

REVIEW ARTICLE

GENERATION AT RISK: THE RISE OF ADOLESCENT OBESITY

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Abstract:

Adolescent obesity is a rising public health concern. Today's youth generation is at risk of impaired long-term health outcomes. This paper investigates the consequences of rising adolescent obesity. We examined the trends in Body Mass Index (BMI) elevation among adolescences, highlight key periods of vulnerability for the development of excess adiposity, dietary transitions, physical inactivity, and the increasingly “obesogenic” environments in which young people live. The evidence indicates that adolescents who develop obesity are at significantly greater risk of progressing to severe obesity in adulthood, with attendant heightened risks of cardiometabolic disease, psychosocial impairment, and reduced quality of life. Given the complexity of the underlying etiologies and the strong persistence of excess weight from adolescence into later life.

Keywords: Adolescent Obesity, Body Mass Index, Obesogenic Environment, Dietary Transitions, Physical Activity, Obesity Persistence.

Introduction:

Adolescence is the phase of life between childhood and adulthood, 10 to 19 years of age (WHO). Unique stage of human development and it lays foundations of good health. Adolescents experience rapid physical, cognitive and psychosocial growth and establish patterns of behavior related to diet, physical activity, substance use and sexual activity. These behaviors depending on their nature either protect them or destroy them in the future.

Classification of Adolescent Age Group

- 1. Early: 10-14 years:** Growth spurts, physical changes become easily noticeable, gender consciousness
- 2. Late: 15-19 years:** Growth spurts continues, gain interest in romantic and sexual relationship, development of sexual identity.

3. Young adults: 20-24 years: Almost completed physical development, risk taking behavior declines, more emotional stability.

Obesity is a medical condition characterized by excessive body fat accumulation that presents a risk to health. It is typically measured using the Body Mass Index (BMI), a person's weight in kilograms divided by the square of their height in meters (kg/m^2). Obesity is a growing global epidemic, increasingly affecting not just adults but also adolescents, a critical period of growth and development. The World Health Organization (WHO) identifies obesity as one of the most serious public health challenges of the 21st century. This report, titled "Generation at Risk", focuses on the alarming rise in adolescent obesity and the health implications it poses for future generations.

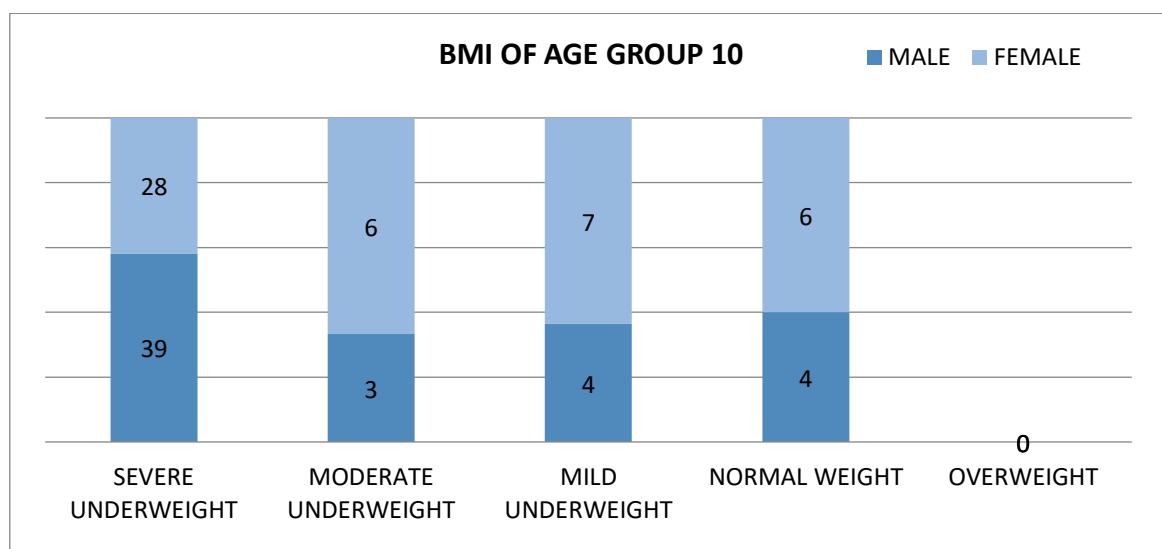
Methodology:

1. Taken height and weight of the age groups 10 and 19 randomly of local areas of Nipani, Belagavi, Karnataka. Height measured using a stadiometer to the nearest 0.1 cm. Weight measured using a digital weighing scale to the nearest 0.1 kg.
2. Calculated BMI using the standard formula, $\text{weight (kg)} / [\text{height (m)}]^2$.
3. Categorized BMI values as severe underweight, moderate underweight, mild underweight, normal weight and overweight.
4. Analyzed data of the age group 10 and 19.
5. The sample will be divided into strata based on age groups and gender to ensure representation across the adolescent spectrum. Within each stratum, participants will be randomly selected.
6. Concluded based on our results.

Data Overview:

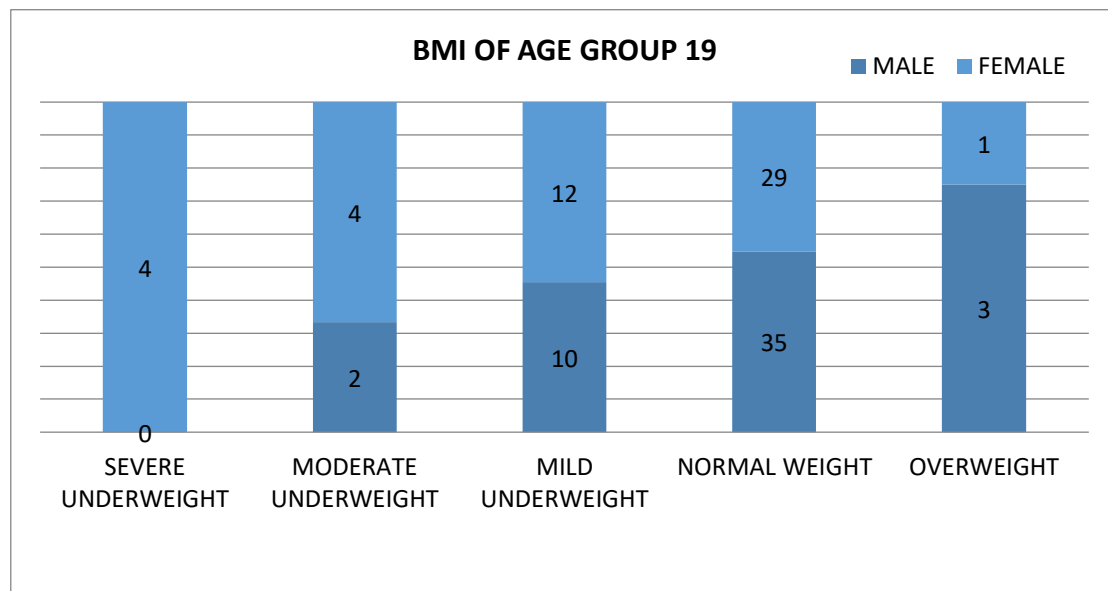
BMI OF age group 10

Gender	Severe Underweight	Moderate Underweight	Mild Underweight	Normal Weight	Overweight
Male	39	03	04	04	Nil
Female	28	06	07	06	Nil



BMI of age group 19

Gender	Severe Underweight	Moderate Underweight	Mild Underweight	Normal Weight	Overweight
Male	Nil	02	10	35	03
Female	04	04	12	29	01

**Observations:****Age 10 – Under nutrition Prevalent****Males:**

- 46 out of 50 (92%) are underweight.
- No overweight individuals.

Females:

- 41 out of 47 (87%) are underweight.
- No overweight individuals.

Age 19 – Shift toward Normal Weight and Early Overweight**Males:**

- 70% (35 out of 50) have normal BMI.
- 3 overweight individuals (6%).

Females:

- 29 out of 50 (58%) have normal BMI.
- 1 overweight individual.

Generation At Risk: What the Data Tells Us

Although under nutrition remains a pressing issue at younger ages, by late adolescence, a transition toward overweight and early obesity is evident, particularly in males. This shift reflects broader changes in:

- **Dietary patterns** (increased consumption of processed and fast foods)

- **Reduced physical activity** (more screen time, less outdoor play)
- **Urban lifestyle changes** (less access to open spaces and recreational activities)

This data reveals that today's adolescents are caught between two extremes:

Undernourished beginnings

Rising risk of obesity in later years

Without timely intervention, this generation could face a dual burden of malnutrition—under nutrition early on, and obesity-related chronic diseases in adulthood.

Risk Factors for Adolescent Obesity

- **Poor dietary habits:** High intake of calories, sugar, and fats.
- **Lack of physical activity:** Sedentary lifestyle and excessive screen time.
- **Emotional and psychological factors:** Stress, peer pressure, and low self-esteem.
- **Genetics and family history** of obesity.
- **Socioeconomic factors:** Limited access to healthy food and education.

Health Consequences of Adolescent Obesity

- Type 2 diabetes
- Cardiovascular disease
- High blood pressure
- Joint problems
- Sleep apnea
- Mental health issues (depression, anxiety, body image concerns)
- Social stigma and bullying
- Higher likelihood of adult obesity

Conclusion:

Conclusion of age group 10: Severe and moderate under nutrition is the dominant issue in early adolescence. These children are not at immediate risk of obesity, but lack adequate nutrition, which may predispose them to metabolic issues later in life.

Conclusion of age group 19: There is a positive trend in improving nutritional status as adolescents age. However, the emergence of overweight cases signals the beginning of a new challenge; the rise of adolescent obesity.

Adolescent obesity is an emerging threat that is beginning to affect a generation already challenged by under nutrition. The data highlights a worrying trend: as children grow into adolescents, nutritional status may improve, but unhealthy lifestyle changes introduce the risk of obesity.

To safeguard this “generation at risk,” there must be a coordinated effort across health, education, and policy sectors to promote healthier environments, behaviours, and mindsets. The time to act is now, before today's at-risk adolescents become tomorrow's chronically ill adults.

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