

To Assess Determinants of Impact of Fast Food on the Present Scenario of Childhood Obesity

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Abstract

'Eat healthy and live healthy' is one of the essential requirements for long life. Childhood obesity is a serious epidemic, affecting children across the world. In our country alone, 17% of all children and adolescents are now obese, triple the rate from just a generation ago (Centers for Disease Control and Prevention [CDC], 2011). Fast food consumption is one potential cause that has received widespread attention. Many researchers have looked at the relationship between fast food and childhood obesity from various angles. Some of these include the influence of family, the media, and the proximity of fast food restaurants to schools and homes. Examining the interrelationships of these angles can lead to a better understanding of the relationship between childhood obesity and fast food, and from this multi-angle viewpoint, we can see that no single aspect is solely to blame. Diseases like coronary artery disease and diabetes mellitus have seen a profound rise in developing countries and such unhealthy junk food consumption is one of the notable factors to its contribution. This global problem of consuming junk food on a large scale and its impact on health needs emphasis and health education which can greatly contribute to its limited consumption and switching over to healthy eating habits for the better living. **Aim:** To examine the inter-relationship between childhood obesity and fast food & assess the various factor affecting childhood obesity. **Objectives:** To Examine relationship between childhood obesity and fast food. **Materials & Methods:** children in various 8 community health centres. Inclusion criteria: Children from 2-12 years of age. Exclusion criteria: Children with obese parents: "Constitutional obesity" Children with chronic systemic diseases. **Result:** the characteristics of the 312, Marathis, jains, Bengalis, and Sikhs children whose parents completed the survey. half the children were female. Children ranged from 2 to 12 years of age, 58% were younger than 7. Approximately 2/3rd of the children were Gujaratis, Marathis constituted the next largest group (17%). Parents' education ranged from second grade to a professional school degree, and (68%) had completed a high school degree (41.7%) or less (26%). Household income ranged from 10,000 - 75,000 per year, and most parents (70%) were in the category of less than 30,000 per year. Income and education differed across ethnicity: Sikhs had significantly lower levels of education than all other participants, and Gujaratis had the highest. Furthermore, Sikhs had the lowest income level, and Gujaratis had the highest. As we expected a high proportion of the children were overweight (23%) or at risk of becoming overweight (14%), which is higher than would be expected for children in this age range. In terms of overweight status across the various ethnic groups, 33% of the Gujarati children, 25% of the children identified as mixed, 18.5% of the Marathi, 18.4% of the child bengali, and 15.4% of the sikh children were overweight. **Conclusion:** the results of this study show that fast-food influences parents' behavior with respect to feeding their children. Thus, for a more comprehensive understanding of approaches to reduce childhood obesity and related cardiovascular risk factors, research that assesses the influence of Fast food on children's eating behaviors and policy debates about food marketing to children should consider parents's exposure.

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Introduction

The public health concern with fast-food marketing lies in the proposed relationship between fast-food consumption and obesity in both children and adults, as well as in the nutritional profile of most fast-food menus. The basic cause of obesity is an imbalance between the amount of energy taken in, through eating and drinking, and the amount of energy expended through metabolism and physical activity—and, in the case of children, through energy deposition for growth. It is estimated that, in children, a sustained imbalance of approximately 2% of energy results in the development of obesity over time.^[1] Foods' energy density is a key determinant of energy intake, and most fast foods have extremely high energy density. Physiologically, humans are poorly able to differentiate between high- and low-energy density foods. Consequently, it is difficult for people to regulate energy balance, and passive overconsumption can occur. Research indicates that fast-food consumption leads to excess energy intake and, in turn, increased risk of overweight and obesity. Frequent fast-food consumption is also a health concern because most fast foods are rich in saturated fats, trans fats, simple carbohydrates, and sodium—all of which are nutrients associated with hypertension, cardiovascular disease, and type 2 diabetes (World Health Organization 2003).^[3] We first review the relationship between fast-food consumption and obesity and the influence of 1) marketing on the relationship. 2) ethnic minority populations. We report the results of an exploratory empirical study that examines

1. The relationships among parents' perceptions of their exposure to fast-food promotion.
2. Their attitudes and normative beliefs about fast food.
3. Frequently their children eat fast food.

We then describe the limitations of the results in some detail to provide guidance for further research. Last, we discuss the implications of the results in terms of their relevance to public policies and the design of social marketing interventions for obesity prevention and, ultimately, for children's health.^[4]

Fast-Food Marketing

In 2003, the fast-food market grew 2.6% to reach \$148.6 billion in sales. The industry's marketing and promotional strategies emphasize the convenience, taste, and low cost of fast food. Product development is important to the industry because taste is so

important to consumers. The increase in fast-food distribution to create ease of access for consumers is also a key marketing strategy.^[5] Fast-food franchises are found in gas stations, department stores, zoos, schools, and other nontraditional outlets, which enables consumers to eat in the midst of performing other activities. Fast-food promotions, especially advertising and in-store promotions, are important components of fast-food marketing. Advertising creates overall awareness and establishes brand equity. Fast food accounts for almost 30% of food advertising, and this amount has been growing steadily over the years. Price promotions create awareness of specific menu items, provide purchase incentives, or create repeat purchases among frequent patrons.^[6]

Parents' Role in Children's Fast-Food Consumption

Parents influence children's eating habits through their implicit and explicit modeling of food consumption behavior. For example, the children of parents who consume fruits and vegetables do the same. Likewise, the children of parents who consume large amounts of fast food may also do the same. Thus, parents influence children's eating habits through the foods they purchase for and serve in the household, as well as through their selection of places to eat and foods to buy. From this perspective, parents influence children's exposure to particular foods and potentially their habits and preferences. Children who develop particular habits and preferences in childhood may establish them as a lifelong pattern. Research on intergenerational influences demonstrates how information, beliefs, and resources are transmitted from one generation to the next and implies a particular mechanism by which parents' attitudes and beliefs related to fast food affect children's fast-food consumption^[7]. Parents' brand preferences create comfort in children and set the stage for compliance with their children's request for a brand. The formation of children's attitudes and beliefs about fast food in the context of family life may imbue the attitudes and beliefs with sustaining characteristics over time.

Ethnic Minority Populations

Beliefs related to fast food and fast-food consumption may also differ among various ethnic groups. Understanding any potential ethnic variation is important because, in our country, rates of childhood and adult obesity, diabetes, and cardiovascular disease are significantly higher among certain ethnic minority populations.

Materials & Methodology

We conducted a cross-sectional study at eight CHCs in medically underserved communities. We selected the centers on the basis of distribution in urban and rural locations, interest in participation, and availability of adequate time and resources for data collection. For the initial subject-sampling strategy, we randomly selected parents of children aged 5 to 12 from the 8 CHCs using a centralized file of chart numbers of children within the age group. We provided each CHC with a table of numbers corresponding to each day and instructed the study administrators to approach all families for which a child of the eligible age had a chart number finishing with the numbers. Because of recruitment difficulties, it was necessary to expand efforts to include on-site recruitment of children using a randomized process with medical record numbers. Specific recruitment challenges involved unreliable or missing contact information, limited telephone access, lack of availability, mistrust of research, and limited transportation.

Measures

We designed measures to capture parents' self-reports of five key constructs:

- Fast-food access.
- Exposure to fast-food promotion
- Fast-food attitudes
- Social norms about fast food,
- Their children's fast-food consumption

We developed the fast-food access and exposure to fast-food promotion measures specifically for this study to reflect observed fast-food marketing strategies and tactics. We adapted the fast-food attitudes and social norm measures from those used in prior research on the influence of attitudes and norms on consumption. We measured the access, promotion, and social norms variables on five-point scales, where 1 = "disagree," and 5 = "agree." We measured attitudes on five-point semantic differential scales, where 1 = "negative," and 5 = "positive." We measured parents' perceptions of fast-food access by their agreement with two items: "I can easily walk to several fast-food restaurants", and "I can easily drive or take public transportation to fast-food restaurants". Because the responses to access variables clustered at extreme ends of the distribution, we combined items for analytic purposes.

We created a three-level ordinal variable with the

following categories:

1. cannot easily walk or drive,
2. can either walk or drive.
3. can easily both walk and drive.
4. We measured parents's perceived exposure to fast-food promotion by their degree of agreement or disagreement with the item "My local fast-food restaurants often have special deals."

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Source of Data

Children in various 8 community health centres.

Inclusion Criteria

Children from 5-12 years of age.

Exclusion Criteria

Children with obese parents : "Constitutional obesity"

Children with chronic systemic diseases.

Statistical Method Involved

- The data collected will be analyzed statistically

using descriptive statistics namely Mean, Standard Deviation, Percentage where ever applicable.

- Chi square and t-test are used for comparison.
- SPSS 17 software will be used for analysis.

Result

The characteristics of the 312, Marathis, jains, Bengalis, and Sikhs children whose parents completed the survey. half the children were female. Children ranged from 2 to 12 years of age, 58% were younger than 7. Approximately 2/ 3rd of the children were Gujaratis, Marathis constituted the next largest group (17%). Parents' education ranged from second grade to a professional school degree, and (68%) had completed a high school degree (41.7%) or less (26%). Household income ranged from 10,000 - 75,000 per year, and most parents (70%) were in the category of less than 30,000 per year. Income and education differed across ethnicity: Sikhs had significantly lower levels of education than all other participants, and Gujaratis had the highest. Furthermore, Sikhs had the lowest income level, and Gujaratis had the highest. As we expected a high proportion of the children were overweight (23%) or at risk of becoming overweight (14%), which is higher than would be expected for children in this age range. In terms of overweight status across the various ethnic groups, 33% of the Gujarati children, 25% of the children identified as mixed, 18.5% of the Marathi, 18.4% of the child bengali, and 15.4% of the sikh children were overweight.

Table 1: Result of the study

	Total sample	312	100%
	Female	162	52
Race	Younger than 7	181	58
	Sikh	52	17
	Gujarati	25	9
	Marathi	100	33
	Buddhist	114	37
INCOME	Mixed	12	4
	<30,000	190	70
	30-54000	48	17.6
Education	>54,000	35	12.4
	12 th Grade	81	26
	High school	130	41.7
	College	87	27.9
	Urban	200	64
	Overweight	72	23
	Risk of overweight	44	14

Conclusion

The results of this study show that fast-food influences parents's behavior with respect to feeding their children. Thus, for a more comprehensive understanding of approaches to reduce childhood obesity and related cardiovascular risk factors, research that assesses the influence of Fast food on children's eating behaviors and policy debates about food marketing to children should consider parents's exposure.

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