



## STATISTICAL ANALYSIS OF OBESITY AMONG CHILDREN AGED 5 TO 19 IN CENTRAL ASIAN COUNTRIES OVER THE LAST 20 YEARS

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**Annotation:** The article provides a statistical analysis of the prevalence of overweight and obesity among children and adolescents aged 5 to 19 globally and in Central Asian countries (Uzbekistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan) during 1990–2022. Based on WHO and regional health system reports, it deeply analyzes the rise in global and regional obesity indicators, demographic and economic conditions, urbanization processes, changes in eating culture, and their influencing factors. Regional differences and epidemiological characteristics are discussed, focusing on the impact of overweight on children's health, physiological and psychological development, and long-term socio-economic outcomes. The importance of prevention and monitoring strategies, promoting a healthy lifestyle for the younger generation, and innovative approaches in local and global health policies are proposed.

**Keywords:** childhood obesity, overweight, Central Asia, WHO, demography, epidemiology, urbanization, healthcare, prevention, development

**Introduction:** Over the years, excessive body weight during childhood and adolescence has emerged as one of the most serious global health issues.[2] Childhood obesity has reached epidemic proportions in both high- and low-income countries, with the number of overweight and obese children doubling or even tripling since 1970.[8] According to WHO data, in 2016, 18% of children and adolescents aged 5-19 worldwide were overweight or obese, with significant geographic variations.[1] Overweight and obesity have significant short- and long-term adverse effects on physical, mental, and emotional health. Exploring the role of dietary behaviors and habits is increasingly important as they form early in life but can be modified later, though with difficulty.[4,10] Additionally, managing obesity and weight loss during adolescence becomes considerably harder after age 35.[3] In Central Asia, overweight and obesity rates are rising, putting significant pressure on health systems.[9] Socioeconomic disparities, culture, and dietary habits create distinct obesity trends in different countries.[5]

**Materials and Methods:** The analysis used WHO Global Nutrition Reports, World Obesity Federation reports, national health statistics from Central Asian countries, and PubMed articles. The study analyzed overweight and obesity prevalence by age, gender, and regional indicators based on BMI (Body Mass Index). WHO Growth Reference 2007 standards were primarily applied.

**Results and Discussion:** Globally, childhood and adolescent obesity rates have risen significantly since 1990. The global obesity rate among children aged 5-19 was just 1.9% in 1990; by 2010, it had risen to 5%, and by 2022 it reached 8.2%, indicating a sharp increase among youth. Europe shows similar trends, rising from 3.8% in 1990 to 6.8% in 2010 and 8.2% in 2022 [WHO data].

In Central Asia, childhood obesity rates vary significantly by country:

Uzbekistan: 2.2% in 1990, slightly increasing to 3% in 2010, and reaching 6.4% in 2022, indicating growing overweight problems.

Tajikistan: 1.4% in 1990, slightly declining to 1.3% in 2010, and rising modestly to 1.6% in 2022. Obesity remains low, with no significant increase.

Kazakhstan: 3.9% in 1990, increasing slightly to 4% in 2010, and 5.7% in 2022, marking it as one of the countries with rising obesity.

Turkmenistan: Stable at 2.3% in 1990 and 2010, with a slow increase to 3.4% in 2022.

Kyrgyzstan: Initially high at 8% in 1990, sharply dropping to 3.7% in 2010, and 2.2% in 2022.

The decrease in Kyrgyzstan's obesity rates likely relates to specific regional and socio-health factors.

Analytical Review: Differences in childhood obesity trends in Central Asia relate to various factors. Uzbekistan, Kazakhstan, and Turkmenistan show continuing increases, possibly due to urbanization, changes in food culture, and decreased physical activity among youth. Tajikistan and Kyrgyzstan maintain low or decreasing rates, likely due to traditional diets, predominantly rural populations, and socioeconomic conditions. Social media and health strategies also play a role in controlling obesity in these countries.

The rise in childhood obesity in Central Asia strongly relates to socioeconomic status, culture, and dietary habits. Urbanization, increased consumption of high-calorie and processed foods, and decreased physical activity explain increases in Uzbekistan, Kazakhstan, and Turkmenistan. [6,7] Tajikistan and Kyrgyzstan maintain lower or stable obesity rates due to traditional diets, rural settings, and slower economic development. Health strategies and social networks contribute to obesity control.

Obesity's negative effects impact not only physical health but also children's mental and emotional well-being, hindering education and social integration, leading to visible social and economic problems. Therefore, prevention and promotion of healthy lifestyles must start early. Regional cooperation, data exchange, and establishing precise epidemiological monitoring systems in each country are crucial to combating obesity, enabling effective prevention and treatment strategies for youth, families, and communities.

**Conclusion:** Childhood and adolescent overweight and obesity are sharply rising worldwide, posing significant challenges to health systems. The trend continues in Central Asia, with each country's unique socioeconomic and cultural factors influencing obesity levels. Regional health systems must develop targeted prevention programs to reduce obesity among youth. Improving dietary culture, encouraging physical activity, and promoting healthy lifestyles will enhance overall regional health.

### References:

1. World Health Organization. Childhood obesity and overweight factsheet, 2022.
2. Lobstein T., Baur L., Uauy R. (2004) Obesity in children and young people: a crisis in public health. Obesity Reviews.
3. Ng M., Fleming T., Robinson M., et al. (2014) Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis. Lancet.
4. WHO. Global Nutrition Report 2016.

- 5.Hill J.O., Wyatt H.R. Role of lifestyle interventions in obesity management. The American Journal of Clinical Nutrition.
- 6.Kazakhstan Ministry of Health. National Childhood Obesity Report, 2023.
- 7.Uzbekistan Health Ministry. Pediatric Health Survey 2023.
- 8.WHO Growth Reference 2007.
- 9.Boboxoja Qoraxo'jayev, I.T. Salomov, M.N. Abdullayeva. Bolalar kasalliklari propedevtikasi. Toshkent, 2006.
- 10.G.I. Shayxova, N.J. Ermatov. NUTRITSIOLOGIYA. Toshkent, 2024.

