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Survey of Blood Pressure and BMI to Promote Social Health

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Abstract

In today's stressful, competitive, mechanized age, stress levels have increased. Therefore, the prevalence of high blood pressure is increasing in the young generation. If high blood pressure is not brought under control in time, such individuals may later develop heart disease or other side effects. The heart is a hollow organ made of muscles. Blood circulates throughout the body due to its rhythmic movement of contraction and expansion. The pressure exerted on the blood vessels as the blood flows through the body. The pressure at which blood circulates through the blood vessels throughout the body is called blood pressure. Also BMI stands for Body Mass Index a very important thing, a healthy body and a controlled weight is not the only thing related to BMI index. Age and gender also affect BMI, or Body Mass Index. Body height and weight ratio is BMI. BMI allows you to know whether your body weight is appropriate for your height or not. But, this also has some limitations. The amount of fat in your body cannot be obtained through BMI.

Keywords: Blood Pressure, BMI, Promote Social Health

Introduction

Blood pressure is the specific pressure required for all organs to get the blood supply they need. Rhythmic movement of the heart, elasticity of blood vessels, blood volume, heart rate and body effects are responsible for its formation. When the heart contracts, blood is forcefully pushed into the arteries. Its pressure is higher at the interstitial level of blood vessels, that pressure is called 'systolic blood pressure'. When the heart returns to a relaxed state, the intra-vascular pressure decreases. It is called 'diastolic blood pressure'. Both types of blood pressure can be measured with the help of a device called 'sphygmomanometer'. By the age of 50, systolic blood pressure should be 110 to 140 and diastolic blood pressure should be less than 90. If the systolic blood pressure is above 140 or the diastolic blood pressure is above 90, such persons should be considered to have high blood pressure or hypertension. If the blood pressure is high at some point, he does not need to start medication immediately. But such persons should have their blood pressure measured regularly. If all the measurements are high, they should start tests and medication as per the advice of a cardiologist. If a person's BMI index based on height and weight falls below 18.5, he is considered below normal. If your BMI level is between 18.5 to 24.9 then it is suitable. But if the BMI level is 25 or more, it is cause for concern. Such persons are afraid of heart disease, stroke, diabetes. A BMI greater than 30 is associated with obesity. You can get all related diseases. BMI is one of the most widely used health indicators due to readily available online BMI tools and easy methodology. The effectiveness of BMI in assessing levels of obesity makes this method easy and affordable to determine a person's level of health. As a research tool, BMI helps categorize individuals by age, gender, demographics, and location into basic categories based on fat mass. In today's stressful, competitive, mechanized age, stress levels have increased. Therefore, the prevalence of high blood pressure is increasing in the young generation. If high blood pressure is not brought under control in time, such individuals may develop heart disease or other side effects later on. BMI is one of the most widely used health indicators due to readily available online BMI tools and easy method. The effectiveness of BMI in assessing levels of obesity makes this method easy and affordable to determine a

person's level of health. As a research tool, BMI helps categorize individuals by age, gender, demographics, and location into basic categories based on fat mass.

Objectives

- 1) Keeping blood pressure under control can prevent the risk of possible heart disease
- 2) The importance of blood pressure and body mass index is understood in the society
- 3) BMI gives an idea of whether body weight is appropriate for height or not
- 4) Realizing that blood pressure is a silent killer as it is not known without fever
- 5) Perception of obesity by BMI

Methodology

Survey method

Initially training was done on blood pressure (Systolic and Diastolic) and BMI under the guidance of science teacher, then from July 2022 actually went to the village every Saturday and Sunday and recorded the blood pressure, height and weight of a total of 110 people with the help of digital sphygmomanometer, digital weighing fork and tape. After coming to school, we classified blood pressure from survey records as Prehypertension, High B.P. stage (I), High B.P. Stage (II) was done in these three parts and by using the online BMI tool from the record of weight and height, the BMI of each person was taken and classified into three parts of Normal, Overweight and Underweight and classified into various samples according to the following criteria.

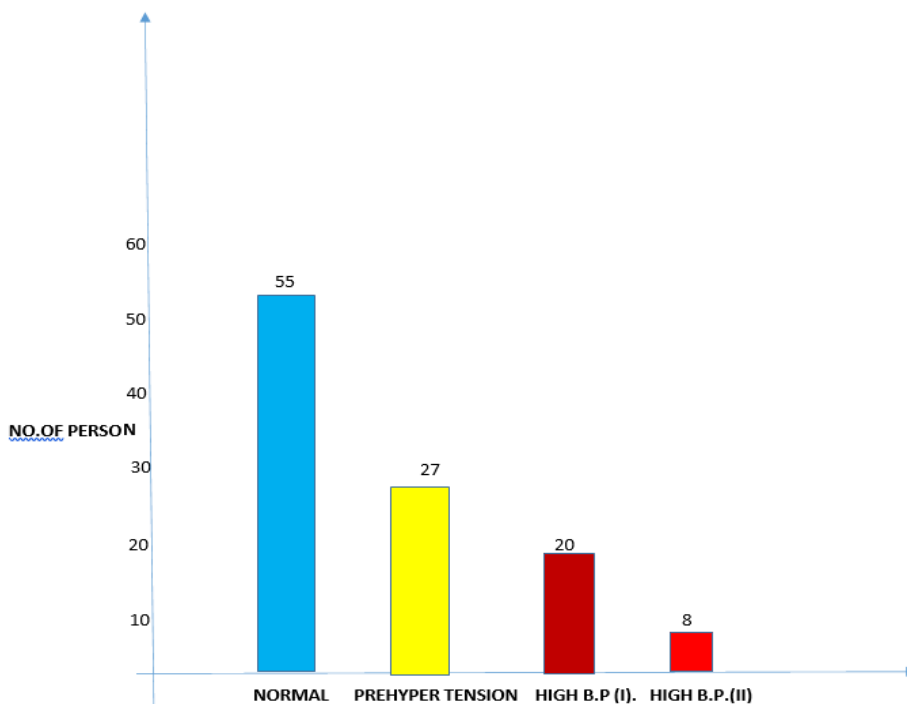
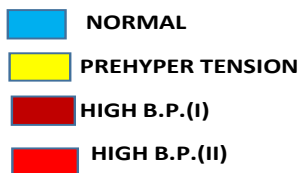
High blood pressure classification chart

Blood Pressure Categories	SBI mmHg	DBP mmHg
Normal	120	80
Prehypertension	120 त्त 139	80 त्त 89
High B.P. (Stage I)	140 त्त 159	90 त्त 99
High B.P.(StageII)	≥ 160	≥ 100

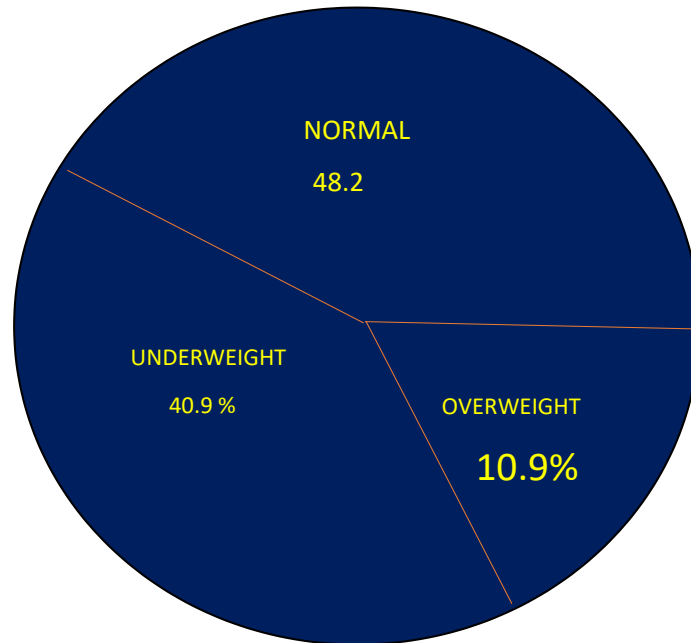
BMI classification chart

Classification Of BMI	BMI
Normal	18.5 त्त 24.9
Underweight	<18.5
Overweight	≥25

Blood Pressure Category



Body Mass Index Category



Application

At the end of the survey, it was noticed that 50 percent of the people had blood pressure and obesity problems and felt it was dangerous in terms of health, so we went to the community and created awareness about the symptoms and solutions of these problems like when one's BP increases, he has severe headache, chest pain, shortness of breath, confusion and Many problems such as red rash appear on the skin. Exercise and diet are two important factors that need to be addressed in controlling blood pressure as well as reducing obesity. For this, we went to the people of the village and created public awareness, guided them and told them the importance of balanced diet and exercise. To reduce obesity, it is necessary to have a balanced amount of carbohydrates, proteins and fluids in your diet to maintain proper water levels in your body. Along with this, if we plan our diet properly, we do not have to worry about gaining weight. The villagers were convinced of this and those who had high blood pressure were asked to seek medical advice. Along with sour fruits, people suffering from high blood pressure should eat citrus fruits. Along with grapes, oranges, lemons, citrus fruits have the ability to lower blood pressure. As all these fruits are rich in vitamins and minerals, they reduce the risk factors of heart diseases like high blood pressure. Helps keep the heart healthy by reducing Regular Exercise: Exercise for at least 45 minutes every day. Exercises such as walking, running, swimming, cycling etc. can be done. Do weight training at least twice a week. Even if regular exercise does not lead to weight loss, it is important to remember that it is beneficial in controlling high blood pressure.

Observation and Analysis

After the completion of the survey, it was found that 50 percent of the people had high blood pressure and obesity, out of 110, 27 people had pre-hypertension, 20 people had stage I hypertension and 8 people had stage II hypertension. The BMI of the villagers was found to be abnormal but after public awareness it was seen that the said villagers

started making efforts to reduce blood pressure and obesity by changing their lifestyle.

Hypothesis Verification

- 1) The importance of blood pressure and body mass index has been realized in the society
- 2) BMI gives an idea of whether body weight is appropriate for height or not
- 3) Blood pressure is not detected without fever and hence it is realized that it is a silent killer

Obesity is perceived by BMI

Acknowledgment

We have been selected the topic after full consideration and pondering over the same and realizing its need in the present day. this has been selected with a view that it might be of same use to my other fellow friends who are working in this field.

This project has been completed with help of students, Youth, villagers and household women. We are also thankful to Management of Institute and Hon.Principal Shri Mapari V.V.

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