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COMBATTING OBESITY: A VITAL APPROACH TO ENHANCE HEALTH AND PERFORMANCE

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ABSTRACT

The condition of obesity has a negative impact on both general health and physical performance. There exists a correlation between an excessive accumulation of body fat and several diseases, such as type 2 diabetes mellitus, hypertension, hyperlipidemia, cardiovascular diseases, and specific types of malignancies. These conditions contribute to an elevated risk of morbidity and mortality. When the body mass index (BMI) is equal to or more than 30Kg, the mortality rate rises by 50% to 100%. A significant number of women in their thirties experience abdominal obesity or an imbalance in the hip-to-waist ratio. It seems to function as a platform for a range of clinical health issues, as well as an increased likelihood of severe sickness. It presents additional mechanical constraints that restrict the execution of routine tasks. As individuals grow older, they may experience a decline in their capacity to control energy consumption in response to physiological signals, resulting in excessive eating and weight gain. Obesity can be attributed to two primary factors: the consumption of high calorie meals with low nutrient density and the adoption of a sedentary lifestyle. Various techniques are employed to ascertain an individual's optimal body weight; but, in several instances, particularly for athletes, the ideal body weight may be unattainable. Therefore, prioritizing a healthy body weight is more advantageous than striving for an ideal body weight. The concept of healthy body weight varies among individuals, regardless of whether they are athletes or non-athletes, and is contingent upon their general health profile. Implementing measures to prevent weight gain is likely to reduce the prevalence of chronic diseases, enhance quality of life, and lower healthcare expenses. Weight management is a necessary practice for individuals, which involves incorporating regular physical exercise into their daily routine and a balanced diet.

KEYWORDS : *obesity, BMI, weight, healthy body weight, over weight.*

INTRODUCTION :

Obesity is a prominent health issue that has a substantial impact on the overall well-being and physical capacities of persons. Excessive adiposity heightens the susceptibility to ailments such as type 2 diabetes, hypertension, cardiovascular diseases, and specific forms of cancer, hence elevating rates of illness and death. As individuals progress in age, they frequently encounter obstacles such as abdominal obesity or imbalanced hip and waist ratios, which can give rise to a range of health complications and constraints in their everyday activities. Elderly persons may also encounter difficulties in efficiently managing their energy consumption, resulting in excessive eating and weight gain. Obesity is caused by a combination of factors, such as excessive intake of calories, insufficient nutrient density, and a lack of physical activity. The prevention and management of obesity are of utmost importance, as they can help

reduce the impact of chronic diseases, improve overall quality of life, and decrease the strain on healthcare systems. This study delves into the complexities of obesity, its effects on both health and performance, and the significance of proactive weight management approaches that are customized to meet individual requirements (Ruze et.al., 2023; Lin and Li, 2021).

The issue of obesity is a significant health concern that has a profound impact on the general well-being and physical capacities of persons. The excessive accumulation of body fat not only presents a substantial danger for a range of diseases but also reduces an individual's ability to perform optimally in daily activities. The presence of obesity is linked to an increased susceptibility to several health disorders, including type 2 diabetes mellitus, hypertension, cardiovascular illnesses, and specific forms of cancer. This association has a substantial impact on the rates of illness and death. Existing research suggests that there is a significant increase in death rates, ranging from 50% to 100%, when individuals achieve a Body Mass Index (BMI) that is equal to or above 30 kg/m^2 (Hruby and Hu, 2015).

As people reach their 30s and older, they frequently face difficulties such as abdominal obesity or imbalanced hip and waist ratios, which worsen health risks. The presence of abdominal adiposity acts as a prelude to a wide range of clinical health problems, which are further exacerbated by restrictions in physical functioning during everyday activities. Elderly persons may also encounter a deterioration in their capacity to efficiently control energy consumption, resulting in excessive eating and eventual weight gain (Ahmed et.al., 2016).

The etiology of obesity is complex, involving dietary patterns characterized by excessive calorie intake with limited nutrient density and sedentary behaviors without consistent physical exercise. The implementation of prevention and management techniques is crucial in addressing the issue of obesity. By engaging in regular physical activity and making conscious eating decisions, individuals can effectively prevent weight gain, thereby reducing the risk of developing chronic diseases, improving their overall quality of life, and alleviating the strain on healthcare systems (Smith et.al., 2020).

In the context of India, the prevalence of obesity has escalated to epidemic levels, impacting approximately 5% of the populace. India and other emerging countries have significant health challenges due to obesity and overweight. Maintaining a healthy body weight within the normal range of BMI is essential, since excessive weight is a major contributing factor to numerous disorders (Venkatrao et.al., 2020).

Obesity is an escalating worldwide problem, especially among women, since just 34% of individuals in the United States were classified as obese in 2008. Under-nutrition continues to be a significant nutrition concern in India, as evidenced by the classification of 12% of women as overweight and 2% as obese. 37% of women in Andhra Pradesh were classified as overweight or obese. Obesity is a major contributor to infertility, as it leads to hormonal abnormalities that result in infertility. Overproduction of adipose cells results in an overabundance of estrogen, which can give rise to polycystic ovarian syndrome (PCOS). According to the 2007 National Family Health Survey, the prevalence of obesity among Indian women is 16%, placing them 15th worldwide, and 18.1% in Maharashtra (Luhar et.al., 2020).

Obesity can arise from a multitude of variables, encompassing dietary patterns, genetic predisposition, insufficient physical activity, and medical irregularities. Consuming a diet that is rich in fat, salt, and sugar, together with fast food and excessive serving sizes, can result in an increase in body weight. The influence of genetics on obesity is noteworthy, since those exhibiting slower metabolic rates or insulin insensitivity may face an elevated susceptibility to this condition. The absence of physical activity, particularly in sedentary lives and high-pressure work environments, can also be a contributing factor to the development of obesity. In addition to adhering to regular dietary and exercise regimens, medical problems can also lead to abrupt weight gain. There are two distinct classifications of obesity: Android type, which has a higher prevalence among men and tends to manifest after menopause, and Gynoid type, characterized by greater resistance to weight loss but a lower likelihood of disease development.

METHODOLOGY

A cohort of 1000 female respondents aged between 30 to 60 years was selected from the urban setting of Madhya Pradesh, India. Informed consent from the respondent was taken prior to the study. Random sampling method was employed to select the sample for the study. Height was measured with the help of stadiometer and recorded in centimeters. Weight of the subjects were measured by digital weighing machine and recorded in kilogram. Body mass index was calculated with the help of formula (Weight (Kg) / Height (m)^2) and recorded in kg. A structured questionnaire was meticulously crafted to gather pertinent information regarding health-related risk factors prevalent among overweight and obese women. Ethical guidelines and principles were strictly adhered to throughout the study. Informed consent was obtained from all participants prior to their involvement in the research. Confidentiality and anonymity of the participants were ensured, and data were handled with utmost sensitivity and discretion.

DATA ANALYSIS

Data obtained from the BMI calculations and questionnaire responses were subjected to rigorous analysis. Descriptive statistics such as means, standard deviations, frequencies, and percentages were computed to summarize the data. Additionally, inferential statistical techniques may be employed to elucidate correlations and associations between variables of interest.

RESULTS

Table1: Showing the prevalence of obesity in women with respect to age.

Age Range N-1000	**Under weight (BMI < 18 Kg)**	**Normal weight BMI (18.5kg to 24.5Kg)**	**Overweight BMI (25 to 29.5 Kg)**	**Obese (BMI≥ 30 Kg.)**
	N (%)	N (%)	N (%)	N (%)
30yrs -40yrs (400 sample)	110 (28%)	040 (10%)	170 (43%)	080 (20%)
40yrs -50yrs (400 sample)	080 (20%)	060 (15%)	160 (40%)	100 (25%)
50yrs -60yrs (200 sample)	000 (0%)	050 (25%)	080 (40%)	070 (35%)
Total	190 (19%)	150 (15%)	410 (41%)	250 (25%)

Table 1 depicts prevalence statistics of obesity based on sum total of body mass index (kg) score, as function of age. Results indicate that out of 400 subjects in 30 to 40 years group 110 (28%) were under weight, 40 (10%) were normal, 170 (43%) were found to be overweight and 80 (20%) were found to be obese in 30 years to 40 years subjects.

While it was seen for 40 years to 50 years female subjects, out of 400 subjects, 80 (20 %) were under weight, 60 (15%) were normal, 160 (40 %) were overweight and 100 (25 %) were found to be obese. In 50 years to 60 years age group none was found under weight. Out of 200 subjects, 50 (25%) were found normal, 80 (40%) were found over weight, and 70 (35%) were found to be obese in the present study. Out of 1000 subjects, majority of subjects were found to be over weight in the present study (for details see table 1).

Table 2: Showing the prevalence of health-related risk in female.

Health risk	Under weight	Normal weight	Overweight	Obese
Primary risk	80	20	240	150
Secondary risk	-	-	70	100

Table 2 depicts prevalence statistics of health-related risk. Results indicate that out of 1000 subjects in 80 were reported to be under weight, 240 were reported to be overweight and 150 were reported to be obese as primary risk in the study.

Out of 1000 subjects, majority of subjects were reported to be secondary risk as over weight in the present study (for details see table 2).

CONCLUSION

The prevalence of obesity and its associated health-related hazards among female participants across various age groups are elucidated by the data shown in Tables 1 and 2. The findings emphasize the urgent requirement for focused interventions designed to tackle obesity and its associated health implications.

Obesity Prevalence: Table 1 indicates a worrisome pattern of rising obesity prevalence as individuals grow older. Among those aged 30 to 40, a significant percentage were categorized as overweight (43%) and obese (20%). Likewise, throughout the age range of 40 to 50 years, there was a significant prevalence of obesity, as seen by around 25% of the participants falling within this demographic. Within the age category of 50 to 60 years, there were no individuals classified as underweight. However, a substantial percentage of individuals were classified as overweight (40%) and obese (35%). The aforementioned results highlight the widespread prevalence of the obesity epidemic, which impacts individuals throughout their adult lives.

Furthermore, the comprehensive examination across all age cohorts confirms the concerning frequency of excessive weight and obesity, with the majority of individuals belonging to these classifications. This underscores the importance of promptly implementing interventions that are designed to encourage the adoption of healthy weight management habits and mitigate the increasing prevalence of obesity.

Table 2 presents an analysis of the health-related risk variables that are linked to obesity among the individuals included in the study. It is worth noting that a significant percentage of participants were identified as overweight (24%) and obese (15%) as key risk factors. Furthermore, a significant proportion of participants were classified as secondary risk factors as a result of their overweight status. The results of this study highlight the complex and diverse health concerns associated with obesity, which include both direct effects such as metabolic disorders and downstream repercussions such as cardiovascular troubles and musculoskeletal problems.

The consequences of the study's findings have substantial ramifications for both public health policy and clinical practice. Due to the widespread occurrence of obesity throughout various age groups, it is necessary to make focused efforts to adopt comprehensive interventions that target the prevention and management of obesity. This may involve advocating for the adoption of healthy lifestyle practices, including consistent engagement in physical activity, adopting a well-balanced diet, and implementing stress management strategies. Furthermore, it may be advantageous to implement targeted interventions that are customized to certain age cohorts, taking into account the diverse risk profiles and health requirements linked to distinct phases of life.

Moreover, the recognition of primary and secondary health-related risk factors highlights the significance of embracing a comprehensive strategy for managing obesity, which includes timely identification, risk categorization, and customized therapies. The development and implementation of evidence-based initiatives for obesity prevention and control may necessitate interdisciplinary collaborations among healthcare professionals, policymakers, and community stakeholders.

In summary, the results of this study underscore the widespread prevalence of obesity and its correlated health hazards among female participants across various age cohorts. Through comprehending the fundamental elements that contribute to the prevalence of obesity and the subsequent health ramifications, policymakers and healthcare practitioners can strive towards the implementation of efficacious policies aimed at alleviating the weight of obesity and enhancing the overall health outcomes of the population.

REFERENCE:

1. Ahmad N, Adam SI, Nawi AM, Hassan MR, Ghazi HF. Abdominal Obesity Indicators: Waist Circumference or Waist-to-hip Ratio in Malaysian Adults Population. Int J Prev Med. 2016 Jun 8;7:82.
2. Hruby A, Hu FB. The Epidemiology of Obesity: A Big Picture. Pharmacoeconomics. 2015 Jul;33(7):673-89.
3. Lin X, Li H. Obesity: Epidemiology, Pathophysiology, and Therapeutics. Front Endocrinol (Lausanne). 2021 Sep 6;12:706978.
4. Luhar S, Timæus IM, Jones R, Cunningham S, Patel SA, Kinra S, Clarke L, Houben R. Forecasting the prevalence of overweight and obesity in India to 2040. PLoS One. 2020 Feb 24;15(2):e0229438.
5. Ruze R, Liu T, Zou X, Song J, Chen Y, Xu R, Yin X, Xu Q. Obesity and type 2 diabetes mellitus: connections in epidemiology, pathogenesis, and treatments. Front Endocrinol (Lausanne). 2023 Apr 21;14:1161521.
6. Smith JD, Fu E, Kobayashi MA. Prevention and Management of Childhood Obesity and Its Psychological and Health Comorbidities. Annu Rev Clin Psychol. 2020 May 7;16:351-378.
7. Venkatrao M, Nagarathna R, Majumdar V, Patil SS, Rathi S, Nagendra H. Prevalence of Obesity in India and Its Neurological Implications: A Multifactor Analysis of a Nationwide Cross-Sectional Study. Ann Neurosci. 2020 Jul;27(3-4):153-161.