ISSN: 2347-467X, Vol. 12, No. (2) 2024, Pg. 527-538

Current Research in Nutrition and Food Science

www.foodandnutritionjournal.org

Narrative Review on the Factors Affecting Fast Food Consumption among Adults

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Abstract

As a result of increasing industrialisation in various countries and the change in their populations' eating patterns, residents may be shifting from a low-calorie diet to one with a high energy density. People tend to consume fewer fruits and vegetables and instead, they opt for more refined carbs, animal protein, processed meat, and fast food. This highlights how, as globalisation progresses, people are rapidly losing their cultural identities concerning traditional healthy foods and local produce. Fast food intake and lifestyle changes have contributed significantly to the increase in the prevalence of food-related chronic diseases. Adults suffering from diet-related difficulties, particularly chronic illness, have become the primary cause of morbidity and mortality in many countries. Adults' fast food consumption is influenced by factors such as chronological age, gender, socioeconomic level, food availability and accessibility, BMI, physical activity, and nutrition knowledge. This review focuses on aspects that influence people's fast food eating habits, providing insights into how health-related problems associated with fast food consumption can be curbed.

Article History
Received: 23 February 2024
Accepted: 27 June 2024

Keywords
Adults;
Chronic Diseases;
Cultural Identities;
Energy Density;
Fast Food;
Globalisation;
Industrialisation;
Morbidity;
Mortality.

Introduction

The term "fast food" is subjectively defined differently in different studies, notwithstanding the variety of foods or the nutritional value of the foods being evaluated. Regarding fast food restaurants, there are either no or very few options that are good for your health. Many people consume more calories than they need because fast food is typically rich in calories.[1, 2] This poses a significant problem for human health since there is a chance that the number of obese people and diseases linked to overconsumption of fast food will rise.[3,4] A person's chronological age, gender, socioeconomic status, food availability and accessibility, BMI, physical

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Doi: https://dx.doi.org/10.12944/CRNFSJ.12.2.4

activity, and nutrition knowledge, are among the factors influencing the consumption of fast foods among adults.[5] Lack of time or the idea of not having enough time has been associated with shifts in eating behaviours, including less time spent making meals at home, more time spent dining out, fewer family dinners, and higher utilisation of convenience or ready-made foods. It is common practice to attribute the popularity of fast food to the fact that it is easily accessible.[6] Engaging in regular physical activity consistently has the potential to enhance general health and reduce the risk of developing chronic and degenerative diseases.[7] However, nutrition education is of utmost importance. Counselling on the advantages of maintaining a balanced diet and the risks associated with consuming fast food,[8] may help reduce consumption of fast food. This review looks into major aspects that have been demonstrated to be associated with fast food intake.

Methodology

For this narrative review, scientific information from published papers was analyzed. Numerous searches were conducted on different search engines and various databases such as Google scholar, PUBMED, Ebscohost, Science Direct, DOAJ and Scopus using the following search terms: “fast food intake ", “Fast Food Consumption”, "fast food and diet”, fast food and adult”, “Availability and accessibility of fast food”, “Nutritional Knowledge and fast food”, “fast food and sociodemographic” and “fast food and Physical Activity”. There were no restriction on the time frame or year in which papers were published. All papers downloaded with the above terms and found relevant to the objectives of the study were scrunitised. Specific studies dealing with children, adolescents and elderly were excluded. To be able to ascertain probable relationships, scientific evidence from cross-sectional, prospective cohort and experimental studies were also considered.

Factors Affecting Fast Food Intake

Socioeconomic Status

Socioeconomic position influences fast food intake, and research consistently finds that lower socioeconomic status is associated with poorer dietary practices.[9] Side, socioeconomic status (SES) refers to income, education, financial security, and perceived social standing/class.[10] Thus, socio-economic status (SES) not only affects the quality of life but also influences access to societal opportunities and advantages. In this regard, a study found a significant association between income and fast food frequency.[11] While overall were unaccustomed to fast food, a notably higher percentage of working Russian adults consumed it compared to non-working individuals.[12] Moreover, it was reported that women with higher education were more likely to consume fast food than men.[13] On the other hand, lower education was independently associated with lower household income, blue-collar employment, and higher fast food intake.[14]

Higher-income households also spent more money monthly on home and away food, including sweets, fruits, and vegetables.[15] In Mauritius, women with medium/high socioeconomic status had better diet quality than those with lower SES.[16] Also, income substantially influenced nutritional status.[17] Interestingly, higher earners with wider access to fresh and nutrient-dense foods tended to consume fewer healthy snacks. Moreover, lower fast food diversity, with fewer options available, improved the dietary profile when there were fewer fast food outlets.[18] In addition, rural areas face challenges such as transportation, poor health, food insecurity, and physical limitations affecting food choices and grocery store access.[19] However, a consistent link was not found between nutritional security and BMI.[20]

Portion Size

Portion sizes of fast food and ready-to-eat meals have grown significantly larger over the past two decades, likely making people unaware of just how much they are consuming. This increase in portion sizes has occurred concurrently with rising obesity rates. Similarly, the consumption of high-energy-density foods in particular can lead to weight gain.[21] Similarly, studies have shown increased portion sizes offered at fast-food restaurants, chains, and convenience stores.[22] Thus, long-term exposure to large meal portions can increase overall calorie intake and promote weight gain in middle-aged individuals.[23] One study found adults eating 50% larger portions had 16% higher daily calorie intake.[24] These increases in portion sizes in the USA may help explain the rise in overweight and obesity prevalence. Nevertheless, undergraduate students have been observed eating more when presented with larger available food quantities.[25] Likewise,

larger Nutrition Album portion sizes correlated with more caloric home-style cooking among senior Mauritians, even though most were unsure of proper portion sizes and liked both small and large amounts.[26] In this regard, middle-aged and elderly Mauritians had a mean of 1919 kcal daily calorie intake and 24.6 kg/m^2 BMI.[27] As a result, it can be perceived that more calories were consumed by obese and overweight participants than normal-weight participants. Also, some hypothesise that increased fast food calorie consumption, leading to overeating, is also associated with increased weight and fatness in middle-aged women.[28,29] Therefore, greater food availability in one's environment may also contribute to higher consumption and calorie intake.

Availability and Accessibility of Fast Food

Accessibility and availability of fast foods are important in influencing fast food consumption. The closer the proximity between fast food restaurants and a person's location, the greater the tendency to consume it. Likewise, consumption of fast food was associated with an increase in the density of Fast Food Outlets (FFO) and a decrease in the distance, but fast food consumption was increased even for longer distances among vehicle owners in Denmark.[30] Moreover, in a cross-sectional study, participants with a minimum of two fast food restaurants within one km of their home had an increased BMI than their counterparts who lived in neighbourhoods with no such restaurants.[31] In addition, a study reported a significant relationship between exposure to fast-food restaurants and obesity.[32] In another cross-sectional study, lower educational levels and increased exposure to fast-food outlets were linked to increased consumption of fast food, BMI, and probability of obesity.[33] Also, exposure to takeout food outlets when at home, at work, and while commuting was linked to somewhat higher takeaway food consumption, a higher body mass index, and increased risks of obesity among UK residents.[34] In most cases, the availability of fast food is linked to high consumption of fast food. Although typical fast-food restaurants and convenience stores offered a similar selection of regular breakfast and lunch/dinner entrées, the choice of healthier breakfast and lunch/dinner options was far wider in restaurants.[35] Despite this, people are more likely to opt for unhealthy choices.[36] In addition, residents who regarded fast food to be more readily available were found to be more likely to eat it.[37] However, density and proximity were not significant predictors, despite the independent link the researchers identified between fast food purchases and availability to a broader choice of fast food restaurants.[38] In addition, among the sample of white people, greater availability is not linked to either higher fast-food meal consumption or a higher risk of obesity.[39] Further research needs to be done as there are some uncertainties and inconsistencies that have been explored regarding the relationship between fast food outlets and fast food consumption.

Age

Ageing is a process where people consume less food and alter their eating habits.[40] Children have limited food options because their parents typically control their meals and snacks, but as they get older and become teenagers, they gain more independence and can make their food choices.[41] In addition, young adults who leave the family home frequently do not have healthy eating habits.[42] Moreover, in the same study, the "fast food" menu has been found to predominate in the diet of young adults due to their fast-paced lifestyle, professional activity, studies, time limits, lack of enough financial resources, stress, and distress.[42] Additionally, younger people who frequently consume fast food lack knowledge of fundamental meal preparation, cooking, and healthy eating.[43] A study reported that young adults who frequently eat at burger-and-fries fast food joints are more likely to be overweight or obese and to consume unhealthy diets.[44] However, there are some cases where sufficient amounts of fruits and vegetables, as well as regular meals, were reported to be consumed by young individuals.[45] Eating preferences are impacted by the physiological, psychological, and social changes associated with ageing.[46] Moreover, for individuals who live to older ages, a better quality diet at midlife appears to be strongly associated with better health and well-being.[47] Also, enhancing nutrition quality in middle age may help people's bodies to function better as they age physically.[48] Usually, ageing comes with a decrease in appetite and altered taste buds,[49] but there are some contradictory results where there was a significant relationship between fast food intake and obesity among middle-aged men in Kingdom of Saudi Arabia.[50] Interestingly, senior adults love

eating fast food every day as part of their diet in America.[51]

Gender

Research shows fundamental male-female physiological/biochemical differences.[52] Thus, despite having lower body mass and fat-free mass, women consume less energy than men on average.[53] This is due to women having higher body fat percentages and lower muscle mass, resulting in lower calorie needs.[54] Moreover, women showed greater appetite reduction than men after meals following a Med Diet. Additionally, women tend to worry more about health and choose more nutrient-dense diets than men,[55] possibly influenced by concerns about body shape and food anxiety.[56] For instance, in nearly all 23 countries studied, women were more likely than men to report limiting salt, eating fruit/fibre, and avoiding high-fat foods across all three behaviours.[57] Interestingly, certain foods like vegetables, fruit, and dairy are associated with femininity, while masculinity is associated with red meat, alcohol, and large portions.[52] However, some men also show interest in nutrition/health and reducing red meat while increasing vegetable intake.[52]

Therefore, it is important to note that gender and appetite data are contradictory. Dieting, restrictive eating, and eating disorders are far more common in women, while research shows men only diet when necessary for health and exercise for weight management. On this note, no male-female differences in fasting appetite or ghrelin levels were found.[58] Satiety strikes women earlier than men, who don't feel hungry until much later. In this regard, certain foods like Mexican and fast food hamburgers are craved by some pregnant women[59] and ovulating women reported less hunger than menstruating women.[60] However, there is little research on sex differences in appetite or menstrual cycle hormone-related differences.[61]

Physical Activity

Regular physical activity and exercise are proven to boost overall health and lower the risk of diabetes, cancer, and cardiovascular disease.[62] Obesity is substantially linked to screen time, a low amount of outdoor activity, and the average intake of fast food63. There is mounting evidence linking sedentary behaviours use to several detrimental health outcomes, including obesity, non-communicable diseases (NCDs), cancer, heart disease, and diabetes, as well as early mortality.[64] In addition, research has shown that sedentary behaviours such as watching TV during adolescence, is a significant predictor of unfavourable health outcomes in adulthood, including being overweight, being unfit, and having elevated cholesterol.[65] It has also been linked to low consumption of fruits and vegetables, heavy consumption of high-energy snacks, beverages, fast food and high overall energy intake.[66] Moreover, adopting a healthy lifestyle promotes positive physical and mental development in children and helps prevent and manage NCDs and obesity.[67] This lifestyle includes eating fruits, vegetables, dairy products, foods with lower fat and sugar content, and regular physical practices.[68] High-energy foods are more favoured and desired by those with low levels of physical activity, while acute exercise decreases reward for inactive people.[69] Regular exercise training may lead to a dissociation between desires and likes of high-energy foods.[70] Body energy requirements are based on physical activity and those who are less active require fewer calories. Overindulgence in food calories can result in fat accumulation and overweight/obesity.[71]

Nutritional Knowledge

Nutrition knowledge is defined as awareness of concepts and behaviours related to nutrition and health, such as adequate dietary intake, diet-related diseases, major nutrient food sources, and dietary guidelines.[72] In this regard, nutrition knowledge is one factor influencing food consumption and people's food choices.[73] Furthermore, consumers' levels of nutrition knowledge may impact their capacity to recognize healthful meals and control chronic diseases linked to diet.[74] Likewise, research shows that the knowledge on dairy products by senior citizens accurately predicted milk intake.[75] Moreover, Mauritian middle-aged women who are aware of the health benefits of fats choose lower-fat dietary patterns.[76] On the other hand, lower education is associated with high-carb, low-fibre, sweet, and red meat diets, while higher education is linked with high fruit/vegetable/fish/nutritional diversity and lower calorie diets.[77] However, fast food intake was higher among college students with adequate nutritional knowledge, attitudes, and practices.[78] Interestingly, increased nutrition knowledge is associated with higher consumption

of all food groups except fruits and vegetables in Mauritius,[78] suggesting that nutrition knowledge does not always relate to healthy eating or adequate energy intake. Contrary to the common assumption relating nutritional knowledge and healthy eating, evidence shows only a weak link between Nutrition knowledge and food choices.[79] Similarly, it was found that there are no positive associations between fast food, physical activity, and nutrition knowledge.[80] Nevertheless, Mauritian adults attending nutrition education courses improved their knowledge, fruit intake, reduction of fatty foods, and maintenance of normal energy intake.[81]

Advertising of Fast Foods

Advertising might have a critical impact on eating habits of a general population. For instance, a study conducted in Australia found that children aged 7 to 12 years increased their food consumption after being exposed to marketing for unhealthy foods, and they did not make up for this by eating less at a later meal.[82,83] This might lead to a tendency towards an increase in weight gain and BMI. Moreover, adults' overall exposure to food advertising on television is associated with their consumption of fast food.[84] Preschoolers' exposure to TV ads has been found to increase their likelihood of consuming fast food by about 30%, independent of TV hours, parental fast food consumption, and socioeconomic status, despite consuming fast food.[85] Another study confirmed that unhealthy foods and beverages in adolescents are a significant contributor to the development, growth, and persistence of obesity.[86] Moreover, a positive correlation between exposure to fast food marketing, brand preferences and intake of fast foods was observed among youngsters aged 10-17 across six countries.[87] Since successful marketing to them can build early, good relationships as well as long-lasting interactions between brands and consumers that last into adulthood, children and adolescents represent a significant portion of the market.[88] It is rather well documented that fast food marketing and advertisements of brand foods are associated with an increased fast food consumption pattern leading to undesirable unhealthy behaviours.

Time Scarcity

Time scarcity leads to changes in eating habits, including reduced home cooking, an increase in fast food consumption, a reduction of family meals, and greater convenience food use.[89] Many young and middle-aged adults are either pursuing higher education or are employed, and have very limited time compared to older seniors. In a study, a lack of money and time causes adults in Australia to be less active and, in some situations, eat less fruit and vegetables, dine out more, and consume extra calories (foods high in salt, sugar, or fat).[90] In Norway, parents with high time scarcity appeared to consume more ultra-processed supper items and fast food meals than those with low time constraints.[91] This might hurt the children's eating habits and lifestyle practices, possibly leading to childhood obesity at an early stage. Moreover, working over 40 hours per week is linked to time-related barriers to healthy eating, particularly among young adult men, and both part-time and full-time females face similar challenges.[92] In addition, reduced frequency of fast food intake was correlated with higher future time preferences.[93] However, sedentary behaviours, fast food, and carbonated soft drink consumption rates are rising globally, with recent years showing sharper increases in low- and middle-income countries.[95]

COVID-19

The COVID-19 pandemic negatively impacted on several factors that were particularly concerning relationships, lifestyle, and lockdown measures.[95] Nevertheless, amidst these changes, there have been notable shifts in dietary habits. While many individuals reported an increase in snacking frequency, there was a decrease in the consumption of fast food and restaurant takeout. The same study observed a preference for desserts and highly processed foods over fresh and whole foods, indicating a change in food preferences during the pandemic.[96] Approximately one-third of individuals had higher wine/drink consumption, raising concerns about potential long-term health issues if further lockdowns occur.[97] In addition, Saudi participants reported more frequent eating and snacking, which was associated with increased weight gain.[98] Conversely, while there was no significant correlation found between fast food, physical activity, and nutritional status in students, there was a decrease in physical activity among young individuals due to the pandemic and the shift to working or studying from home.[99] This decrease in physical activity is of concern given its potential implications for overall health. Researchers also discovered a substantial

correlation between BMI/obesity prevalence in children and adolescents during the COVID-19 pandemic.[100]

Conclusion & Future Directions

This review has explored that different factors including socioeconomic status, portion size, availability and accessibility of fast food, age, gender, physical activity, nutritional knowledge, advertising of fast food, time scarcity, and COVID-19 can have a potential influence on the consumption of fast food among adults. With rapid industrialisation and globalisation, increased fast food consumption is associated with adverse health effects. During recent years, overconsumption of fast food has been associated with non-communicable diseases like diabetes, obesity, cardiovascular diseases and hypertension. Despite that fast food intake is regarded as a contributor to NCDs, only a few studies have looked into such possibilities.[98-100] Further studies are warranted to assess the relationships between the consumption of fast food and health outcomes.

No one can deny the fact that consumption of food/junk food is on the rise and the number of fast food outlets is increasing day by day. With more urbanisation and globalisation of food supply, there has been a displacement and marginalisation of a lot of traditional foods, local produce from the market and more accessibility and proliferation of packaged and processed foods. This shift and change in consumer preferences and consumptions can inevitably culminate in unhealthy dietary habits which ultimately lead to nutrition-related disease. There is a dire need for the government to implement policies that align with the core principles of healthy diets as outlined by WHO. Advertising plays a crucial role in promoting the sale of fast food targeting especially children, who are the most vulnerable. Hence reducing exposure and putting restrictions on fast food adverts and at the same time promoting healthy ways of eating could be effective strategies to limit excessive intake of fast foods. For various reasons, people will always be lured towards consuming fast/junk foods and therefore early educational and awareness interventions are important.

Authors' Contribution

RJ initiated the study and its rationale. YB worked on the project as student. RJ, YB and AFA contributed to the initial and final write up of the article.

Data Availability Statement

'Not applicable' as it is a review paper

Ethics Approval Statement

'Not applicable' as it is a review paper

A**cknowledgement**

The University of Mauritius is acknowledged. This work was also supported by the Distinguished Scientist Fellowship Program (DSFP) at King Saud University, Riyadh, Saudi Arabia.

Funding Source

No funding was required for this project.

Conflict of Interest section

There is no conflict of interest

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