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Assessment of present health status of school going children from 'Tetroid city of India' Pithampur and Indore city from Madhya Pradesh

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Abstract
For the present study the purposive random sampling technique was employed to select the sample of two hundred boys and girls (n=200) of 6th standard, 100 students were selected from School going children of Pithampur and Indore, Madhya Pradesh. Form the selected students the Body Masss Index (BMI) was calculated to find the present health status of the children. Weight machine and Height chart were employed to collect the data and findings shows that Children from Pithampur found 71% Underweight, 21% Normal and 8% found Overweight, whereas Children from Indore found 77% Underweight, 16% Normal and 7% found Overweight. Most of the children are lying in the underweight category which may be due to physical and psychological causes such as – Genetics Stress and Depression, Digestive Problems and other diseases, Eating Disorder, Parental Ignorance, Cultural Influence, Socio-economic status, Lack of Physical Exercises also leads to underweight in children.

Keywords: body mass index (BMI), health status underweight, normal, overweight

Introduction

The Body mass index (BMI) or Quetelet index is a value derived from the mass (weight) and height of an individual. The BMI is defined as the body mass divided by the square of the body height, and is universally expressed in units of kg/m^2, resulting from mass in kilograms and height in metres. The BMI may also be determined using a tab or chart which displays BMI as a function of mass and height using contour lines or colours for different BMI categories, and which may use other units of measurement (converted to metric units for the calculation).

The BMI is an attempt to quantify the amount of tissue mass (muscle, fat, and bone) in an individual, and then categorize that person as underweight, normal weight, overweight, or obese based on that value. However, there is some debate about where on the BMI scale the dividing lines between categories should be placed. Commonly accepted BMI ranges are underweight: under 18.5 kg/m^2, normal weight: 18.5 to 25, overweight: 25 to 30, obese: over 30. People of Asian descent have different associations between BMI, percentage of body fat, and health risks than those of European descent, with a higher risk of type 2 diabetes and cardiovascular disease at BMIs lower than the WHO cut-off point for overweight, 25 kg/m^2, although the cutoff for observed risk varies among different Asian populations. *(Wikipedia, 2018)* [1].

The prevalence of obesity is increasing in adults and children alike. Many developing countries throughout the world report a steep rise in incidence of obesity. An article in Times of India, 18th March, 2007 expressed concern at the rise of obesity and overweight in India, especially among the affluent children and youth. This article quoted *Vishal Balf, CEO, Wockhardt group of hospitals* as "Today's generation of children may be the first in modern history to have a shorter life span than their parents". This article further expressed that in this era of organic and vegan revolutions and diet charts, it comes as a shock when experts say that the 25-35 age group is far from being fit. *(Encyclopedia Britannica, 2002).*

Review of Related Literature

Fishben (1959) [2] emphasized that obese individuals eat without regard to appetite, "to overcome fear or social maladjustments". Obese individuals were found to be more immature, and had more psychological problems and poor impulse control *(Moore and Schultz 1983)* [3]. The overeating of obese individuals is governed almost entirely by the enticing appearance of food *(Schachter, 1968)* [4]. While genetic and environmental factors play a definite role in causing obesity, it is largely accepted that one of the main causes for obesity is personal behavior regarding their maintenance of health. Healthy habits among children lay the groundwork for positive youth development *(Danner, 2000; Ge et al., 2001).*

More recently, strong arguments have been made about the important effects that television programs and advertisements have in shaping attitudes toward health issues as well as health behaviors. *Wallack and Dorfman (1992)* noted that those individuals who watched more television were more likely to believe in the healing powers of medication than adopting healthy behaviors.

Objectives

1. To assess the present health status of school going children from 'Tetroid city of India' Pithampur and Indore city of Madhya Pradesh.
2. To Study the health status with the help of Body Mass Index (BMI).

Delimitations

1. The study was delimited to 'Tetroid city of India' Pithampur and Indore city from Madhya Pradesh only.
2. The study was further delimited to School going children of Pithampur and Indore
3. The study was further delimited to the 6th Standard boys and girls Students only.
4. The study was further delimited to the 200 students.

Limitations

1. Daily routine, individual differences and environmental factors may act as a limitation for the study.
2. Lack of proper sophisticated instruments was also considered as the limitations of the study.

Sample: For the present study the purposive random sampling technique was employed to select the sample of two hundred boys and girls (n=200) of 6th standard, 100 students were selected from School going children of Pithampur and Indore, Madhya Pradesh.

Tools: Weight machine and Height chart were employed to collect the data.

Procedure

Methodology

The methodology of the study consists of selection of subjects, selection of variables, testing procedure, In this survey study two hundred boys and girls (n=200) of 6th standard, 100 students were selected from School going children of Pithampur and Indore, Madhya Pradesh

Form the selected students the BMI was calculated to find the present health status of the children.

Body Mass Index Scale

Table 1

S. No.	Weight Category	Index
1.	Underweight	<=18.5
2.	Normal	<=24.9
3.	Overweight	<=29.9
4.	Obese	>30

Body Mass Index Formula

$$BMI = \frac{weight\ in\ kg}{(height\ in\ meters)^2}$$

Finding

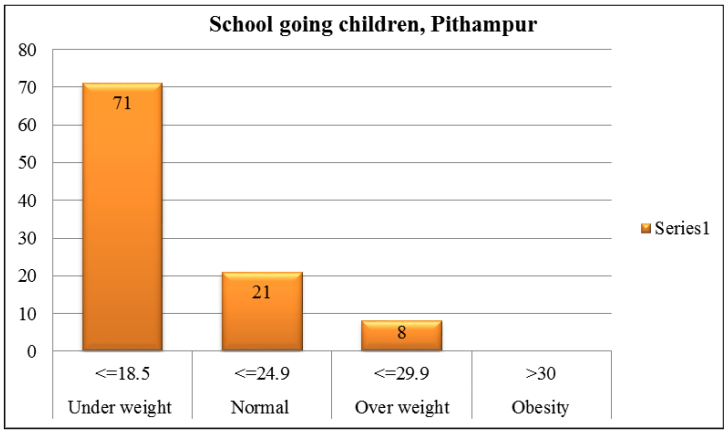

Fig 1

Children from Pithampur found 71% Underweight, 21% Normal and 8% found Overweight.

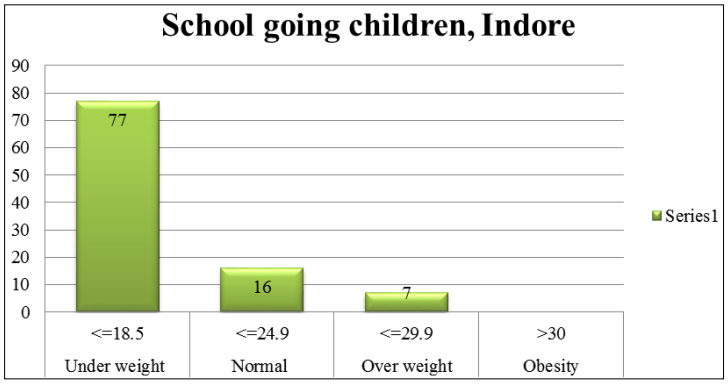

Fig 2

Children from Indore found 77% Underweight, 16% Normal and 7% found Overweight.

Discussion of Findings

As we can see in the graphical representation of both the cities that most of the children are lying in the underweight category which may be due to physical and psychological causes such as:

- **Genetics:** If child's mother and father are skinny, it is likely that child's genetics play a role in their thinness.
- **Stress and Depression:** In Indian educational system more stress is given to the academic performance of the child which may cause stress and depression to a child and this may lead them to fall in underweight category.
- **Digestive Problems and other Diseases:** Due to deficiency of digestive enzymes and presence of intestinal worms, also there are several more diseases like Diabetics, Hyperthyroid due to which a child may suffer weight-loss.
- **Eating Disorder:** In present scenario children are not taking healthy and nutritious diet which is major cause of underweight.
- Parental Ignorance, Cultural Influence, Socio-economic status, Lack of Physical Exercises also leads to underweight in children.

Conclusion

Most of the Children's of both the cities i.e. Pithampur and Indore of Madhya Pradesh found Underweight.

Recommendation

1. Similar study can be conducted on large group of sample
2. Comparative study can be conducted in other cities also.
3. Similar study can be done on male and female separately.

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