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## REVIEW ARTICLE

### Dietary Behaviour in children

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#### ABSTRACT

*School age period is an important period for growth in children and this is the time period when children start developing healthy or unhealthy eating practices as well. Dietary behaviour in school aged children influences diet quality resulting in a poor nutritional status. There are various factors that influence dietary behaviour of children such as parent behaviour, socioeconomic status of family, advertisements of commercialized packaged food products to list a few. The aim of this brief review is to give an insight about the dietary behaviour commonly observed in children and factors associated with it. The information was gathered by searching relevant and recent literature in the Central Library of Banasthali Vidyapith, INFLIBNET, Google Scholar, PubMed and EBSCO. Studies suggested that not only in India but globally the children are falling preys to unhealthy dietary practices. It was deduced by reviewing the literature that dietary behaviour affects health of children both directly and indirectly. Hence, it is necessary that children should be made aware about the unhealthy dietary behaviour and health hazards associated with them Governments should promote advertisements of healthy foods rather than unhealthy foods.*

**Keywords:** Dietary behaviour; Dietary habits; Breakfast skipping; Nutritional status; Obesity

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#### INTRODUCTION

Childhood obesity is a serious public health problem in most industrialized countries [1]. It has generally been known that facets of the recent dietary environment contribute to obesity among children. Also, parents have an important influence in microenvironment of children [2]. Dietary behaviours have been observed to track from childhood into adulthood [3]. Unhealthy food behavior in childhood, therefore, can have an enormous health influence later in life [4]. It is essential to develop influential behavioural intervention programmes to improve the quality of diet. Interventions for improving health-related behaviours should be tailored to the most required and changeable determinants of these behaviours, preferably applying behaviour change theories [5]. In this review, we have tried to present dietary behaviour commonly observed in children.

#### COMMON DIETARY BEHAVIOUR OBSERVED IN CHILDREN

##### BREAKFAST CONSUMPTION:

Skipping of breakfast is very common in children globally which might be due to several reasons that includes child is not hungry in the morning time, picky eating and being late for school as well. In a study it was reported that the prevalence of skipping breakfast in school going children of 10-16 years is 24% in some areas of Udipi [6]. In a review it was asserted that the occurrence of skipping breakfast varied from 10-30%, with an increase in adolescents, especially in girls. Skipping of breakfast had been associated with lipid profile, blood pressure, insulin-resistance and metabolic syndrome. Studies have reported a poor quality dietary intake in case of skippers of breakfast. Also skipping of breakfast is marker of being at risk of overweight/ obesity and metabolic diseases [6]. In the past studies have shown that breakfast's contribution is less in proportion to the day's energy as most of the children were going to school after breakfast skipping [7-8] while dinner and lunch contributed largest proportion of the day's

recommended energy [7]. In a study of Kenya, it was reported that contribution of lunch was less than half of the recommended energy for the day in primary school children [7]. Among school children, different meal patterns had been seen in the past and breakfast was the most skipped meal or was being eaten less by school aged children especially in rural areas [7-8]. Breakfast skipping has an impact on nutritional status and academic performance in children and an important role has been played by breakfast in nutrition of school aged children [6]. It has been reported that breakfast skipping in school children seems to be common dietary habit in school children and a day's total energy contribution from breakfast is quite less than what it is supposed to be.

### **CONSUMPTION OF LOW NUTRIENT DENSITY FOODS**

Intake of calorie dense foods is also increasing in children of school age resulting in an increase in cardiovascular diseases; industrial growth in countries is one of the major contributors for it. Researches have shown an increasing trend in consumption of processed foods [9-10] especially foods high in sugar, saturated fat and sodium and were preferred by adolescents in urban settings [9,11]. In developing countries, foods which are high in calorie are consumed by children which aggravates the risk for them of becoming overweight and obesity in school aged children and adolescents [12]. In a study of school children of Himachal Pradesh, it was noted that junk foods that were popular in school children were chips, bakery products, soft drinks, chocolate and sugar sweetened beverages and from these also, chips (71%) were the most favorite followed by chocolate (14%), bakery products (13%), soft drinks (7%) and sugar sweetened beverages (5%). Also most of them were consuming at least one junk food item in the last 24 hours [13].

### **EATING OUTSIDE HOME**

Eating outside home is also one of the reasons that children end up buying unhealthy foods. It was seen in a study that eating outside home often was associated with choosing unhealthy foods and less intake of fruits, high in calories and saturated fatty acids and lesser consumption of micronutrients [14-15]. It was observed that people eating out were more likely to gain weight [16] and those consuming fast-food more frequently were found to be associated with insulin resistance, diabetes mellitus and cardio vascular diseases [15, 17]. There is not much research available on frequency of eating from restaurants in school aged children.

### **FACTORS INFLUENCING DIETARY BEHAVIOUR**

Unhealthy dietary habits lead to failure in fulfillment of the patterns of eating that the body requires [18,19] and may result in obesity [20,21].

#### **SOCIOECONOMIC BACKGROUND:**

Dietary habits are a useful in characterizing whole diets and these are also influenced by various social and economic factors [22]. Preferences for food also have been observed to be related to feeding behaviour of parents, financial conditions and nutrition knowledge in children of China [23]. Socioeconomic status is included in these issues, as families in which the parents have good educational level are the ones who consume more healthy foods than those who are not aware of healthy foods and are not educated enough [24]. Results of a national survey of Lithuania of primary school age children revealed that socio-economic position of family plays major role in consumption of breakfast, fruits and sweetened beverages in younger school age children [25].

#### **FOOD RETAIL ENVIRONMENT:**

Fast food shops which are easily accessible to children are one of the reasons that children want to eat foods sold in those shops instead of home made foods. A systematic review concluded that there were few moderate evidences which suggested that the food environment around houses might influence diet of children [26]. Also an increase in neighborhood exposure to stores which sold healthy stuff were seen to be related with high bone mineral density at 4 and 6 years [27]. Food environment in neighborhood is an important determinant of dietary behaviour and weight status. There is also evidence that fast food outlets near school or houses are related to overweight and obesity, and to unhealthy dietary behavior [28].

### **WESTERNIZATION**

Westernization is also influencing dietary behaviour among children. Schoolchildren and adolescents of 9-18 years old along with their mothers were studied in Agra, Bangalore, Delhi and Pune. The results showed that there was excessive consumption of sweet food products. Also, food consumption in children was influenced by peer pressure and advertisements screened on television. Calorie consumption was

found to be strongly associated with obesity [29]. A study from China reported that fast food outlets are increasing rapidly. Chinese children were more likely to consume food products at KFC than that of other US counterparts. Children were found to be consuming Western fast foods more with increasing age [30]. It was reported in another study that around half of the students ( 52%) consumed Western fast food and 44% Chinese fast food at least once a week in Shanghai, Nanjing, Xi'an, and Beijing of China [31].

### ADVERTISEMENTS

It is often seen in children these days that children watch TV along with a bowl of chips and cola can after returning from school. Most of the parents agree to the fact that advertisements which promote junk foods often make learning healthy eating habits at home difficult to understand for children [32]. Interest of consumers in western culture and an increase in the services of fast foods is increasing the growth of industry and increase in popularity of Mc Donald's and Dominos has shown that consumers prefer western fast foods [33]. Advertisements of television causes obesity in children as it leads to increased eating while watching and increased exposure to advertisements that promote empty calorie foods [34].

### CONCLUSION

There has been not much research being conducted on dietary behaviour in school going children and breakfast skipping is the only dietary behaviour that has been studied in school children mostly. Very few studies have reported consumption of junk foods especially bakery products, chocolate and chips, eating out in children, association of food retail environment with the unhealthy dietary behaviour and influence of TV advertisements on eating behaviour of children. More detailed research about consumption of calorie dense foods in school children is required so that its drawbacks can be highlighted. It is essential that awareness should be spread about unhealthy eating behavior often seen in children and factors influencing them, so that parents make sure that children don't indulge in poor dietary habits resulting in good diet quality across the globe.

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