International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Childhood Obesity in India - A Silent Epidemic

Dr. Rashmi Subbiah

Associate Professor**,** Department of Economics**,** Ethiraj College for Women

Abstract

India has long topped the list of countries with the highest number of malnourished children in the world. It's now increasingly also reporting alarming levels of childhood obesity which, experts say, could take on the form of an epidemic if not tackled urgently.

The diagnosis of obesity is primarily based on body mass index (BMI), defined as weight in kilograms divided by height in square metres. Normal range for BMI in children varies with age and sex. The Center for Disease Control has published tables for determining obesity in children. For children and adolescents (age 2–19 y), the BMI value is plotted on the CDC growth charts to determine the corresponding BMI-for-age percentile. Overweight is defined as a BMI at or above the 85th percentile and lower than the 95th percentile. Obesity is defined as a BMI at or above the 95th percentile. Childhood obesity can lead to life-threatening conditions like Type 2 diabetes mellitus, hypertension, dyslipidemia, obstructive sleep apnoea, cancer, liver diseases, early puberty, psychiatric disorders, asthma and other respiratory problems.

Keywords: child Obesity, BMI, life threatening conditions

Introduction

The latest National Family Health Survey (NFHS-5, conducted in 2019-21), the most comprehensive household survey of health and social indicators by the government, found that 3.4% of children under five are now overweight compared with 2.1% in 2015-16.

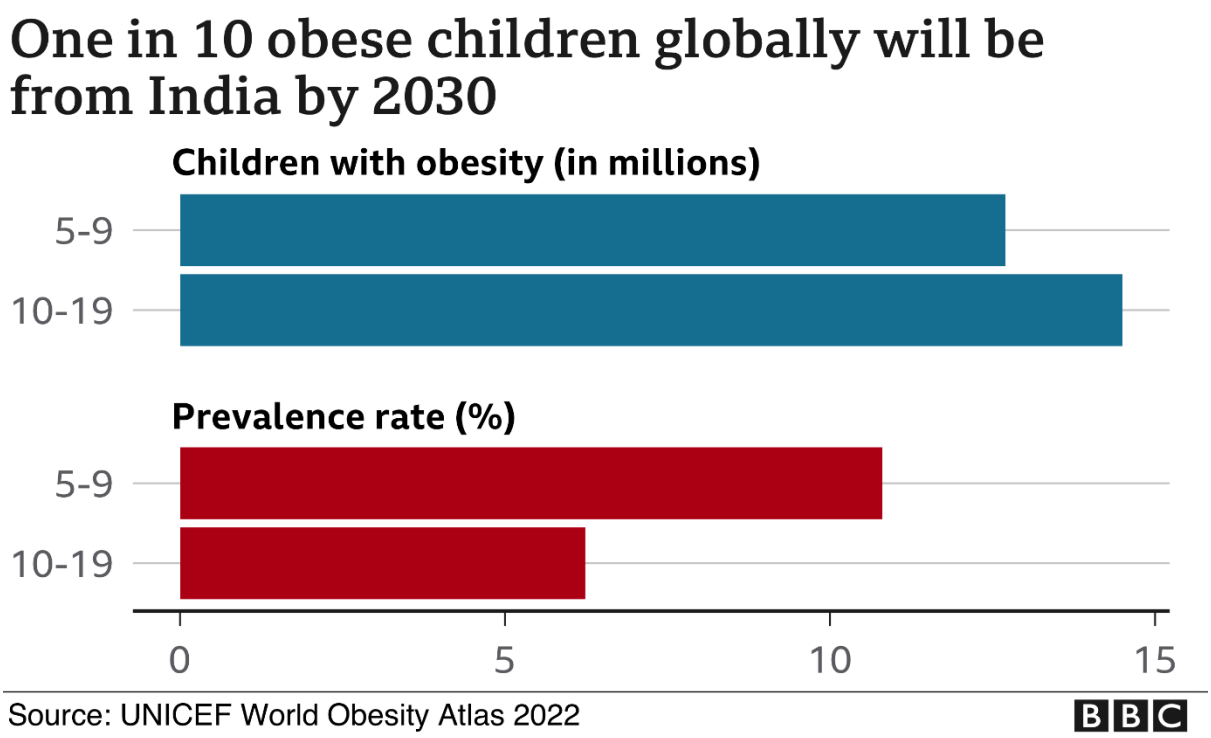
According to Unicef's World Obesity Atlas for 2022, India is predicted to have more than 27 million obese children, representing one in 10 children globally, by 2030. It ranks 99th on the list of 183 countries in terms of preparedness to deal with obesity and the economic impact of overweight and obesity is expected to rise from $23bn in 2109 to a whopping $479bn by 2060.

According to WHO, too much body fat increases the risk of non-communicable diseases, including 13 types of cancer, type-2 diabetes, heart problems and lung conditions, leading to premature deaths. Last year, obesity accounted for 2.8 million deaths globally.

Factors affecting obesity in children

Genetic factors

Obesity is probably polygenic in inheritance. BMI may be 25-40 %inheritable but behavioural and environmental factors play a big role .Maternal undernutrition or malnutrition and placental insufficiency lead to epigenetic changes that put these children at greater risk for developing overweight and obesity when exposed to energy -dense foods and sedentary lifestyles when compared to children born of mothers with adequate nutrition .Maternal obesity or hyperglycaemia can also cause epigenetic changes ,which predispose the children to increased deposition of fat tissue .



Gender

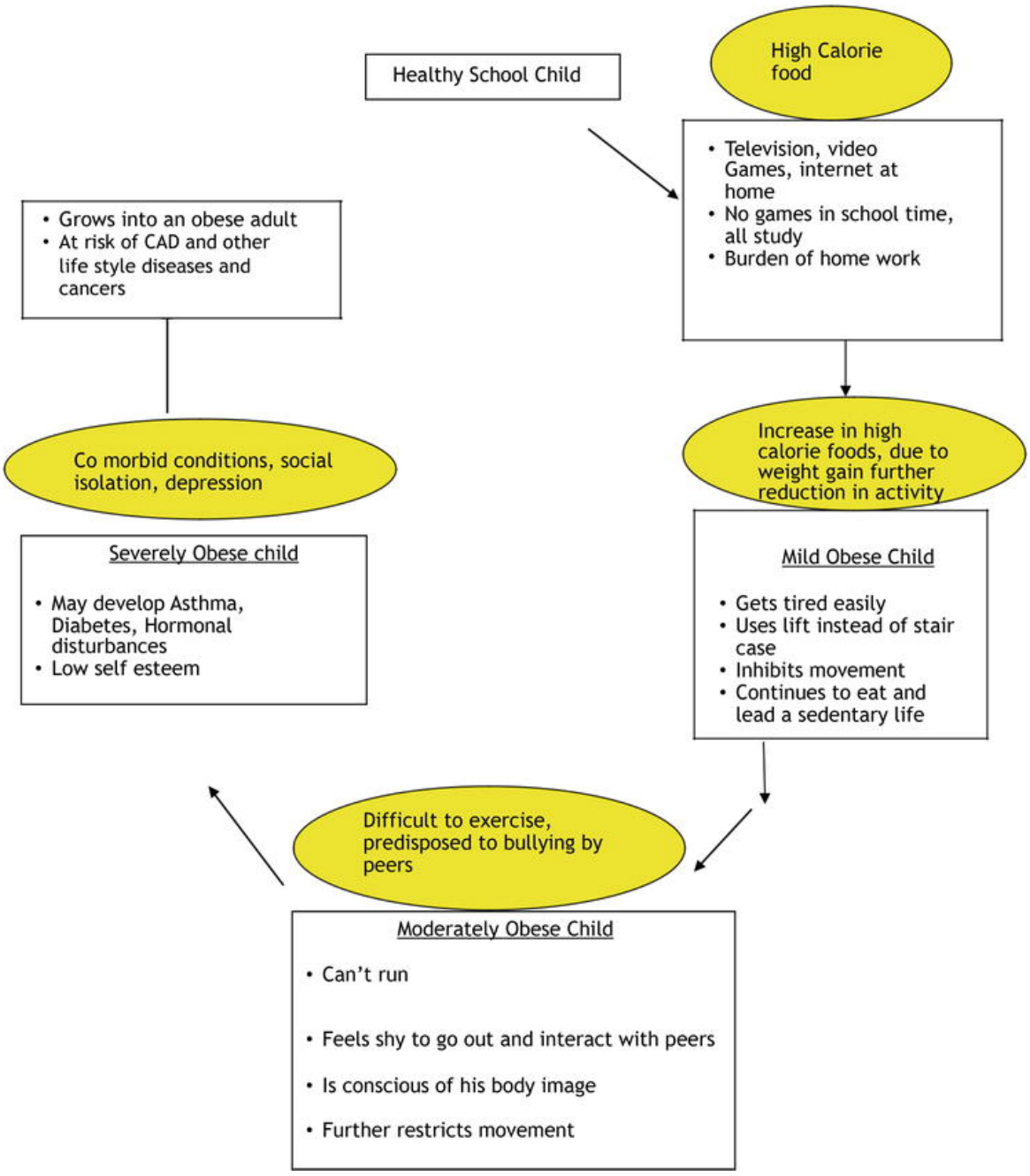
The prevalence of obesity is higher in boys than in girls with the trend reversing in late adolescence. This is attributed to the cultural advantages that boys enjoy in India. They get larger helpings of food at home, snack more and they have greater freedom to go out and also participate negligibly in doing household chores. The gender disparity was highest in the most affluent socio-economic groups.

Age

The prevalence of obesity in under-fives was less than 2 % across India .In children >5 years it varied from 2 to 8 %.Overweight rates were about 2 x higher and were higher in North and East India than in South India.

Dietary Factors

With Globalisation, the dietary mores of Indian children have also started changing rapidly. The majority of the urban children preferred to eat out: they felt that home cooked food was ‘old -fashioned’. Almost half of them also had their evening meals while watching television. Adolescents associate junk food with independence and convenience and consider health food options odd.



Physical activity

There is good corelation between physical inactivity and childhood obesity.

TV Watching

Sedentary lifestyle is associated with higher adiposity. Every additional hour of TV watching also directly corelate with increased intake of foods frequently advertised on TV like sweets, sweetened beverages, cookies, chocolates, sweetened cereals and salted snacks .This habit of watching TV or playing games on mobile phones starts at an earlier age .During preschool period ,most mothers have a tendency to feed children by distracting them. They let them watch cartoons on TV or play games on mobile phones. In the process, they tend to overeat, being too distracted to signal the feeder that they are

full. This tendency to overfeed themselves continues into adolescence also .TV time per day increases the prevalence of obesity in children by 2 %.

Psychosocial factors

Anxiety and depression are higher in obese children

Familial factors

It is known that families that eat together consume healthier foods. There is a greater tendency to consume fast foods in single parent families or where both parents work .Eating out regularly and 'TV dinners 'are both associated with higher intake of dietary fats .

Socio-economic factors

Urbanisation is the strongest risk factor for obesity in India. Obesity is three times commoner in cities as compared to rural areas. Rapid urbanisation has led to 'Mcdonaldisation 'of society in terms of an increase in the culture of eating out and eating fast foods. An important contributary factor to this change has been increasing financial independence of women, who are now spending less time in their kitchens. Such households often pack energy -dense convenient food in school tuck boxes and also offer the same as snacks between meals. This results in excess consumption of calories by children and leads to fat gain. Higher socio-economic status is another risk factor.

Community/society level factors

Structural elements like road, transportation, structure of buildings, playgrounds ,parks and public spaces influence obesity in children .Increased concretisation and loss of public spaces and parks in cities have led to decreased opportunities for sports and a more sedentary lifestyle .Many poorer neighbourhoods are considered unsafe for children because of drug pedlars and predatory adults .Parents prefer to keep their children indoors. Even when they have to go out or attend school, the parents drop them by car. Walking or cycling to school often considered a healthy activity is thus lost. Children are bombarded by commercials of confectionary, chocolates ,sweetened cereals and fizzy drinks on TV, billboards and magazines .Celebrity endorsements are a big influence on children .Most cultures also use sweets or food as inducements for good behaviour or rewards .This further reinforces the habit of high fat and sugary food intake .

Problems associated with childhood obesity

Physical	**Psychological**	**Social**
Respiratory and sleep problems Insulin resistance High blood pressure Dyslipidemia Musculoskeletal problems Gall stones Fatty liver	Low self-esteem, increased depressive symptoms and unhealthy dietary practices	Low participation in social activities Lack of social support due to less interaction with peers

Economic Effects of Childhood Obesity

Obese children become obese adults. They are more prone for certain health conditions.

Health Conditions

Obesity in children and adults increases the risk for the following health conditions.

- High blood pressure and high cholesterol which are risk factors for heart disease.
- Type 2 diabetes.

- Breathing problems, such as asthma and sleep apnoea.
- Joint problems such as osteoarthritis and musculoskeletal discomfort.
- Gallstones and gallbladder disease.

Childhood obesity is also associated with

- Psychological problems such as anxiety and depression.
- Low self-esteem and lower self-reported quality of life.
- Social problems such as bullying and stigma.
- Obesity as adults.

Adults with obesity have higher risks for stroke, many types of cancers, premature death, and mental illness such as clinical depression and anxiety.

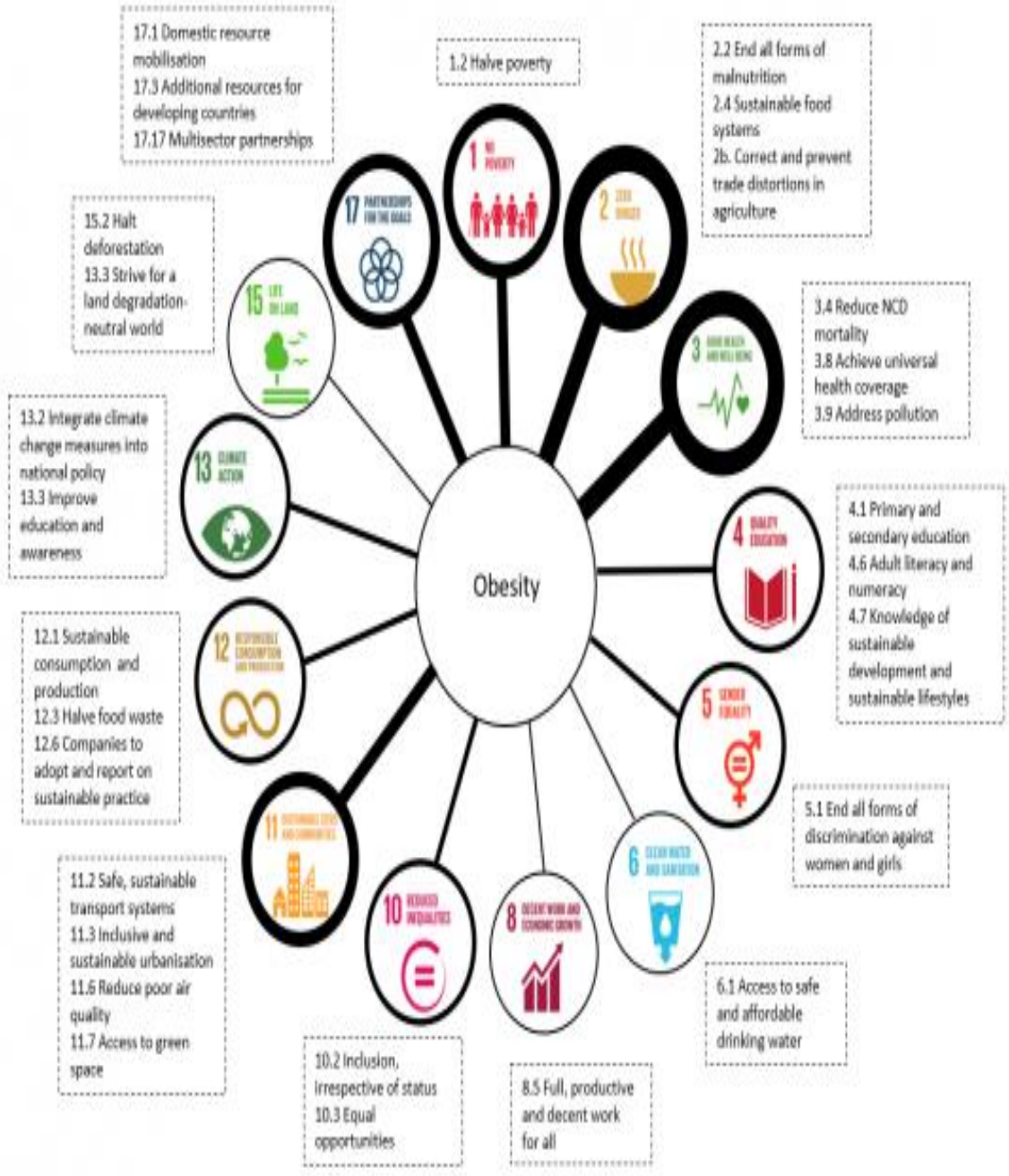
Direct medical costs may include preventive, diagnostic, and treatment services. Indirect costs relate to sickness and death and include lost productivity. Productivity measures include employees being absent from work for obesity-related health reasons, decreased productivity while at work, and premature death and disability[11]

Apart from the directly related health related morbidities, child obesity has also important economic and social costs, with increased burdens on health systems as well as reduced economic productivity in later years. Thus, strategies to tackle this growing health crisis in urban areas have to be redirected by considering distinctive urban factors that support an obesogenic environment for children living in urban areas. The socio-economic status (SES) has also an influence on the prevalence of child obesity. Usually, in developed countries, child obesity declines with an increase in SES. In India, children from affluent families have a higher prevalence of obesity and overweight, which is influenced by the prevailing socio-cultural constructs and misconception of obese children being healthy in India.

As per world obesity just 1.8 % of developmental assistance for health is allocated to non - communicable diseases [NCDs].NCD and obesity are no longer a challengeonly for high-income regions: most of the world's population now live in countries where overweight/obesity is responsible for more deaths than underweight .And, although NCDs are the focus of a Sustainable development goals target, obesity is not explicitly alluded to, making it even less likely to be the recipient of development assistance.

The chart below shows opportunities to leverage sustainable development to take action against obesity. Obesity could be a beneficiary of action taken under at least 13 of the 17 SDGs – but this significant opportunity is infrequently used to drive or fund action on this global health crisis. We should work to ensure that obesity is recognised as a sustainable development priority worldwide, including through advocating for obesity to be embedded firmly within in high-level discussions. Tackling obesity is a prerequisite for the long-term health of people and planet.

In the chart below it shows the Linking SDGs to Obesity Note: The thickness of the arrows indicates the strength of the relationship between each goal and obesity



Steps to be taken to tackle Childhood Obesity

Obesity plays a vital role in major health and development issues; hence it must be made relevant and an essential component of the global development agenda and prioritised to successfully achieve targets related to non-communicable diseases induced morbidity and mortality. It is noted that children from wealthier families and educated mothers are more susceptible to become overweight and obese in cities. This could be due to the fact that urban areas have a higher share of affluent population with sedentary lifestyles and who can afford fast food. Lack of open spaces in the neighbourhoods further aggravate this problem. A high level of unhealthy food consumption and limited physical activity leads to overweight and obesity. Conversely, less urbanised areas having lower purchasing power and limited access to fast food chains and restaurants tend to spend on essential food items, mainly following traditional nutritional diet and healthy lifestyle practices. The growing socioeconomic inequalities encourage diverse health challenges for children living in urban areas and pose a challenge for sustainable urbanisation. In order to address these challenges, behavioural change among mothers and caregivers is the need of the hour. They need to be sensitised through campaigns targeted at tackling the misconceptions like obese children are healthy. Also, cycling and outdoor sports activities need to be promoted atschools.

Moreover, since schools serve as a major source of information for adolescents, dedicated curriculum for healthy practices and activities need to be institutionalised. Further, ensuring supply of fresh and nutritional food in the school canteens are also some of the ways of tackling this issue.

The evidence connecting social and environmental factors to obesity are often unacknowledged. Factors such as food availability, purchasing capacity indicated by the level of SES, proliferation of high calorie, energy dense food option and reductions in occupational and transportation related physical activity contribute to an obesogenic lifestyle.

As witnessed in the western societies, as economic development progresses in India, an increase in obesity might also be witnessed among the low-income communities as well. This may be promoted by unhealthy food habits and more sedentary lifestyles among the poor in future with increasing urbanisation.

Thus, addressing the complexity of the issue of obesity as just not a health issue but a multifactorial challenge needs to be addressed urgently. Moreover, sensitising parents belonging to higher SES can help in identifying, counselling, and treating those who are at risk of obesity. In this perspective, SDGs play an important role in contextualising urban environments to control obesity among children. One of the ways to integrate SDGs 3 and 11 is through educating, encouraging and empowering city administrators and planners to recognise obesity as an emerging health crisis. As a part of mitigation strategy, appropriate guidelines for promoting safe, sustainable and healthy neighbourhoods which can promote healthy lifestyles should be developed at the city level. Besides, an effort should be made to protect and promote green spaces in cities, including community gardens, orchards and parks, to enable children and adolescents to play outdoor games and carry out physical activities. Child-friendly city planning including inclusive street designing with open spaces and parks and safe neighbourhoods are factors promoting healthy cities. Reduction in crime rates and increasing trust in city governments is also a crucial factor in ensuring that children are allowed to access open spaces without any fear for their

security. Moreover, urban development schemes in India need to prioritise establishing infrastructure that could ensure adequate availability and access to basic amenities. Improving the quality of public spaces in urban areas will also indirectly encourage a greater convergence between adoption of a sustainable healthier lifestyle at the individual level while also strengthening other environmental determinants such as pollution, cleanliness and decluttering of pavements and sidewalks. Importantly, the current development programmes (AMRUT & Smart City Mission) in India and Delhi have mandatory provisions of developing green spaces/parks for creating child-friendly cities. These efforts need to be upscaled and promoted across all cities and towns to universalise access to open spaces for children and adolescents.

References:

1. Childhood Obesity in India: A Meta-Analysis TanuMidha& Bhola Nath &Ranjeeta Kumari & Yashwant Kumar Rao &Umeshwar Pandey
2. Childhood obesity: Why are Indian children getting fatter? BBC news -Geeta Pandey
3. Child Obesity and Urbanisation in India: An Overview with a Focus on Delhi Debolina KUNDU, Rakesh MISHRA and Swastika CHAKRAVORTY
4. Obesity and the SDGs: an opportunity hidden in plain sight :World Obesity
5. Obesity in School children in India written by VangalKrishnaswamy ,Sashindran and Puja Dudeja
6. Consequences of Obesity | Overweight & Obesity – CDC-https://www.cdc.gov › obesity › basics › consequences
7. 15 Jul 2022 — Economic Impact.