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RESEARCH ARTICLE

The Importance of Physical Activity in Reducing Obesity among Women

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ABSTRACT

This study underscores the critical role of physical activity in mitigating obesity among women, highlighting the numerous benefits of exercise, which are equally significant for women as for men. In recent years, technological advancements have compelled women to adapt to these changes by incorporating new devices both at home and in the workplace. However, prolonged sedentary behavior, particularly sitting in front of computers and engaging in internet browsing, has resulted in a marked decline in physical activity, with detrimental effects on women's health. This inactivity contributes to a variety of physical and health-related issues, including obesity, a global epidemic threatening populations worldwide. Research has established a link between obesity and the onset of various diseases, such as diabetes, cardiovascular conditions, and arteriosclerosis. These health complications are further exacerbated by socio-economic changes, which have significantly altered women's lifestyles. Women are increasingly preoccupied with material concerns, relying on fast food and reducing their physical activity, thereby compromising both their physical and psychological health.

INTRODUCTION

Physical activity has become a cornerstone of modern life, practiced to fulfill daily needs, such as work-related tasks, or engaged in spontaneously for relaxation and recreation. Exercise can also be intentionally pursued for preventive and therapeutic purposes. It is not confined to any particular gender, age group, or physical condition, but serves as a universal tool for achieving personal goals.

However, with rapid advancements across various sectors, global trends indicate a significant reduction in physical activity, as machines have increasingly replaced manual labor. Consequently, human movement has been severely restricted, leading to adverse health consequences. This shift has had a particularly harmful impact on women's health, given their active roles in the family, school, and workplace.

The transformation of women's roles has precipitated notable changes in lifestyle. Women have transitioned from traditional homemakers focused on child-rearing to modern, materially-driven individuals striving to keep pace with societal progress. This transition has resulted in a neglect of vital aspects of their health, including their physical well-being.

Consequently, there has been a noticeable decline in physical activity among women, leading to the rise of chronic health conditions such as heart disease, diabetes, and obesity. Studies suggest that the principal contributors to this trend are reduced physical activity, poor dietary choices, and a lack of awareness regarding the importance of exercise, particularly in Arab societies, where women often underestimate the severe health risks associated with obesity. This paper seeks to highlight the crucial role of physical activity in combating obesity among women.

Problem statement and significance:

Obesity has become a widespread issue in contemporary society, as reflected in numerous studies and research conducted by experts in the field. "Recent studies indicate that the location of fat accumulation in the body is most closely linked to the health risks associated with obesity" (Haza'a ben Mohammed Al-Haza'a, p.4). Obesity is often referred to as "the mother of all diseases" due to its role as a precursor to various chronic conditions, including diabetes, heart disease, and hypertension (Sports Science and Physical Activity, 2014, p.1).

Obesity has emerged as a significant burden for both men and women. It does not solely arise from overeating; research reveals that it is also a consequence of excessive inactivity, laziness, and a lack of physical effort, alongside the consumption of calorie-dense foods (Farouk Abdel Wahab, 1995, p.79). The vital role of physical activity in combating obesity is highlighted by the results of a recent study, which tracked two groups of individuals: one group experienced weight gain over the course of a year, while the other maintained their weight. The findings showed that those who gained weight had lower energy expenditure through physical activity.

Another study investigated the relationship between body composition indicators and daily steps (measured by a pedometer) in a group of 80 women, aged between 50.3 and 60.8 years. The study revealed a strong correlation between physical activity levels and body composition indicators. It found that the body fat percentage was lowest (26.4%) among women who engaged in regular physical activity, increased to 35.1% among those who exercised less, and reached 44.2% among those who were sedentary (Haza'a ben Mohammed Al-Haza'a, 2004, p.22-23).

In May 2004, the World Health Organization (WHO) issued Resolution WHA57.17, the Global Strategy on Diet, Physical Activity, and Health, urging member states to establish national action plans and policies to increase physical activity levels within their populations. Furthermore, in May 2008, the WHO's 61st World Health Assembly passed Resolution WHA61.14 on the prevention and control of noncommunicable diseases, reinforcing the global strategy and action plan for their prevention and management (World Health Organization, 2010, p.10).

Women, as integral members of society, must engage in physical activity and sports due to their positive impacts on physical, psychological, and social health. Regular physical activity helps prevent, treat, or at least reduce the severity of health disorders and diseases that impair mobility and may contribute to premature mortality. Unfortunately, many women overlook the significance of physical activity, resulting in a high prevalence of obesity among them. This can be attributed to several factors, including a lack of health awareness, poor dietary habits, and insufficient physical activity.

After reviewing the scientific evidence on physical activity, obesity, and their interrelationship in terms of women's health, we aim to address this critical and urgent issue by posing the following research question: **What is the significance of physical activity in reducing obesity among women?**

Study importance:

- To underscore the importance of physical activity in a woman’s life for maintaining health and preventing chronic diseases.
- To raise awareness and encourage women to engage in physical activity, recognizing its positive impact on achieving and maintaining an ideal body weight.
- To emphasize the role of physical activity in mitigating obesity among women.
- To promote the culture of female participation in sports, particularly in Arab societies.

Key concepts and terminology of the study:

Physical activity:

"Any behavior undertaken by an individual for work, leisure, treatment, or prevention, whether spontaneous or planned." (Sports Science and Physical Activity, 2014, p.02)

"It refers to any movement of the skeletal muscles that results in the expenditure of energy by the body." (ibid., p.10)

Physical activity is recognized as "the fourth major risk factor for death worldwide (6% of global deaths), following high blood pressure (13%), smoking (9%), and high blood glucose levels (6%). Additionally, 5% of global deaths are attributed to excess weight and obesity." (World Health Organization, 2010, p.10)

Obesity:

"Refers to the excessive accumulation of fat in the body, which increases a person's weight and alters the shape and composition of the body, leading to obesity." (Farouk Abdel Wahab, 1995, p.78)

"Obesity is defined as the excessive accumulation of fat in the body, resulting in an abnormal increase in weight relative to a person's height and age. If an individual's weight exceeds more than 20% of their normal weight due to fat accumulation, they are considered obese." (Hassan Fikri Mansour, 2004, p.5)

Obesity as a chronic disease:

The World Health Organization defines obesity as a condition where the body mass index (BMI) reaches or exceeds 30.

Hossam Fouad describes obesity as: "A chronic disease that persists throughout life, linked to genetic factors. It is a life-threatening condition with significant medical, psychological, social, physical, and economic implications for the individual." (Sports Science and Physical Activity, 2014, p.5)

The difference between obesity and overweight:

Ali Abu Saleh clarifies the distinction between obesity and overweight, which are often used interchangeably. Obesity refers to an increase in body fat percentage. For example, a man's body typically contains about 15% fat, and this may increase to 20%. If the body fat exceeds 20% of total body weight, the individual is classified as obese. Conversely, a woman's body contains 20-25% fat, and if her body fat exceeds 25%, she is considered obese.

Overweight, however, refers to a person's total body weight without considering fat percentage. The ideal weight varies based on height, gender, and overall body structure. (Sports Science and Physical Activity, 2014, p.5)

It is crucial not to confuse "overweight" with "obesity." Obesity refers to an increase in body fat percentage. When body fat exceeds 20% in men and 30% in women, it is classified as obesity. Overweight, on the other hand, refers to body weight above the normal average for individuals of the same age and gender, without accounting for body fat percentage.

Consequently, overweight does not necessarily indicate a high fat percentage; the increase could stem from muscle mass, as observed in athletes. (Basma Al-Ghazzawi, Majdoline Obeidat, 2006, p.728)

Causes of obesity:

A combination of environmental and genetic factors contribute to the development of obesity. These factors include:

- **Dietary causes:** Consuming high-calorie foods in large quantities or engaging in poor eating habits, such as eating while watching television, can lead to weight gain.
- **Lack of physical activity:** A sedentary lifestyle and insufficient exercise are significant contributors to obesity.
- **Genetics.**
- **Psychological and social factors:** Emotional and social factors also play a role in the development of obesity.
- **Certain diseases and medications:** Some health conditions and medications can contribute to obesity. (Ministry of Health, 2005, p.2)

- **Genetics:** Studies have shown that if one parent is obese, the likelihood of the child becoming obese may reach up to 40%. If both parents are obese, the chances of their child becoming obese rise to 80%. However, if both parents are lean, the likelihood of their children becoming obese is only 7%. Several factors related to genetics may be inherited, such as:
    - An increased number of fat cells beyond the normal level.
    - The distribution of fat in specific body areas, such as the abdomen and hips.
    - A reduced ability to burn fat.
    - Changes in certain hormones, such as increased insulin secretion, which promotes fat formation and accumulation.
    - Inherited behaviors, such as overeating, laziness, and reduced physical activity, passed down from parents.
- **Glands:** In rare cases, hormonal imbalances and glandular disorders can contribute to obesity. However, hormonal disorders are responsible for no more than 5% of all obesity cases. Some key hormonal disorders that lead to obesity include:
    - Increased cortisol secretion by the adrenal glands (located above the kidneys), leading to a condition known as "Cushing's Disease." This condition is characterized by fat accumulation in the face, neck, and trunk, while the limbs remain unaffected.
    - Hypothyroidism (underproduction of thyroid hormones) leads to the accumulation of mucous-like substances, water retention under the skin, and reduced fat metabolism.
    - Dysfunction of the pituitary gland (located at the base of the brain), which controls many other endocrine glands. (Hassan Fikri Mansour, 2004, p.9-10)
- **Medications:**
- **Contraceptive pills:** Many oral contraceptives contain estrogen and progesterone, hormones that can contribute to weight gain and the development of obesity. These hormones increase water retention in the body and under the skin, and progesterone can typically stimulate appetite.

- **Antihistamines:** Medications such as Avil and Tavegyl have been found to stimulate the appetite center in the hypothalamus in some individuals, leading to increased food intake and subsequent weight gain. Some weight loss centers even use these medications as appetite stimulants to promote weight gain.

- **Sedatives and antidepressants:** Medications like Tryptazol and Calmbam, which are used to treat psychological disorders, can lead to obesity if used over extended periods. These drugs reduce energy expenditure and fat burning by causing lethargy, laziness, and reduced physical activity. (Hassan Fikri Mansour, 2004, p.11-12)

Measuring obesity:

Sharaf (2000) mentions that energy consumption decreases with age. The basal metabolic rate for women decreases by 4-5% every ten years after the age of 40. By the time a woman reaches 65, her body only needs around 1600 calories per day to maintain her weight. Additionally, menopause reduces the calorie requirement by approximately 100 calories.

Physical activity performance in women of this age group decreases by around 130 calories per day. This results in an excess of approximately 230 calories per day that are not consumed, leading to a weight gain of about one kilogram per month. Both Abu Saleh (1993) and Muhaili (2004) agree that one of the easiest ways to estimate obesity is by using the Body Mass Index (BMI) method, as per the following equation: (Basma Al-Ghazzawi, Majdoline Obeidat, 2006, p.728-729)

BMI = weight (in kilograms) / height (in meters squared)

If the result is:

Less than 20 kg/m^2	Underweight
20-25 kg/m^2	Normal weight
25-30 kg/m^2	Overweight
30-35 kg/m^2	Moderate obesity
35-40 kg/m^2	Severe obesity
40-45 kg/m^2	Very severe obesity
45-50 kg/m^2	Morbid obesity

(Basma Al-Ghazzawi, Majdoline Obeidat, 2006, p.729)

In another classification of BMI, the body weight categories are divided as follows:

Person's Status	**BMI Range**
Normal	18.5 - 24.9
Overweight	25 - 29.9
Obese	30 - 39.9
Morbidly Obese	40 and above

How to get rid of obesity

There are various ways to treat obesity, but it is recommended first to consult a family doctor for necessary examinations to ensure there are no complications from obesity and to discuss the best methods for weight loss. The most effective and optimal approach is to follow a balanced diet that includes all the nutrients the body needs, along with regular physical exercise and the adoption of a healthy lifestyle in the long term. (Ministry of Health, 2005, p.2)

The role of physical activity in reducing weight and combating obesity:

- Increases the utilization of fat in the body as an energy source.
- Reduces the loss of muscle mass.
- Prevents the decline in metabolic rate at rest due to dieting.
- Physical activity leads to better long-term weight loss results when combined with a diet, compared to diet alone. (Haza'a ben Mohammad Al-Haza'a, p.6)
- Leads to an increase in muscle size due to hypertrophy (muscle cell enlargement).
- Increases certain components inside muscle cells, along with enzymes involved in oxygen consumption.
- Boosts energy-producing materials in cells, especially glycogen. (Ayman Al-Husseini, p.109)

Health benefits of regular physical activity

Regular physical activity offers numerous health benefits. Just moderate physical activity, such as walking for at least 30 minutes a day, can provide these benefits. The more intense the activity, the greater the benefits. Regular physical activity:

- Reduces the risk of stroke by 30% to 40% in women.

- Increases the levels of good cholesterol (HDL) in the blood, which helps counteract bad cholesterol that can lead to plaque buildup in arteries, a major cause of heart attacks.
- Reduces the risk of diabetes by 50%.
- Helps prevent or combat risky behaviors.
- Aids in weight management and reduces the risk of obesity by 50% compared to individuals with sedentary lifestyles. (Somaya Jaafar Hamidi Suleiman et al., p.6-7)
- Improves muscular strength.
- Reduces body fat percentage.
- Lowers blood pressure (especially in hypertensive individuals).
- Increases fibrinolysis (the breakdown of fibrin), helping to keep blood flowing smoothly.
- Increases the body's sensitivity to insulin, which helps lower blood sugar levels.
- Increases energy expenditure, aiding in the prevention of obesity.
- Increases bone density, reducing the risk of osteoporosis.
- Reduces anxiety, stress, and depression.
- Enhances glucose tolerance.
- Reduces the effect of catecholamines on the heart, helping to regulate heart rhythm.
- Lowers the risk of colon cancer. (Haza'a ben Mohammad Al-Haza'a, 2004, p.7)

CONCLUSION:

The significance of physical activity in combating obesity among women cannot be overstated. As this study demonstrates, the modern lifestyle, shaped by technological advancements and increasing sedentary behaviors, has contributed to a sharp decline in physical activity, which is a major driver of obesity. Women, in particular, face the challenge of balancing multiple roles in family, work, and society, often at the cost of their own physical well-being. Yet, incorporating regular physical activity into daily routines can bring transformative health benefits. From weight management to reducing the risk of chronic diseases such as heart disease and diabetes, exercise is an accessible and powerful tool for improving both physical and mental health. The evidence shows that women who engage in physical activity experience better body composition, higher energy levels, and a significant reduction in health risks.

To address this pressing issue, it is crucial to raise awareness and encourage cultural shifts that prioritize physical health in women's lives. This includes not only fostering better exercise habits but also promoting healthier dietary choices and creating supportive environments that make physical activity more accessible. By doing so, we can empower women to take charge of their health, reduce the prevalence of obesity, and improve overall quality of life. A proactive approach, focusing on education and support, is key to reversing the trend of rising obesity rates and ensuring that women can lead longer, healthier lives free from the chronic diseases linked to sedentary lifestyles.

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