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Review Article

Obesity Prevalence in World and Türkiye

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Abstract

Obesity, which now affects one in three people, is considered the disease of our time. When body weight increases abnormally, regardless of a person' s control, excess fat tissue accumulates in the body. Obesity is indicated by factors such as body mass index (BMI), waist circumference measurements, and other anthropometric measurements. Environmental factors, such as poor and inadequate nutrition, contribute to the development of obesity, as does the adoption of a sedentary lifestyle. Genetic and etiological factors also play a role. Obesity affects not only the individual but also society as a whole. If unhealthy eating habits established in adolescence persist into adulthood, individuals may struggle to achieve a balanced and adequate diet, leading to health problems. The main objectives in the fight against obesity are to promote a balanced diet and to encourage lifestyle changes, including physical activity. This study was compiled by collecting data from secondary sources about obesity and its prevalence globally and in Türkiye.

Keywords: Balanced Nutrition, Causes of Obesity, Obesity

INTRODUCTION

Optimal nutrition ensures a healthy life with maximum well-being and minimal disease risk. The primary goal of optimal nutrition is to meet metabolic needs and provide sufficient energy and essential nutrients for the body to function. Obesity occurs when a person's body mass exceeds the appropriate weight relative to their height or when their energy intake exceeds their energy expenditure. In other words, obesity results from an excessive accumulation of fat mass in the body.

As a person's weight increases and reaches obesity levels, metabolic and endocrine changes occur. If weight gain is not controlled, obesity can lead to a variety of health problems, including high blood pressure, skin disorders, mental health problems, respiratory problems, altered blood lipid profiles, musculoskeletal problems, and diabetes. Obesity is a multifactorial metabolic disorder.

Obesity is a complex, heterogeneous, chronic, and unfortunately progressive disease that significantly impacts health, quality of life, and mortality (Lingvay et al., 2024).

In 1997, the World Health Organization (WHO) declared obesity a major public health issue and a global epidemic. Generally, a body mass index of 25 kg/m² or higher is considered overweight, while 30 kg/m² or higher is classified as obese (Haththotuwa et al., 2020; Lingway et al., 2024). In adults, the percentage of body fat in the body mass index (BMI) typically ranges from 15-18% for men and 20-25% for women. When the percentage of body fat exceeds 20% in men and 30% in women, obesity is diagnosed if weight gain is persistent. Anthropometric measurements are used to assess obesity, and it is essential to consider several measurements rather than relying solely on one.

Hunger and obesity can affect people from all walks of life. Food insecurity is a global problem that transcends economic boundaries. Interestingly, the prevalence of obesity-related deaths worldwide is higher than hunger-related deaths, highlighting that obesity is a significant problem alongside hunger. Nutrition goes beyond simply filling the stomach; it plays a critical role in overall health. The most crucial step in preventing obesity is ensuring everyone has convenient access to nutritious food and makes healthy choices.

Obesity

Obesity occurs when an excessive and disproportionate amount of fat accumulates in the body, adversely affecting health. The prevalence of obesity is steadily increasing, making it a critical health issue of our time. In general, obesity is defined as a body mass index (BMI) of ≥30 kg/m² in adults aged 20 years and older, regardless of sex or age (CDC, 2023a).

Obesity not only affects the health of individuals but also has broader societal implications. It leads to various diseases and can cause physiological, endocrinological, aesthetic, psychological, and sociological problems. Obesity is associated with increased mortality, reduced health-related quality of life, and increased disease burden and healthcare costs.

Obesity arises from the interaction of many factors, including genetic, metabolic, behavioral, and environmental influences. With serious social and psychological effects, obesity significantly contributes to the global burden of chronic disease and disability, impacting all age and socioeconomic groups (Haththotuwa et al., 2020).

In recent years, the prevalence of obesity in children has increased dramatically. Overweight children have a high likelihood of becoming obese adults and face an increased risk of

developing noncommunicable diseases later in life. Due to these trends, global health targets in nutrition surveillance have focused not only on undernutrition but also on all forms of malnutrition, including overweight and obesity (Bixby et al., 20025). These efforts have also led to an increase in the budget allocated for obesity prevention.

A report by the Organisation for Economic Co-operation and Development (OECD) found that obese people tend to use health services more frequently. Overweight people spend about 2.5 times more on healthcare than those with a healthy body weight. According to the OECD, obesity-related spending will be a significant financial burden for the United States between 2020 and 2050. The same report predicts that 12% of our country's healthcare spending will be on obesity-related diseases (OECD, 2017). In Europe, spending on obesity-related diseases is much lower than in the US and our country. The World Health Organisation (WHO) reports that 6% of health expenditure in the European Region is spent on treating obesity (WHO, 2000).

Obesity Prevalence in the World

According to the World Health Organization (WHO), the global prevalence of obesity nearly tripled between 1975 and 2016. In 2016, more than 1.9 billion adults aged 18 years and older were overweight, and more than 650 million of them were classified as obese. In addition, an estimated 38.2 million children under the age of 5 were overweight or obese in 2019. Notably, the prevalence of overweight children under 5 in Africa has increased by about 24% since 2000, and in 2019, about half of all overweight or obese children under 5 lived in Asia (WHO, 2003).

From a broader perspective, obesity, once considered primarily a problem in high-income countries, is now widespread in low- and middle-income countries and in rural areas. If there are no positive changes in dietary habits and obesity rates continue to rise, it is estimated that 20% of the world's population will be obese by 2030 (WHO, 2000).

The World Obesity Federation's (WOF) 2016 report estimates that obesity will affect around 770 million adults worldwide by 2020. With immediate action, this number will be one billion by 2030 (WOF, 2023a). Interestingly, Nauru holds the title of the most obese country in the world, with 59.85% of its adult male population classified as obese. In contrast, Vietnam has the lowest risk of adult male obesity, with a rate of 1.67% (WOF, 2023b).

According to the 2003-2004 US National Nutrition and Health Survey conducted by the Centers for Disease Control and Prevention (CDC), obesity, defined as a BMI greater than 30, was higher in both men and women. Specifically, it was 31.1% in women and 33.2% in men then. The subsequent study, conducted in 2005-2006, reported slightly higher figures: 33.3% for men and 35.3% for women (CDC, 2023b).

EU statistics compiled by Eurostat (2023) cover EU countries, including Norway, Serbia, and Turkey. They show that weight problems and obesity are increasing rapidly in all countries. The study looked at the rates of overweight and obese adults in the EU between 2018 and 2020. In 2019, the highest rates of obesity among women will be found in Malta. Conversely, the lowest female obesity rates (low to high) were found in Italy, Romania, and Bulgaria. Among men, the highest rates were found in Romania, Italy, the Netherlands, and France. The countries with the highest obesity rates (from high to low) for women were Estonia, Latvia, Ireland, and Malta. For men, these countries were Croatia, Ireland, Hungary and Malta. The same study also highlighted that obesity rates tend to be higher in men than in women. In addition, obesity tends

to increase with age, and women's level of education appears to be inversely correlated with obesity. However, there is no significant association between educational attainment and obesity in men.

Obesity Prevalence in Türkiye

Obesity, a condition characterized by excess body fat, is one of the significant health challenges affecting individuals from childhood through adolescence and into adulthood. The prevalence of overweight and obesity has increased significantly worldwide, affecting both children and adults.

Obesity is a major public health problem affecting a significant portion of the Turkish population. In the last 20 years, the prevalence of obesity among adults has increased significantly. In 1990, 18.8% of the adult population was obese (28.5% among women and 9% among men), and this rate rose to 36% in 2010 (44% among women and 27% among men) (Erem 2015). In a study investigating the BMI data of women visiting the Cancer Early Diagnosis and Screening Center (KETEM) in Türkiye, the prevalence of obesity among adult women aged 35-60 was found to be 35%. The highest prevalence was observed in Western Turkey, in the Aegean region, where 42% of women had a BMI over 30. The lowest rate was observed in Eastern Turkey, with 21% of women being obese, followed by 28% in Southeastern Turkey (Ozgul et al., 2011).

According to health research in Turkey:
- In 2008, the BMI rate for obese people aged 15 and over was 15.2%.
- By 2019, this rate had increased to 21.1%.
- Looking at gender-specific data for 2019, 24.8% of women and 17.3% of men were classified as obese (TUIK, 2019).

In the young population (15-24 years), the Turkish Health Survey reported the following obesity rates:
- In 2016, the obesity rate was 3.8%, which increased to 4.6% in 2019.
- For young men, the obesity rate was 3.5% in 2016 and 4.8% in 2019.
- For young women, the rates were 3.8% in 2016 and 4.5% in 2019 (TUIK, 2019).

In addition, the rate of non-obese normal-weight individuals (aged 15-24) decreased from 66.4% in 2016 to 64.3% in 2019. This rate was 63.6% for young women in 2016 and 64.3% in 2019 (TUIK, 2019).

According to the World Obesity Federation (WOF, 2023b):
- In 2016, 25.29% of adult males in Turkey were classified as obese, ranking 44th worldwide in terms of obesity prevalence.
- Among women, 20.71% were classified as obese, ranking 24th in the world.
- For boys, the obesity rate was 12.18% (73rd in the world).
- For girls, the rate was 10.92% (54th in the world).

Furthermore, WOF (WOF, 2023a) predicts that by 2022, 20.2% of adults aged 15 years and over in Turkey will be obese.

These findings highlight the urgent need for effective strategies to tackle obesity and promote healthier lifestyles, particularly emphasizing the necessity of combating obesity among women.

Causes, Detection, and Prevention of Obesity

The leading causes of obesity can be categorized as etiological, environmental (related to eating habits and lack of physical activity), and genetic. Etiological factors include certain medications, hormone treatments, hypothalamic surgery, neuroendocrine, and nutritional obesity. Typical forms of diet-related obesity include eating disorders that begin between 0 and 2 years of

age, hyperphagic obesity that begins in childhood and is characterized by continuous weight gain, frequent consumption of high-fat, high-energy foods, psychological issues, socioeconomic status, sedentary lifestyle, and aging.

When assessing obesity based on genetic factors:
- If both parents are thin, the obesity rate is 10-15%.
- If the mother is thin and the father is obese, the rate rises to 40-50%.
- If both parents are obese, the rate rises to 80%.
To detect obesity, the World Health Organization (WHO) recommends using the Body Mass Index (BMI), which assesses whether an individual's weight/height ratio is within a healthy range (Nishida et al., 2004). BMI is a commonly used method for detecting obesity because of its simplicity and practicality. It is calculated by dividing a person's weight in kilograms by their height in square meters. However, BMI alone does not consider variations in body structure between individuals, so it is essential to consider additional methods of assessing obesity.

The WHO defines individuals over 18 with a BMI of 30 kg/m² and above as having first-degree obesity, while those with a BMI of 25 to 29.9 kg/m² are considered overweight (Baysal et al. 2014). As obesity is characterized by the accumulation of fat in the body, reliance on BMI alone may not be a comprehensive indicator of fat content.

While measuring waist circumference is one of the most commonly used methods, other anthropometric measures such as waist-to-hip ratio or waist-to-height ratio can be appropriate, considering factors such as age, gender, and disease risk.

The obesity epidemic requires timely and effective population-based approaches to prevent the condition. Obesity can be largely prevented by adopting healthy lifestyles that include healthy eating and adequate physical activity. In many countries, there is a need for the development of national policies and the implementation of population-based intervention programs to combat the obesity epidemic and promote public health (Lim et al.; 2020).

Obesity is also a concerning health issue in Türkiye and shows an increasing trend over time. Yumuk (2005) emphasized the need for national surveys to demonstrate the magnitude of obesity among children.

Santas and Santas (2018) noted that there is a relationship between education level and obesity rates, particularly among women in Türkiye. Women who did not receive education or did not complete primary school, as well as those who were not working, have a higher risk of obesity. Obesity increased in proportion to the number of births among mothers. It was most commonly observed in the Western and Central regions. As household welfare increased, obesity also rose.

Ercan et al. (2012) reported in their study that the increase in computer and screen time affects the obesity rates of adolescents. It was observed that the body mass index (BMI) also increased with the increase in computer usage. A greater proportion of overweight and obese adolescents watched TV and used computers for more than 2 hours per day compared to their normal-weight peers. Normal-weight individuals were found to have a higher participation rate in regular physical activity. The prevalence of obesity among the families of obese adolescents was 56.5%.

Obesity is a major global health problem. The most effective strategy for preventing obesity is to instill healthy eating habits and promote physical activity from an early age. Educating children about food ingredients, the risks of unhealthy diets, and the importance of avoiding fast food is crucial. Regular weight monitoring is also essential.

CONCLUSION

Diet plays a crucial role in the fight against obesity. Obesity is a preventable, treatable, and manageable disease. The most crucial step to prevent and control obesity is to eat a balanced and nutritious diet. In addition, lifestyle changes and regular physical activity contribute to overall health.

For a well-balanced diet: Aim to consume a variety of fresh fruits and vegetables daily. Choose seasonal produce whenever possible. Include whole grains in your diet, such as whole wheat bread, brown rice, and oats. Add pulses like lentils, chickpeas, and beans as sources of protein and fiber. Try to consume 2-3 servings of milk and dairy products each day. Eating fish at least 2-3 times a week (about 300-500 grams) provides essential nutrients and healthy fats. Also, pay attention to your daily fluid intake to stay hydrated. Additionally, choose different food groups at each meal.

Culturally appropriate programs and policies that promote nutritious diets within caloric requirements can help reduce overweight and obesity. In addition, public health initiatives that encourage physical activity help to maintain a healthy weight.

Declaration of Interests: The authors have no conflict of interest to declare.

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