Content available at: https://www.ipinnovative.com/open-access-journals

IP Journal of Nutrition, Metabolism and Health Science

Journal homepage: https://www.jnmhs.com/

Review Article

A review on obesity: A multidimensional global issue

Shivam Dubey[1]*

[1]Rani Durgavati Vishwavidyalaya, Jabalpur, Madhya Pradesh, India

Abstract

Obesity has emerged as a significant health concern affecting individuals across all socioeconomic strata globally. The widespread consumption of fast food, driven by its affordability, convenience, and accessibility, has contributed to this issue. Many people prioritize quick meals over nutritious, wholesome food due to increasingly busy lifestyles, leading to a lack of time for meal preparation and consumption of balanced diets.

The health implications of obesity are far-reaching and multifaceted. Obesity has surpassed numerous medical conditions as a leading cause of morbidity and mortality worldwide. Moreover, the economic burden of obesity is expected to escalate globally, with future medical costs projected to rise substantially. Obesity increases the risk of developing various serious health conditions, including Hypertension (high blood pressure), Type 2 diabetes, Sleep apnea, Gallbladder disease, High cholesterol, Respiratory problems, Joint issues and musculoskeletal pain, Fatty liver disease, Gastroesophageal reflux disease (GERD).

Furthermore, obesity has a profound impact on mental health, contributing to conditions such as Anxiety disorders, Depression The complex interplay between obesity, physical health, and mental well-being underscores the need for comprehensive approaches to prevention, management, and treatment. Addressing obesity requires a multifaceted strategy that incorporates healthy lifestyle choices, dietary modifications, and targeted interventions to mitigate its adverse effects on overall health and well-being.

Keywords: Overweight, Obesity, Health effects, Epidemic, Youngsters

Received: 13-10-2024; **Accepted:** 25-11-2024; **Available Online**: 07-05 2025

1. Introduction

Finding the risk variables that may be changed is essential for obesity epidemiology and management since obesity is a complicated condition that arises from a confluence of genetic, behavioural, environmental, and socioeconomic factors. Excessive fat deposition is a defining feature of this illness. Obesity has been exacerbated in recent decades by behavioural shifts such as adopting sedentary lives and less healthful eating habits. The body mass index, which is calculated by dividing a person's weight (kg) by their height (m2), is used to diagnose overweight and obesity. Additional measures, including the waist circumference, can aid in diagnosing obesity, and the body mass index serves as a stand-in indicator of fatness. In new borns, children, and adolescents, the body mass index categories used to define obesity differ by age and gender. According to several studies, a sedentary lifestyle that includes things like watching television for extended periods, not exercising, and eating poorly as a youngster is linked to a higher chance of becoming obese. These results have given rise to the theory that children's unhealthy lifestyles do increase the risk of obesity in addition to hereditary factors. Although eating habits and a sedentary lifestyle are examples of behavioural factors that contribute to obesity, it is unclear which behavioural factors cause obesity. Furthermore, prevention efforts targeting youth and young adults have generally failed.[1]

However, the majority of studies have focused on young adults or teenagers, and research on the clustering of metabolic components in preadolescent children has confirmed that the distribution of these components may provide useful information. It has been discovered that eating habits including overeating, eating quickly, and just seldom attending family meals are strongly linked to preadolescents' risk of being overweight. A quarter of obese children fulfilled the requirements for a metabolic syndrome diagnosis, and

*Corresponding author: Shivam Dubey
Email: Shivamdubey20@gmail.com

https://doi.org/10.18231/j.ijnmhs.2025.002

nearly all of them had at least one risk factor for the condition despite their young age.

2. Discussion

According to World Health Organization estimates, 2.5 billion persons aged 18 and older were overweight in 2022, with over 890 million of them suffering from obesity. This indicates that 43 percent of individuals over the age of 18 were overweight (43 percent of men and 44 percent of women). Compared to 1990, when 25% of adults aged 18 and over were overweight, the data indicates a rise. The prevalence of overweight varies by location, ranging from 67% in the location of the Americas to 31% in the African and South-East Asia regions of the World Health Organization. In 2022, 16 percent of individuals over the age of 18 were obese worldwide. During the year 1990 and 2022, the proportion of overweight people has more than doubled worldwide. It is expected approximately forty million kids under the tender age of five were overweight in the year 2022. Overweight was always thought to be an issue in high-income countries, but it is now becoming more prevalent in low- and middle-income countries. Since 2000, there has been a nearly 23% increase in the number of overweight children under 5 in Africa. Asia accounted for nearly half of all children under five who were overweight or obese in 2022. By the year 2022, there were more than 390,000,000 overweight children and adolescents within the ages of 5 and 19 years old. The proportion of children and adolescents aged between the ages of 5 and 19 who are overweight or obese rose dramatically from 8 percent to 20 percent between 1990 and 2022. Both boys and girls have shown increases in this regard; in 2022, 21% of boys and 19% of girls were overweight. Through the year 2022, eight percent of kids and teenagers (160,000,000 youngsters) had been diagnosed as being overweight, as opposed to a mere 2 percent during 1990 (31,000,000 young persons) who had been among the ages five and nineteen.

The reasons for obesity are the subject of a multifaceted scientific investigation. The dramatic rise in obesity over the last few decades indicates that environmental influences outweigh genetic ones.[2] According to certain research, being overweight as a child has a more detrimental impact on one's adult life than being overweight later in life, even if the prevalence of obesity declines with age. Overeating, TV viewing, and physical inactivity are risk factors for obesity that may be changed. Nonetheless, several interventional trials focusing on diet restriction and increased physical activity have neither produced reliable findings nor been successful in changing adult behaviour. Strategies to remove and/or change the risk factors for obesity should be put into place before preadolescence because lifestyles and behaviours are formed early in life.[3] The mismatch between energy expenditure and consumption is the cause of being overweight. A sedentary lifestyle and physical inactivity are independently linked to the development of obesity in children, adolescents, and adults, according to epidemiological studies.[4] Obesity may be exacerbated by fewer opportunities for physical activity. Watching television affects the metabolic rate more than other passive activities which might involve reading, writing, and playing board games.[5] According to one study, prolonged TV viewing was linked to increased leptin levels and decreased H.D.L. cholesterol levels. According to a 2009 study by Metcalf *et al.*,[6] obesity did not seem to be caused by physical inactivity, but rather the effect of it. According to the authors, efforts to encourage physical exercise have mostly failed. The inability to precisely measure physical activity attributes including intensity, patterns, and amount has hindered research on the causation of obesity. Therefore, rather than showing direct causation, the association between obesity and inactivity may be the result of other, unidentified causes. Although physical interventions to address childhood obesity have other positive health effects, a recent review of studies that tried to alter physical activity found that they are unlikely to significantly improve BMI.[7]

Additionally, viewing television for extended periods while watching commercials might cause unhealthy eating habits including nibbling, which usually includes consuming more calories than more healthful eating practices.[8] It is generally accepted that the shift to an unhealthy diet, which includes more convenience food, fewer fruits and vegetables, higher sugar, and low fiber intake, is partly accountable for the current obesity among children epidemic.[9] Furthermore, the development of obesity is also linked to energy consumption and eating habits. Few research has been done on eating behaviours and childhood obesity, even though one review article claimed that unhealthy eating practices such as eating out, skipping family meals, eating quickly, and overeating may affect total calorie intake. It has also been noted that children who are overweight are also more likely to have unfavourable familial conditions.[10]

As fast food and unhealthy meals have become more popular, families are eating together less frequently. Children's attitudes and views about nutrition are influenced by mealtimes spent with their parents.[11] Anderson and Whitaker found that children who attended fewer family dinners had a higher likelihood of being overweight. Parents have direct control over their children's eating habits and have an impact on what, when, and how much they eat.[12]

3. Conclusion

Most non communicable diseases associated with overweight and obesity can be prevented or controlled. Individuals may be able to lower their risk by implementing preventative measures at every stage of life, beginning before conception, and continuing throughout the early years. These could include making sure you gain the right amount of weight throughout pregnancy, breastfeeding exclusively for the first six months after giving birth, and continuing to do so for at least 24 months. Furthermore, encouraging youngsters to engage in good food, physical activity, sleep, and sedentary behaviour regardless of their present weight can also help

prevent obesity. The children's exposure to screens should be constrained, and their intake of beverages with added sugar and high-energy meals should be monitored, along with other good eating habits. Individuals' eating and physical activity habits are mostly determined by social and environmental factors that severely limit their freedom of choice. Because obesity is a societal issue rather than an individual one, it may be resolved by fostering communities and supportive settings that promote regular exercise and a healthy diet as the most practical, inexpensive, and accessible lifestyle choices. A healthy lifestyle should include a balanced diet, regular exercise, enough sleep, and abstinence from alcohol and tobacco. The political health agenda should prioritize well-defined control and preventive measures, given the significance of the health hazards associated with overweight and obesity and its rising global prevalence.[13] More study is needed on a number of topics, including the benefits of encouraging physical activity, modifying food choices and calorie intake, identifying and managing eating behavioural impairments, and other variables associated with the prevalence of overweight and obesity.[14-16] Since people frequently engage in stress eating because of emotional pain, emotional self-regulation is also crucial for mental health. Adults should also restrict their calorie intake from total fats and sweets and increase their diet of fruits, vegetables, whole grains, legumes, and nuts. Adults who want to prevent their weight from rising should be physically active regularly. In addition to individuals, doctors, and physicians have a significant role to play since they must weigh and measure patients who are visiting medical facilities and offer advice on good eating and living habits. Once an obesity diagnosis has been made, they can offer comprehensive obesity prevention and treatment services that include physical exercise, a balanced diet, and medicinal and surgical interventions.

Additionally, by lowering the fat, sugar, and salt content of processed goods, the food business may significantly contribute to the promotion of healthy diets. The businesses can guarantee that all customers have access to reasonably priced, wholesome options. This may be achieved by restricting the marketing of foods heavy in sugar, salt, and fat, particularly those targeted at children and teens. They should also make sure that healthy food options are available and encourage frequent physical exercise in the workplace. Furthermore, the legislative bodies must educate the public about the negative consequences of obesity by holding health awareness events. Policies should also be created to implement the required adjustments to curb this issue. In addition to health sector responses that are prepared to detect risk, prevent, treat, and manage the condition, these policies and actions may include structural, financial, and regulatory measures meant to create healthy food environments that make healthier food alternatives available, accessible, and desired.

4. Source of Funding

None.

5. Conflict of Interest

None.

References

1. Reilly JJ, Armstrong J, Dorosty AR, Emmett PM, Ness A, Rogers I, et al. Early life risk factors for obesity in childhood: cohort study. *BMJ*.2005;330(7504):1357
2. Newby PK. Are dietary intakes and eating behaviors related to childhood obesity? A comprehensive review of the evidence. *J Law Med Ethics*.2007;35(1):35–60.
3. Sugimori H, Yoshida K, Izuno T, Miyakawa M, Suka M, Sekine M, et al. Analysis of factors that influence body mass index from ages 3 to 6 years: A study based on the Toyama cohort study. *Pediatr Int*. 2004;46(3):302–10.
4. Hu FB, Li TY, Colditz GA, Willett WC, Manson JE. Television watching and other sedentary behaviours in relation to risk of obesity and type 2 diabetes mellitus in women. *JAMA*. 2003;289(14):1785–91.
5. Ainsworth BE, Haskell WL, Leon AS, Jacobs DR, Jr, Montoye HJ, Sallis JF, et al. Compendium of physical activities: classification of energy costs of human physical activities. *Med Sci Sports Exerc*. 1993;25(1):71–80.
6. Metcalf BS, Hosking J, Jeffery AN, Voss LD, Henley W, Wilkin TJ. Fatness leads to inactivity, but inactivity does not lead to fatness: a longitudinal study in children (EarlyBird 45). *Arch Dis Child*. 2011;96(10):942–7.
7. Harris KC, Kuramoto LK, Schulzer M, Retallack JE. Effect of school-based physical activity interventions on body mass index in children: a meta-analysis. *CMAJ*. 2009;180(7):719–26.
8. Lank NH, Vickery CE, Cotugna N, Shade DD. Food commercials during television soap operas: what is the nutrition message? *J Community Health*. 1992;17(6):377–84.
9. Sallis JF, Glanz K. The role of built environments in physical activity, eating, and obesity in childhood. *Future Child*. 2006;16(1):89–108.
10. Yannakoulia M, Papanikolaou K, Hatzopoulou I, Efstathiou E, Papoutsakis C, Dedoussis GV. Association between family divorce and children's BMI and meal patterns: the GENDAI Study. *Obesity (Silver Spring)* 2008;16(6):1382–7.
11. Birch LL, Fisher JO, Davison KK. Learning to overeat: maternal use of restrictive feeding practices promotes girls' eating in the absence of hunger. *Am J Clin Nutr*. 2003;78(2):215–20.
12. Anderson SE, Whitaker RC. Household routines and obesity in US preschool-aged children. *Pediatrics*. 2010;125(3):420–8.
13. Visscher TL, Seidell JC. The public health impact of obesity. *Ann Rev Public Health*. 2001;22(1):355–375.
14. Ng M, Fleming T, Robinson M, Thomson B, Graetz N, Margono C, et al. Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. *Lancet*. 2014;384(9945):766–81.
15. Scott KM, Bruffaerts R, Simon GE, Alonso J, Angermeyer M, de Girolamo G, et al. Obesity and mental disorders in the general population: results from the world mental health surveys. *Int J Obesity*. 2008;32(1):192–200.
16. Hawks SR, Goudy MB, Gast JA. Emotional eating and spiritual well-being: a possible connection? *Am J Health Ed*uc. 2003;34(1):30–3.

Cite this article: Dubey S.A review on obesity: A multidimensional global issue. *IP J Nutr Metab Health Sci*.2025;8(1): 3–5