



Lifestyle that Leads to Childhood Overweight and Obesity in Preschoolers and School-age Children

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ABSTRACT

BACKGROUND: Recent statistics on the alarming rate of obesity growth have led to a great deal of media attention to the problem. Historically, obesity has only been linked to adults, and it becomes more prevalent as people get older. However, childhood obesity is currently on the rise due to children's sedentary lives brought on by a number of situations. Childhood obesity is more common than ever before, and managing it is getting harder. The situation is becoming so bad, in fact, that some are beginning to fear that the children of today will live shorter lives than their ancestors have for millennia.

AIM: To evaluate the health effects of overweight and obesity on preschoolers and school-age children

MATERIAL AND METHODS: Since the researcher knew the area well and had built a solid rapport with the school administration, the study was carried out in the pediatrics department. Furthermore, there was no information available on the prevalence of overweight and obesity in this area's preschoolers, school-age children, and teenagers. Children between the ages of three and twelve were chosen by the researcher for the investigation. A total of 1800 participants were examined to determine the prevalence of obesity and overweight in the 3–12 age range. 480 of the 1800 school-age survey participants were overweight, and 130 were obese.

RESULT: Based on the preceding chart, it can be deduced that 2.13 percent of obese girls and 3.11 percent of obese boys among the chosen subjects were between the ages of three and five. Six to eight-year-olds accounted for 2.95 percent of obesity females and 6.06 percent of obese boys. In the 9–12 age range, 3.77 percent of obese girls and 5.08 percent of obese males were found.

CONCLUSION: The contemporary obesity epidemic is the result of a culture that promotes overindulgence in food and discourages physical activity. Obesity can be prevented by eating a low-fat, low-energy diet, exercising frequently, and controlling portion sizes. However, in the current environment, it is becoming more and more difficult to acquire and maintain these habits.

KEYWORDS: Childhood, Adolescent, Diet, Overweight and Obesity

INTRODUCTION

Overweight and obesity affect adults as well as children and adolescents in both wealthy and underdeveloped countries. The World Health Organization lists overweight and obesity as two of the most important public health concerns of our day, and they are spreading like wildfire around the world. It's also getting more recognition as a significant problem in developing countries and those undergoing economic transition. 1,2

Recent statistics on the alarming rate of obesity growth have led to a great deal of media attention to the problem. Historically, obesity has only been linked to adults, and it becomes more prevalent as people get older. However, childhood obesity is currently on the rise due to children's sedentary lives brought on by a number of situations. Childhood obesity is more common than ever before, and managing it is getting harder. The situation is becoming so bad, in fact, that some are beginning to fear

that the children of today will live shorter lives than their ancestors have for millennia.

Illnesses classified as non-communicable diseases (NCDs) cannot be spread by contact. Hereditary or environmental factors can cause disease. When referring to conditions brought on by lifestyle choices, the phrase "disease of affluence" is occasionally used. Examples include diabetes, heart disease, high blood pressure, obesity, cancer, and mental health problems. Hereditary, behavioral, and environmental factors all contribute to non-communicable diseases.³

Youngsters are an investment in the future of society. The health and development of these people as they grow from childhood to maturity will affect the stability and prosperity of nations in the future.⁴ Childhood is defined as the years between the age of one and the start of puberty. Additionally, this is the time when the child should learn the fundamental abilities required for a seamless transition to maturity. These early formative years are the most crucial in a person's life because they provide the groundwork for healthy physical, cognitive, and social development. Childhood is not a single, consistent stage of life; rather, it is a series of developmental transitions between birth and adulthood. Obesity is one of the most common chronic illnesses affecting children, and its prevalence is rising.^{5,6}

In wealthier countries, childhood obesity used to be considered a problem. Developing countries are still dealing with this problem today. Juvenile obesity is not a benign condition, despite the common belief that overweight youngsters will outgrow their problem. The longer a child has been overweight, the higher the likelihood that they will continue to be overweight into adolescence and adulthood.^{7,8}

Worldwide, the percentage of children who are obese ranges from over 30% in the United States to less than 2% in sub-Saharan Africa. At the moment, 20 percent of school-age children in the UK and Australia, 15.8% in Saudi Arabia, 15.6% in Thailand, 10% in Japan, and 7.8% in Iran are obese.⁹ Reddy et al.¹⁰ says that Many people of Asian races show a tendency for fat

deposition in the abdominal area referred to as central adiposity.

National data indicate that 16 per cent of children aged six to nineteen years are overweight.¹¹ Shetty et al.¹² says that in developing countries such as India, especially in urban populations, childhood obesity is emerging as a major health problem.

It has been discovered that adolescents and teenagers who are obese are at risk for cardiovascular disease (CVD), which includes abnormal glucose tolerance, high blood pressure, and high cholesterol. When diabetes first appears in kids and teens, it can lead to more serious issues like renal failure and cardiovascular disease. It is estimated that approximately 7% of obese youngsters suffer from sleep apnea.^{13,14}

MATERIAL AND METHODS:

This survey is cross-sectional. To obtain adequate representation, a multistage sampling approach was employed for the cross-sectional survey. Since the researcher knew the area well and had built a solid rapport with the school administration, the study was carried out in the pediatrics department. Furthermore, there was no information available on the prevalence of overweight and obesity in this area's preschoolers, school-age children, and teenagers. For the study, children between the ages of three and twelve were chosen. A total of 1800 participants were examined to determine the prevalence of obesity and overweight in the 3–12 age range. 480 of the 1800 school-age survey participants were overweight, and 130 were obese.

Identification of Subjects: The subjects were screened for overweight and obesity by measuring their height and weight and calculating their Body Mass Index (BMI). Based on age and specific BMI percentiles, the subjects were classified as overweight (85th-95th percentile) and obese (>95th percentile), and non-overweight and non-obese (< 85th percentiles).

Measurement of Height:

The pupils were told to stand with their feet flat against the wall, their heads, shoulders, and buttocks touching the wall. The head was

held delightfully upright, the arms drooping at the sides. A non-stretchable measuring tape was used to record the subjects' heights. The scale was then held perpendicular to the wall and a mark was made there. After that, a non-stretchable measuring tape was used to determine the sample's height.

Measurement of Weight:

The chosen subjects' weights were recorded using a bathroom scale. The test participants were told to stand on the weighing scale barefoot, facing front with their knees straight. After a careful analysis of the measurements, the result closest to 0.5g was noted.

Body Mass Index (BMI):

Weight and height can be related in a number of ways. The most advantageous ratio is the BMI or Quetelet index (Kg/m²). BMI is the recognized standard for assessing obesity in both children and adults, and it offers a consistent measurement for children across age groups. The formula for calculating body mass index (Kg/m²) is to divide height in square meters by weight in kilos. When a person's BMI falls between the 85th and 95th percentiles for any age or gender, they are classified as overweight, whilst those who score beyond the 95th percentile are deemed obese.

RESULTS:

Table1: Age and Gender wise distribution of the Overweight and obese children

Age (Years)	Boys (403)				Girls (207)			
	Overweight	%	Obese	%	Overweight	%	Obese	%
3-5	69	11.31	19	3.11	26	4.26	13	2.13
6-8	114	18.69	37	6.06	59	9.67	18	2.95
9-12	131	21.47	31	5.08	68	11.15	23	3.77

Based on the preceding chart, it can be deduced that 2.13 percent of obese girls and 3.11 percent of obese boys among the chosen subjects were between the ages of three and five. Six to eight-year-olds accounted for 2.95 percent of obesity females and 6.06 percent of obese boys. In the 9–12 age range, 3.77 percent of obese girls and 5.08 percent of obese males were found.

The age group of 3-5 years accounted for 11.31 percent of overweight boys and 4.26 percent of overweight girls, followed by 6-8 years, which had 18.69 percent of overweight boys and 9.67 percent of overweight girls, and 9-12 years, which had 21.47 percent of overweight boys and 11.15 percent of overweight girls.

Table 2: Consumption of Fast-food

	Boys				Girls			
	Over Weight		Obese		Over Weight		Obese	
	No	%	No	%	No	%	No	%
Yes	280	45.90	58	9.51	123	20.16	50	8.19
No	52	8.52	13	2.13	25	4.10	9	1.56

Among overweight School children 45.90 percent of the boys, 20.16 percent of the girls, 9.51 percent and 8.19 percent of obese Children boys and girls had the habit consuming of fast foods like rolls, pizza, burgers and other foods which are loaded with calories.

DISCUSSION:

The World Health Organization (WHO) states that obesity and overweight are among the most important public health problems in the world today and are on the verge of becoming an epidemic. It's also getting more recognition as a significant problem in developing countries and those undergoing economic transition. The problem of overweight and obesity affects children and adolescents in both developed and developing countries. It affects more than just grownups. The period of human development known as adolescence, which signifies the passage from childhood to maturity, is vital and is characterized by an extraordinarily rapid rate of growth. Over the past 20 years, the prevalence of overweight and obesity in children and adolescents has climbed considerably in wealthier countries; similar trends, albeit more slowly, are also observed in emerging nations.

Nicklas et al.¹⁶ found that Childhood obesity has reached epidemic levels in developed countries. Twenty five percent of children in the US are overweight and 11 per cent are obese. Since 1980, the percentage of obese children in the age group of 6 to 11 has doubled, and the percentage of obese adolescents aged 12 to 19 has tripled.¹⁷

Livingstone et al.¹⁸ estimates the prevalence of childhood obesity in Scandinavian countries is lower when compared to Mediterranean countries; nonetheless, the proportion of obese children is rising in both cases.

Ramachandra et al.¹⁹ found the prevalence of overweight (including obese) adolescents to be 22 per cent in better off schools to 45 per cent in low-income group schools. Thirteen percent of students in a wealthy Delhi school were overweight, with eight percent clearly obese.²⁰ According to longitudinal research, there is a correlation between adult morbidity and both persistent and rapid childhood weight and BMI

rise. It means that a child's weight and/or serial BMI measurements need to be regularly checked. The International Task Force (IOTF) has established the standards for adult obesity in Asia and India, with BMI > 23 classified as overweight and BMI > 25 classified as obesity. This is in recognition of the fact that Indians are at lower risk of metabolic illnesses at lower weight levels.⁴

Rodriguez et al.²¹ found socio-economic status and cigarette smoking as independent predictors of asthma. Children who are obese are more likely to have social and psychological issues like prejudice and low self-esteem.²²

Adolescents and kids that are obese struggle in peer connections. Kids who are overweight usually don't have many friends.²³ Adolescents experiencing depression are more likely to experience an elevated Body Mass Index, and a higher BMI is associated with worsening symptoms of depression.²⁴

When obese persons have a high-fat, high-carb fast food meal, their bodies undergo more severe and prolonged cellular damage than those of normal weight. Compared to those of normal weight, obese people have higher levels of inflammation and oxidative stress. The prevalence of obesity among Indian youngsters is on the rise, and there doesn't seem to be a slowdown in this trend. High obesity rates are linked to a sedentary lifestyle and the consumption of high-calorie snacks. Contrary to popular belief, many members of the scientific and public health fields are become more sedentary.

CONCLUSION: In summary, pediatric obesity is on the rise at epidemic proportions, particularly in younger children, and it is strongly linked to major comorbidities and health problems. The primary goal ought to be prevention because, if successful, it will contribute to a decrease in adult obesity. We will therefore have the best chance of effectively reversing the obesity epidemic if we acknowledge it as a crisis, allocate funds for it, and collaborate across disciplines to launch an effective public health campaign focused on early detection and prevention.

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