

Changing Trends in Food Consumption Habits on Adolescent Overweight And Obesity



ECONOMICS

KEYWORDS : obesity, overweight, consumption, body mass index, junk food, snacks, fast food

Dr. shaji Kuriakose

Manjananickal (H) Marangattupilly P. O Kottayam, Kerala

ABSTRACT

Children's dietary habits have shifted away from traditional micro-nutrient rich food to fast food, snacks and sugary drinks which are poor in micro-nutrients and dietary fiber. However, few studies have examined the effects of these foods on any nutrition or health related problem. The aim of this study to understand the effect of modern consumption habits on adolescent obesity.

Introduction

The increase in childhood and adolescent obesity has gained full attention of health care professionals, health policy experts and parents. All are concerned that today's overweight and obese children will turn into tomorrow's overweight and obese adults, destined to suffer from all the health problems and health care costs associated with obesity. There are several contributing factors to the development of obesity in childhood and adulthood including poor nutrition, lack of physical activity, home and peer influences as well as socio economic factors.

The primary cause of childhood obesity must be due to changes in energy balance. Weight is gained when energy intake exceeds energy expenditure (Anderson and Butcher, 2006). Physiologically, obesity can only develop if food consumption is high and energy expenditure is low, resulting in positive energy balance across months or years. The two important components of energy balance are energy intake (Consumption) and energy expenditure.

One of the important causes of positive energy balance among children is fast food consumption. Cross-sectional studies have established that individuals consuming fast food meals have higher energy intake with lower nutritional values than those not consuming fast food (Sahasporn, 2003). Another frequently studied source of energy is soft drinks. As with fast food, studies generally establish that drinking these beverages results in higher overall energy intake. Buying a 600 ml bottle of cola on the way from school has become routine for children. Research has proved that a glass of fizzy soft drink is nothing less than a killer assault on the body (Lall, 2009). There is a positive link between overweight and soft drink consumption (Ludwig et al. 2001). Another much studied source of energy intake is snacks. Snack foods such as potato chips are available around the corner, in a variety of flavours and sizes to suit everyone's palate and pocket (Gulati, 2003). Snack foods are often densely caloric, prepared, processed and packaged foods (Nielsen et al. 2002

Keeping in mind the above facts, the researcher have undertaken the present venture to analyze the effects of modern food consumption habits on adolescent overweight and obesity.

Objectives of the Study

The objectives of the study are:

1. To understand the food consumption habits of adolescents in the study area.
2. To trace the correlation between modern consumption habits and adolescents obesity.
3. To suggest various measures to control adolescents obesity in relation with modern consumption habits.

Methodology

Methodology consists of area covered and period of study, method of measuring obesity, sources of data, sample design and data management and analysis.

Area covered and period of study

The study is conducted among the higher secondary students of Kottayam District in Kerala. The study was conducted during the academic year 2010-2011.

Method of Measurement of Obesity

Trained investigators weighed all the sample adolescents without shoes and heavy clothes, heavy belts and with empty pockets. The weighing machine was regularly checked up with known standard weight. A portable anthropometric rod was used for measuring height. The International Obesity Task Force (IOTF) references were used for measuring overweight and obesity.

Sources of Data

The study has used both primary and secondary data. Primary data for the study has been collected from +2 students in Kottayam district by using pre-tested questionnaire. Books, research journals, reports, newspapers and websites are the sources of secondary data.

Sample Design

A multi-stage proportionate random sampling technique has been adopted for this study. The sample size is 400.

RESULTS

With the popularity and easy availability of calorie rich packaged food, confectionaries, meat products etc. there is a drastic change in the food habits of Keralites. The increased purchasing power and affluence of the people during the past few decades have tremendous influence over the food habits of the state. The high remittances of foreign currency, wider exposure to western life and food culture, urbanisation and demonstration effect have their serious impact on the present food culture of the state. The exodus from poverty to affluence and from hard work to sedentary lifestyle has contributed to several changes in Kerala's society mostly with respect to a shift in the nutritional status of the people. These changes in food habits have adverse effects on the health status of people especially of children and adolescents. Modern food industries use artificial sweeteners, ajinomoto, Chinese salt, various colouring agents and hormones which are dangerous to health. Per capita calorie consumption per day of average Keralites has increased. Sugar consumption has at least doubled and alcohol consumption has reached dangerous levels. Consumption of fried items is also doubled. On the other hand, per capita consumption of green leafy vegetables is only half the Recommended Dietary Allowances (RDA). These changes in food habits have made the state population very vulnerable to lifestyle and environmental change induced diseases like obesity, diabetes, hypertension, heart problems etc. Whether there is positive relationship between high consumption of soft drink, snacks, bakery items, fast food etc. and overweight and obesity among the respondents is analysed in this study.

Consumption of snacks

Most of the snack foods are energy dense and leads to overweight and obesity. It is clear from the following table that overweight and obesity is high among the sample students who have the habit of consuming snacks between meals.

Table 1
Consumption of Snacks and Overweight and Obesity

Consumption of Snacks	Number	Mean	Standard Deviation	t/p
Yes	270	21.327	4.1658	t=.181
No	130	20.986	3.7144	p=0.857

Source: Survey data

The 't' value obtained is 0.181 and significance level is 0.857 which is greater than 5% significance level. Though overweight and obesity is found high among the regular consumers of snacks, no statistically significant association between snacks consumption and overweight is found.

Obesity and consumption of fast food

Increase in consumption of 'junk food' and fast food contributes substantially to the epidemic of obesity among adolescents. Table 2 presents the effect of fast food on overweight and obesity of the respondents.

Table 2
Fast Food Consumption and Obesity

Fast food intake	No. of Respondents	Percentage	Overweight and obesity		Z/p
			No. of Respondents	Percentage	
Yes	227	56.75	56	24.66	Z=5.81 p=0.000
No	173	43.25	17	9.82	

Source: Survey data

56.75 per cent of the respondents consume fast food regularly and 43.25 per cent do not. From the Z value and p value, it is observed that the proportion of overweight and obese students is more among consumers of fast food than among non-consumers.

Consumption of soft drinks and overweight

Soft drinks add to higher overall energy intake. Table 3 traces the relation between soft drink consumption and overweight

Table 3
Soft Drink Consumption and Overweight

Soft drink Intake	No. of Respondents	Percentage	Overweight and obesity		Z/p
			No. of Respondents	Percentage	
Yes	240	60	49	20.41	Z=4.58 p=0.000
No	160	40	24	15	

Source: Survey data

60 per cent of the respondents consume soft drink regularly. 20.41 per cent of the respondents who consume fast food regularly are either overweight or obese. It is only 15 per cent among the non-consumers of fast food. Statistically also it can be concluded that the proportion of overweight and obesity is more among the consumers of soft drink than among non-consumers in the sample.

Consumption of Confectioneries and Overweight

Consumption of confectioneries has become very common among the people in Kerala. The health impact of it on the respondents is given in Table 4.

Table 4
Consumption of Confectioneries and Overweight

Confectioneries Intake	No. of Respondents	Percentage	Overweight and Obesity		Z/p
			No. of Respondents	Percentage	
Yes	385	96.25	71	18.44	Z=0.62 p=0.27
No	15	3.75	2	13.33	

Source: Survey data

The Z value obtained to test whether overweight differs with respect to consumption of bakery items is 0.62 and significance level is 0.27 which is greater than 5% significance level. Thus it is observed that there is no significant difference between the proportions of overweight and obese students among those who consume bakery items (96.25%) and those who do not consume bakery items (3.75%).

Discussion

The respondents with the habit of eating too much snacks has overweight and obesity. The study finds out that 67.5 per cent of the respondents eat snacks between meals. There is a tendency of junk food consumption among the respondents. The study shows that 56.75 per cent of them consume junk food regularly and overweight and obesity are significantly greater ($P < 0.05$) among them. Overweight is significantly higher ($P < 0.05$) among the students who are regular consumers of soft drinks than among non-consumers of soft drinks. Obesity is found high among students who consume confectionaries regularly (18.44%). The percentage of obesity and overweight is relatively high among respondents who consume meat frequently (20.07%). Based on the above findings the researchers make the following suggestions with regard to eating habits of adolescents. Parents should ensure that their children are getting a balanced diet which has adequate calories, protein, fat, carbohydrates, minerals and vitamins. Eating snacks between meals, while reading and watching television must be discouraged. There is an urgent need to educate people regarding the dangerous contents of processed food, junk food, soft drinks etc and their adverse effect on the health of younger generation. The advantage and nutritional value of traditional food must be emphasized. Government should impose higher taxes on all fast food, soft drinks, snacks items and other packaged low nutritional value foods. This tax revenue can be used for giving subsidy for vegetables, fruits etc. Nutrition education must be the part of curriculum from school level onwards. Children are not what economists call rational consumers. They cannot evaluate information critically and weigh future consequences of their action. Therefore, government should ban unethical marketing strategies and protect children from maladies of junk food.

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