Analysis of BMI of Females Age 30 to 35 Years from Maharashtriya Mandal Campus Pune City

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ABSTRACT

This research paper aims to analyze the Body Mass Index (BMI) of females aged 30 to 35 years from the Maharashtriya Mandal campus in Pune City. The study investigates the prevalence of obesity and underweight among this specific age group and examines potential factors influencing BMI in this population. A cross-sectional study design was employed, and data were collected using standardized techniques. The findings highlight the importance of addressing BMI-related issues and promoting healthy lifestyles among females in this demographic.

In this study 96 women's from MM campus were selected randomly. BMI was calculated using the standard norms for this study. females were categorized as 'Underweight', 'Normal', 'overweight', and 'obese' on the basis of their BMI. Nominal data in the form of remark was analysed and frequency was counted. It is found that 4 (4.16%) women's out of 96 were underweight, 50(52%) out of 96 were Normal, 26 (27.08%) out of 96 were found overweight and 16 (16.76%) were found obese. The frequency of underweight, overweight and obese is less. 50% of females were found normal. It is concluded that females look after their Body composition

Keywords : BMI, Underweight, Overweight Obese, Norms

Introduction

The prevalence of overweight and obesity has become a global health concern, impacting both developed and developing countries. Understanding the BMI trends among specific age groups is crucial for designing targeted interventions. This research

focuses on females aged 30 to 35 years from the Maharashtriya Mandal campus in Pune City and aims to provide insights into their BMI distribution and associated factors.

The World Health organization defined Health as not merely an absence of illness ordeformity but a positive state of wellbeing physically, mentally, and socially. Many of ourailments affect one of these three aspects of health: obesity affects our health. The incidenceof obesity is rising. Obesity is a result of genetic and environmental factors. Little can be done for our genetic predisposition to obesity. The leaves with our lifestyle as the major area which needs to look into our lifestyle includes our diet, rest, and inactivity, thinking and our action exercise. The sudden boom in obesity is mostly attributed to technological advances that have left us more sedentary. We drive rather than walk, or cycle; we spend a lot of time sitting in front of computers; we have an abundance of junk food. Women particularly spenda lot of time in the kitchen talking with friends in groups, watching TV series, and eating fatty food, snacks like pizza, burger. The daily routine of women is quite busy that makes them physically inactive and susceptible to obesity. Also lack of physical activity, consumption of junk food, competition, pollution, and environmental changes are some of the salient features of today's lifestyle. Life lifestyle in itself is a threat to health. Obesity is one of the major consequences which in itself is a disease and the root cause of various other life threatening disorders. The potential benefits of regular physical activity in reducing obesity are well documented. Regular exercise expends calories that can result in reduced fatstorage in the body's fat cell. At the same time, exercise designed to build muscles increases lean body tissue (muscle), which can result in a lesser relative percentage of fat in the body and higher resting metabolism.

Physical activity has great potential for reducing the incidence of obesity in our society. Women are genetically predetermined to have a greater amount of body fat than men. Women need more body fat in order to maintain the normal reproductive processes of menstruation and pregnancy many different types of aerobic exercises are in use today. The most effectives ones are running, swimming, Bicycling and walking. Aerobic activity is a popular form of exercise that will help to improve your body's flexibility, muscular strength and cardiovascular strength. The more you train using aerobics exercise the better your body's metabolism will be able to use oxygen to generate energy. Presently obesity is a serious health problem throughout the world, in advanced countries like U.S.A, Japan, European countries and even in developed countries like India. In today's affluent society, inactivity and a sedentary mechanical way of life has greatly enhanced the prevalence of obesity, adversely affecting the body composition of human beings.

Methodology

A cross-sectional study design was adopted for this research. Data was collected during a specific time period using standardized techniques to ensure accuracy and consistency.

The perfect and correct research method decides the accuracy in results and quality of research findings. In this study the descriptive method was used. This method is a fact – finding study that involves truthful and satisfactory interpretation of findings as it is widely accepted. As this study is concerned with analysing the BMI of women's age 30-35 years of Maharashtriya Mandal campus Pune. So it is a descriptive research study. The descriptive research methods are non-experimental because they deal with the relationship among non-manipulated variables. The Normative Survey Approach and evaluation technique has been used under Descriptive Method. The survey enables the researcher in formulation of generalization because it is appropriate to this study. This method is less time consuming and supports quantitative analysis so is preferred for study. The population was the female aged 30-35 years from Maharashtriya Mandal campus Gultekadi, Pune. For this study Convenient Sampling Method was used to select the samples from theavailable population. Total number of Samples was 96 Females.

Anthropometric measurements, including height and weight, were collected from each participant. Height was measured using a stadiometer, and weight was measured using a calibrated weighing scale. The collected data were used to calculate BMI using the formula:

BMI = weight (kg) / height (m^2).

Data analysis

Descriptive statistics were used to summarize the BMI distribution among females aged 30 to 35 years. The prevalence of underweight, normal weight, overweight, and obesity was calculated using established BMI cut-off points. Additionally, potential factors influencing BMI, such as dietary habits, physical activity levels, and socio-economic status, were analyzed using appropriate statistical tests.

Summary of Frequency of weight category with respect to BMI of femalesage 30-35 years

Category	frequency	percentage
Underweight	4	4.16%
Normal	50	52%
Overweight	26	27.08%
Obese	16	16.76%
Total	96	100%

As per category given to females for their BMI and frequency counted; it is found that out of 96 females of age 30-35 years from Maharashtriya Mandal campus Pune city, 4 (4.16%) females were found underweight, 50 (52%) were found Normal, while 26 (27.08%) females were found Overweight, and 16 (16.76%) were found obese.

Descriptive analysis of BMI of female's age 30-35 yearsfrom Maharashtriya Mandal campus

Stat tech	BMI(kg/m2)
Mean	24.5
Median	24.38
Mode	32.31
Std Dev	4.64
Minimum	16.43
Maximum	36.82

Interpretation

From the above table, it interpreted that the average BMI of Maharashtriya Mandal's women's is 25.40. It is found that women are overweight. Median is 24.38 it means 50% of women are below 24.38 and rest 50% women are above 24.38. The mode of distribution is 32.31 it means that the frequent BMI score is 32.31 in the distribution. The standard deviation of the group is 4.64 that mean BMI score is deviated by 4.64 from the mean. Minimum BMI score is 16.43 while 36.82 is maximum.

Conclusion

In the present research Frequency of weight category with respect to BMI of female age 30-35 years. It is concluded that 50 women's out of 96 are normal, which indicates these females are living health conscious and are aware of fitness and wellness. 4 women's out of 96 are found underweight they may be at greater risk of certain health conditions, including malnutrition, osteoporosis, decreased muscle strength, hypothermia and lowered immunity. They are more likely to die at a younger age. Underweight women have less chance of becoming pregnant than women who are a healthy weight. While 26 women's are overweight, which indicates that they are at the border line of various health diseases? These women's are prone to serious health consequences such as cardiovascular disease (mainly heart disease and stroke), type 2 diabetes, and musculoskeletal disorders like osteoarthritis. These conditions cause premature death and substantial disability. 16 women's out of 96 are categorized as obese, which means they have crossed the border line. obesity causes or is closely linked with a large number of health conditions, including heart disease, stroke, diabetes, high blood pressure, unhealthy cholesterol, asthma, sleep apnea, gallstones, kidney stones, infertility, and as many as 11 types of cancers, including leukemia, breast, and colon cancer. Hence it is concluded that greater or lower the BMI higher risk of health related diseases.

Discussion

The primary objective of the study was to analyze BMI among women in Maharashtriya Mandal campus Pune. The study found that higher proportion of women's has normal BMI 16.76% are found obese, the problem is noticeable higher among affluent household than poor families. This generally contrasts with the findings of other studies conducted on the similar topic in western and African countries where poor households are found to be more overweight and obese than affluent (Ziraba AK, Fotso JC, Ochako R.2009) Nevertheless, a number of studies conducted in developing countries, especially in Asia,supports the finding of this study, the affluent are more overweight or obese than the poor (Ramachandran A et al. 2004). The multinomial analysis found that women age 35 years and above are 5 times more likely to be overweight and 12 times more to be obese than women of 20-25 years .This is all due to decline of physical activity along with metabolic rate. (Sinha R, Kapoor AK 2010)

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