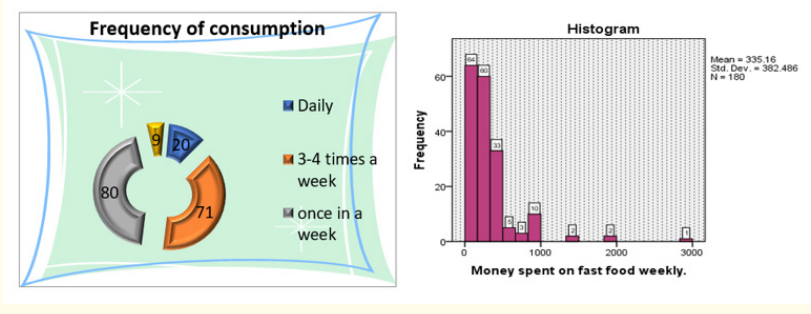

Figure b

tive Appearance (58%) and influenced by social media (35%).

Considering the frequency and expenditure on fast foods, 80 students i.e. 44.44% consume Fast Food once in a week followed by 71 students i.e. 39.44% consume 3-4 times a week. Out of 180 students, 38 students spend Rs. 200 per week on their Fast Food followed by 28 students spending Rs. 100 and 500 rupees weekly.

Talking about the place to eat, 56 students i.e. 31.11% visit Dominos, 12 students i.e. 6.67% visit KFC, 32 students i.e. 17.78% visit McDonald's, 109 students i.e. 60.55% visit restaurants or cafe, 130 students i.e. 72.22% prefer street food.

It was observed that according to 94.7% i.e., 286 out of 302 students think Fast Food is not healthy. According to 40.40% students, sometimes they are aware about the nutritional information and ingredients contents in each Fast Food they consume, 25.50% stu-

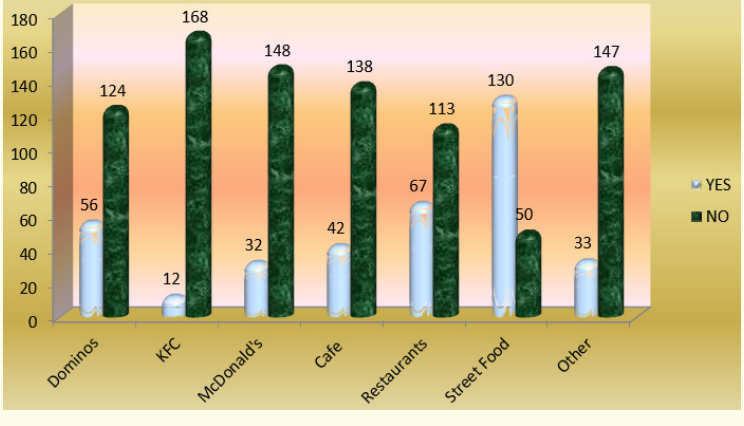

Figure c

dents are most of the time aware about the nutritional information and ingredients contents of Fast Food, 8.94% students are always aware about the Fast Food related Nutritional Information while 9.27% students who are not at all aware about the Ingredients of content and their nutritional Information.

It was also observed that 86.42% of students are aware about the Health Hazards of the Fast-Food consumption while 41 students are not aware about the health Hazards and ill-effects of consumption of Fast Food.

After looking at the data and comparing all the diseases, we can say most of the student (38.74%) have Digestive Issues, following the Digestive Issues, next problem suffered by 29.14% students is of overweight, 43.71% students have no Disease. There are very few people who have Diabetes, Depression, Blood Pressure and Heart Diseases.

Asking about the workout, 188 students out of 302 i.e., 62.25% workout physically to keep themselves fit and healthy while 114 students do not workout at all. 43.62% students used to workout

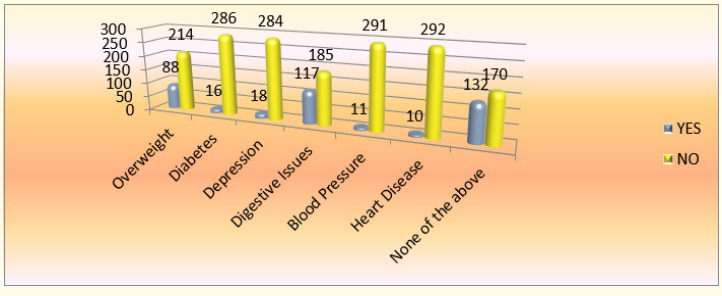

Figure d

daily, followed by 26.06% of students who workout about 4 times a week while 13.83% workout once a week. About 33% students workout for about 1-2 hours while 63% students workout for less than 1 hour.

To check the Association between the given observed variables and Fast-Food Consumption, chi-square test was used and following results were obtained.

Out of all males, 51.1% consume Fast Food and 48.9% do not. For females, 66.7% consume Fast Food and 33.3% do not. Since,

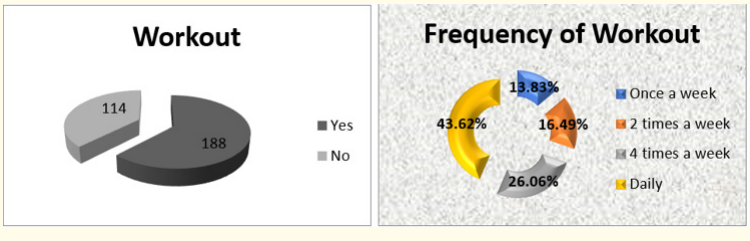

Figure e

the p-value of $\chi 2$-square test obtained was 0.007 which is less than 0.05 so we reject the null hypothesis and conclude that there is association between Gender and fast food consumption.

Considering the taste of Fast Food, 10% of males strongly disagree, 2.9% disagree, 17.1% are neutral, 44.3% agree and 25.7% strongly agree that Fast Food is preferred much due to its Great taste. Similarly, out of all females, 10% strongly disagree, 13.6% are neutral, 38.2% agree and 38.2% strongly agree that Fast Food is preferred much due to its great taste.

Since, the p-value of $\chi 2$-square test obtained was 0.208 which is greater than 0.05 so we accept the null hypothesis and conclude

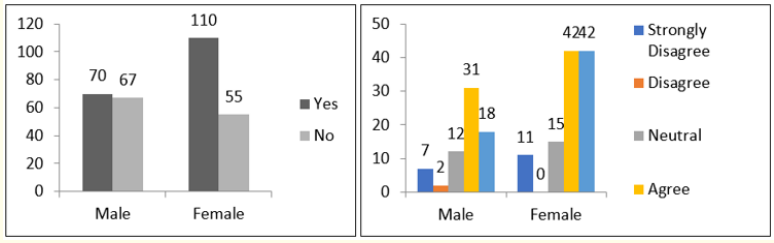

Figure f

that there is no association between Gender and preference of fast food due to its great taste.

It was observed that 9.5% of male students think that Fast Food is healthy while 90.5% think fast food is not healthy whereas 1.8% female students think that fast food is not healthy while 98.2% think that fast food is not healthy. Since, the p-value of χ2-square test obtained was 0.001 which is less than 0.05 so we reject the null hypothesis and conclude that there is association between Gender and their thought about whether fast food is healthy or not.

14.6% male students were not at aware about the nutritional information, 21.2% rarely, 35.8% sometimes, 24.1% most of the times and 4.4% were always aware about the nutritional information of the food they are eating. 4.8% female students were not at all aware about the nutritional information, 11.5% rarely, 44.2% sometimes, 26.7% most of the times and 12.7% were always aware about the nutritional information of the food they are eating. Since, the significant value of χ2-square test obtained was 0.001 which is less than 0.05 so we reject the null hypothesis and conclude that there is association between Gender and awareness about the nutritional information.

About 81% male students were aware about the Health Hazards of Fast-Food Consumption while 19% are not whereas 90.9%

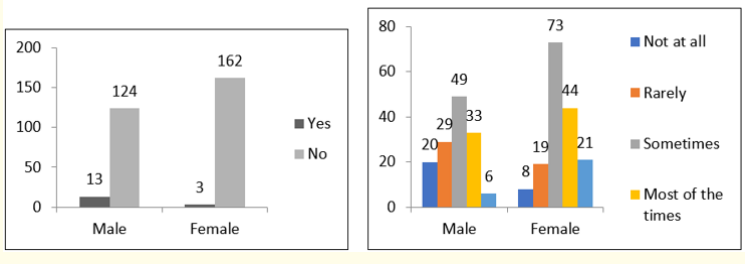

Figure g

female students were aware about the health hazards and 9.1% are not. Since, the significant value of χ2-square test obtained is 0.013 which is less than 0.05 so we reject the null hypothesis and conclude that there is association between Gender and having awareness about the Fast-Food consumption.

Talking about the eating habit, 13.1% male students strongly disagree, 21.2% disagree, 32.1% are neutral, 26.3% agree and 7.3% strongly agree with the fact that eating fast food on daily basis makes you eat more while 10.3% female students strongly disagree, 15.8% agree, 30.3% are neutral, 33.3% agree and 10.3% strongly agree with the above fact. Since, the p-value of χ2-square test obtained is 0.435 which is greater than 0.05 so we accept the null hypothesis and conclude that there is no association between Gender and their thought about eating fast food makes you eat more.

About 12.6% male students workout once a week, 13.7% workout 2 times a week, 21.1% workout 4 times a week and 52.6% are working out Daily while 15.1% female students workout once a week, 19.4% workout 2 times a week, 31.2% workout 4 times a week and 34.4% are workout Daily. Since, the significant value of χ2-square test obtained was 0.088 which is greater than 0.05 so we accept the null hypothesis and conclude that there is no association between Gender and frequency of workout.

Considering the duration of workout, 60% male students workout for less than an hour, 35.8% workout for 1-2 hours and only

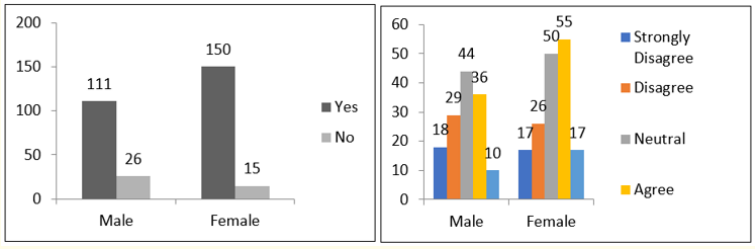

Figure h

4.2% workout for more than 2 hours while 66.7% female students workout for less than an hour, 31.2% workout for 1-2 hours and only 2.2% workout for more than 2 hours. Since, the p-value of χ2-square test obtained was 0.535 which is greater than 0.05 so we accept the null hypothesis and conclude that there is no association between Gender and duration of workout per day.

Out of those consuming fast food 35% people are Day Scholar, 28.9% are Hosteller and 36.1% have their other kind of residence.

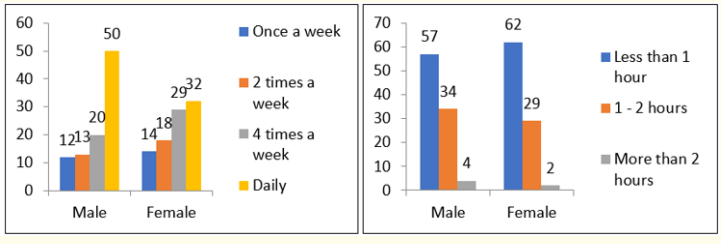

Figure i

And also for those not consuming 26.2% are Day Scholar, 24.6% are Hosteller and 49.2% are living at other places. Since, the significant value of χ2-square test obtained was 0.072 which is greater than 0.05 so we accept the null hypothesis and conclude that there is no association between fast food consumption and place of their Resident.

Out of those consuming fast food only 30% people are overweight while 70% don't have and those who do not consume, 27.9% people are overweight while remaining 72.1% don't have. Since, the significant value of χ2-square test obtained is 0.689 which is greater than 0.05 so we accept the null hypothesis and conclude that there is no association between fast food consumption and person being overweight.

Out of those consuming fast food only 42.8% people have Digestive issues while 57.2% don't have. And also for those not con-

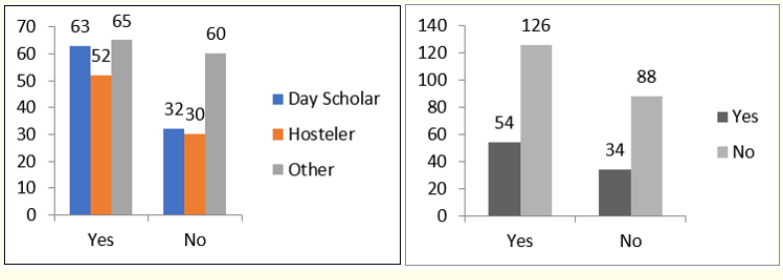

Figure j

suming 32.8% people have Digestive issues while remaining 67.2% don't have.

From the above table, Since, the significant value of χ2-square test 0.080 is greater than 0.05 so we accept the null hypothesis and conclude that there is no association between fast food consumption and person having Digestive issues.

Out of those consuming fast food,39.4% people have no disease, while 60.6% have some kind of disease. And from those not consuming 50% people have no disease, and other 50% have some disease.

From the above table, Since, the significant value of χ2-square test 0.070 is greater than 0.05 so we accept the null hypothesis and conclude that there is no association between fast food consumption and person having no disease.

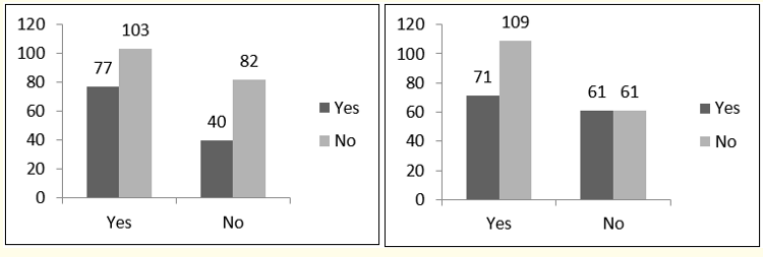

Figure k

Conclusion

In the given study, an attempt has been made to study the behavioural pattern of Fast Food consumption among college going students. A study has been done related to their preferences over different reasons for consumption, their frequency of consumption, their knowledge about it, and their awareness on this issue has been conducted among males and females. On the basis of these above parameters following conclusions can be drawn

- **Fast food Consumption Pattern:** 59.6% of total respondents use to consume Fast Food, and out of them Females are more likely to consume Fast Food. The main reason for their consumption is the great taste, the varieties available and its attractive appearance. This simply gives us an idea on what things we need to work on. We must try to make healthy food tasty too so that people may go for it, and also it should look attractive with different varieties. This can easily make people shift from Fast Food to some Healthy food.

Most of them have it on weekly basis or 3-4 times a week and consume on an average of Rs.200 per week. Even few of them have it on daily basis which should be the matter of concern. They should restrict themselves from daily eating of fast food.

One more thing is that price matters most and because of large number of growing fast food industry, so many stalls and corners the prices have come down. This can be the one of the main reason of rapid growth in the consumption since last 4 years.

Awareness: If we talk about the knowledge of people then 94.7% respondents say that fast food is not healthy, even 86.42% of total know about the health hazards of excessive consumption of such food though we have seen 59.6% people are eating fast food.

We have seen that females are much more aware about the nutritional information and the health hazard of the fast food then also they are more likely to consume fast food in preference to males. Out of consumers and non-consumers, more Non-consumers are working out. And out of those consumers most of them are males. They workout daily for about less than an hour.

Digestive issues and overweight problem: Over consumption of fast food is a serious matter of concern among the young students. They are very much addicted to it, even though they knew it is hazardous to their health. They must improve their health habits to further protect themselves from the diseases in long run of life. They must follow a proper healthy diet routine along with the physical fitness, which is proper workout on daily basis.

Declarations

- **Funding:** Not applicable.
- **Conflict of interest:** The authors declare no conflict of interests.
- **Data source:** The data is Primary Data. It has been collected mostly by face to face interview and few are collected by

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