



The Effect of a proposed Training program on Reducing Excess weight in obese Individuals (aged 40-45) Practicing at Hazna Gym Fitness center in Msila

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Abstract

This study examines the effect of a proposed training program on reducing excess weight in obese individuals aged 40-45 years at "Hadna Gym" in M'sila. The sample consisted of 20 participants with excess weight, selected purposively. An experimental design with pre- and post-assessments was used. The program included 24 sessions, three times a week over two months. The results showed that the program effectively reduced excess weight, with statistically significant improvements in body mass index and body fat percentage between pre- and post-assessments

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1. Introduction:

The phenomenon of decreased physical activity and reduced human movement is one of the most prominent characteristics of the modern era, the age of scientific and technological advancement. Modern devices and tools have become an integral part of human life, leading to a heavy reliance on machines for daily needs, thereby reducing physical exertion. Consequently, humans have become prone to many contemporary diseases associated with inactivity, such as obesity, high blood pressure, heart diseases, knee joint osteoarthritis, and others.

Sports activities hold significant importance in modern societies as they contribute to enhancing physical and mental health, making them an essential element in community policies. However, practicing any sports activity should adhere to specific conditions, including conducting necessary medical examinations, which help avoid numerous errors that might lead to health complications negatively affecting practitioners (Barjam Ridwan, 2014, p. 142).

As a result, weight gain has become a major concern, not only regarding physical health but also on psychological and social levels. Researchers, particularly healthcare experts, agree that obesity is among the most prevalent issues in recent years (Sharabi & Kasemi, 2020, p. 97).

In our era, sports activities have become a fundamental factor in development due to their role in improving individuals' lives. Physical activity has become an urgent necessity as it serves as an effective tool for preparing generations and guiding

them toward a better future (Borouj, 2022, p. 108).

Experts agree that regular physical activities, known as aerobic activities, are the most effective in weight reduction. Activities such as jogging, walking, and running are among the best for reducing fat percentages (Al-Haythami, 2018, p. 121). These activities have become popular among various age groups and genders as they combine entertainment and sports while also having positive effects on reducing obesity and excess weight.

2. Problem Statement:

Laziness and inactivity have become prominent features of our daily lives, as we excessively rely on modern means to perform the simplest tasks with minimal effort. This sedentary lifestyle, coupled with unhealthy and unbalanced diets and overeating, has led to a loss of physical fitness and an increased risk of various diseases, starting with weight gain, obesity, and ultimately morbid obesity. These result in serious health complications, including diabetes, high blood pressure, heart diseases, and cancer. Obesity, as defined by the World Health Organization (WHO), is an increase in body fat percentage beyond the normal limit, measured using the Body Mass Index (BMI). The WHO also indicates that obesity is a chronic and common disease, with overweight and obesity reaching epidemic levels globally. Over a billion people suffer from being overweight, while more than 350 million are obese, with over 2.5 million annual

deaths attributed to these factors (Al-Haythami, 2018, p. 46).

In our society, the elderly are among the most affected by excess weight, whether they were previously active or not. As they age, their mistaken belief that sports are unsuitable for them often leads to hesitancy in engaging in simple physical activities. However, within this group, some individuals maintain positive energy despite their weight issues, choosing to tackle the problem through sports activities in gyms. They strive to lose weight while enjoying the recreational and psychological benefits of such activities, which provide comfort and relaxation.

As specialists in adaptive physical activity, we see the necessity of providing scientifically-based field sports programs for this group, aiming to reduce excess weight using BMI as a key metric for improvement. This need forms the basis of our research idea.

(2.1):General Research Question

Does the proposed training program contribute to reducing excess weight in obese individuals aged 40–45 who practice at Hasna Gym in M'sila?

(2.2):Sub-Questions

1. Are there statistically significant differences between pre- and post-measurements in BMI among practicing obese individuals?
2. Are there statistically significant differences between pre- and post-measurements in fat percentage among practicing obese individuals?

(2.3):Hypotheses

(2.3.1):General Hypothesis

The proposed training program contributes to reducing excess weight in

obese individuals aged 40–45 who practice at Hasna Gym in M'sila.

(2.3.2):Sub-Hypotheses

- a. There are statistically significant differences between pre- and post-measurements in BMI among practicing obese individuals, favoring the post-measurements.
- b. There are statistically significant differences between pre- and post-measurements in fat percentage among practicing obese individuals, favoring the post-measurements.

3. Research Objectives:

- Assessing the contribution of the proposed training program to reducing excess weight.
- Evaluating the impact of the proposed training program on reducing body mass index (BMI) among obese practitioners.
- Investigating the effectiveness of the proposed training program in reducing body fat percentage among obese practitioners.

4. Importance of the Research:

The significance of this research lies in promoting a culture of physical activity and enhancing health awareness among older adults. It focuses on weight loss strategies to achieve better health and encourage regular exercise. This initiative stems from recognizing the severity of obesity, which has become a significant health threat, affecting society as a whole and older adults in particular.

5. Definitions of Study Terminology:

5.1 Training Program:

The training program is a vital part of the sports coach's plan, representing the practical and implementation aspect of the strategy. Without it, the planning process

remains incomplete. The program consists of detailed activities and steps required to achieve the desired goals. It is composed of training units, each with specific requirements and objectives that the coach aims to achieve gradually. This program ensures the fulfillment of all planned goals, contributing to the athlete's improved performance and enhanced physical and psychological well-being (Aaed Fadel Melhem, 2012, p. 42).

5.2 Operational Definition:

A set of organized and sequential practical steps and activities designed to achieve a specific goal within a defined timeframe.

5.3 Excess Weight:

This term refers to a person's body weight exceeding the standard set for a specific population, based on age, gender, and body size. It is important to note that weight gain can result from an increase in fat, muscles, bones, skin, or other body components (Al-Takriti, 1986, p. 325).

5.4 Operational Definition:

Excessive weight gain above the ideal weight due to fat accumulation. It is defined as an increase in BMI between 25 and 29.9 kg/m².

6. Previous and Similar Studies:

6.1 Abdul Qawi Rashid's Study (2013):

Title: The Effectiveness of a Proposed Exercise Program in Reducing Body Fat Percentage and Its Relationship with Certain Functional Variables in Obese Students Aged 12-15 Years.

Objective: This study aimed to design a sports program to reduce fat percentage among middle school students (aged 12-15) with obesity and examine its impact on functional variables such as resting

heart rate, systolic blood pressure, and vital capacity.

Sample: 20 students (11.12% of the original population) from three schools in Al-Abadiyah Municipality.

Methodology: The researcher employed an experimental design with a single group using pre- and post-measurements to evaluate the program's effectiveness.

Results: The program reduced fat percentage by 9.63% in males and 9.84% in females, but the program's duration was insufficient to eliminate obesity completely. No correlation was found between fat percentage and resting heart rate or systolic blood pressure.

Recommendations: Extend the program duration and combine it with a suitable diet for greater effectiveness.

6.2 Ahmed Salama's Study (2018):

Title: The Impact of a Physical Exercise Program on Body Fat Percentage and Some Anthropometric Measurements in Obese Patients.

Objective: This study aimed to investigate the effect of a physical exercise program on body fat percentage and some anthropometric measurements in obese patients.

Sample: 19 men.

Tools: Micro Life device, Rostameter, and Beurer device.

Results: The program improved body composition, basal metabolic rate (BMR), and active metabolic rate (AMR).

6.3 Ahmed Mahmoud's Study (2016):

Title: The Impact of a Training Program on Weight Loss and Some Biological Variables in Individuals Aged 25-30 Years.

Objective: This study examined the impact of a training program on weight loss in former athletes.

Sample: 39 participants.

Tools: Ultrasound device, Beurer device, Rostameter, and a medical scale.

Results: The program improved both biochemical and physical variables.

6.4 Huwaida Al-Sadiq Atallah's Study (2011):

Title: The Impact of a Proposed Aerobic Exercise Program on Weight Loss for Women Aged 35-45 Years.

Objective: This study aimed to evaluate the impact of a proposed aerobic exercise program on variables such as body weight, fat percentage, and body circumference measurements (chest, waist, shoulders, hips, buttocks, and arms).

Sample: 16 women participating in the sports center of the Police Club in Burri, Khartoum.

Methodology: The study adopted an experimental design with pre- and post-measurements for a single experimental group.

Results: The program effectively reduced body weight and fat percentage, with significant statistical differences in post-measurements. Additionally, there were noticeable improvements in chest, waist, shoulder, hip, buttock, and arm circumferences.

7. Commentary on Previous Studies:

Upon reviewing previous studies related to the effects of physical activity on weight gain, obesity, and associated physical and biochemical variables, the following points can be drawn:

-Importance of Physical Activity: All studies emphasized its role in improving

fat distribution, reducing weight, and enhancing individuals' health fitness.

-Methodology: Most studies adopted the experimental approach, utilizing designs such as single-group or two-group (control and experimental) models.

-Sample Size: The majority relied on small, purposefully selected samples.

-Measurement Methods: Field tests were used to evaluate physical variables, while laboratory assessments were employed for biochemical variables.

-Program Design: Studies focused on implementing low-to-moderate intensity training programs aimed at improving health fitness and reducing weight.

-Progressive Intensity: Most research highlighted the importance of gradual intensity increments, particularly for overweight and obese participants.

-Age Diversity: Study samples spanned various age groups, from children and adolescents to middle-aged and elderly individuals.

8. Methodological Procedures:

8.1 Pilot Study:

Before conducting the final research, a pilot study was carried out at the "Hodna Gym" fitness hall in M'sila municipality to provide a solid foundation for the field study. This study involved:

*Selecting the experimental approach as the most suitable for the research topic.

*Identifying appropriate tests and measurements for the field study.

*Ensuring the availability of tools and resources necessary for the study.

*Coordinating with the gym management to secure approval and organize a special program for the research.

8.2 Research Methodology:

The experimental method is one of the most appropriate scientific approaches for determining the causes of studied phenomena and developing solutions (Mohamed Moussa, 1996, p. 18). Since this study aims to analyze the effects of a proposed training program on weight reduction for individuals aged 40–45, the experimental approach was deemed the most suitable.

8.3 Study Population and Sample:

The selection of a study sample is a critical step in research, as it defines the scope and forms the foundation of the study. Given the challenges of conducting a comprehensive study on the entire research population, a small, representative sample was purposefully selected based on the study's objectives and available resources.

The sample comprised 10 individuals from the gym who met the following criteria:

- *Good health condition.
- *Obesity as a prerequisite for achieving research goals.
- *Regular attendance of training sessions.

8.4 Study Fields and Boundaries:

Location: The study was conducted at "Hodna Gym," located in M'sila.

Time Frame:

Phase 1: Pilot study conducted on January 3, 2024.

Phase 2:

Preliminary measurements on January 13, 2024.

Training program implementation: January 14 – March 4, 2024.

Post-measurements: March 7, 2024.

8.5 Study Variables:

-Independent Variable: The proposed training program, which the researcher modifies or manipulates to study its effect.

-Dependent Variable: Excess weight, the element affected by changes in the independent variable.

8.6 Data Collection Tools:

-Tests: Standardized methods for measuring behavior and performance (Mahmoud, 2009, p. 19).

-Body Measurements:

Height: Measured while standing upright on a flat surface, ensuring contact between the feet, buttocks, and back.

-Weight: Measured using a DETECTO scale with minimal clothing for accuracy (Mohamed & Salah, 2009, p. 93).

-Body Circumference: Flexible, non-stretchable measuring tapes were used for upper and lower limb measurements.

-BMI: Calculated as weight in kilograms divided by height in meters squared (BMI).

9. Field Procedures:

9.1 Preliminary Measurements:

Conducted on January 13, 2024, using consistent tools for both pre-and post-measurements.

9.2 Homogeneity of the Study Sample (Independence):

The homogeneity of the study sample was verified using the relative coefficient of variation. The coefficient of variation in the pre-test was 12.80%, while in the post-test it was 13.20%. Both values are below 30%, indicating that the sample is homogeneous in the extraneous factor. The relative coefficient of variation was calculated using the formula:

$$\frac{\text{Standard Deviation}}{\text{Arithmetic Mean}} \times 100$$

9.3 Foundations of the Program:

The program is based on the following principles:

- *Adhering to scientific principles in content preparation.
- *Guiding participants to follow an appropriate dietary regimen.
- *Gradual progression in training load in terms of intensity, volume, repetitions, and density.
- *Setting specific goals for each training unit and stage.
- *Considering individual differences based on participants' abilities and readiness.
- *Utilizing the available resources in the gym.
- *Diversifying exercises while incorporating modern methods.
- *Focusing on recreational aspects and enhancing elements of excitement and competition.

9.4 Stages of Designing the Proposed Program:

A. Initial Program Design:

The training program was developed based on a review of books, references, and studies related to weight loss and

After expert review, the final program was established as follows:

Duration: 8 weeks.

Weekly Training Units: 3 non-consecutive units.

Duration of Each Unit: 60 minutes.

Total Training Units: 24 units.

Total Time: 24 hours distributed over 8 weeks.

C. Implementation Steps of the Program:

The trainer explains the details of the training unit and assesses the impact of the previous load.

The training area is organized before the session begins.

Equipment and tools are prepared as required.

Warm-up exercises are performed thoroughly.

The training unit content is implemented gradually following a scientific sequence. Cool-down and relaxation exercises are conducted.

Participants are encouraged to adhere to the recommended dietary regimen.

10. Statistical Tools and Methods:

*Statistical Package for the Social

The measured part	Unit of measurement	Pre-measurement		Post-measurement		T Calculated	T Tabular	Significance level	Statistical significance
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation				
Body Mass Index (BMI)	Kg/M ²	30.93	3.37	26.99	3.06	2.29	1.812	0.001	signifier

nutrition. The program was designed to last 8 weeks, with 3 non-consecutive weekly sessions, each lasting 60 minutes. The initial version of the program was reviewed by a group of specialized experts.

B. Final Program Design:

Sciences (SPSS).

Source: Prepared by the researchers based on the SPSSv20 program outputs

Table 01 shows that there are statistically significant differences at the 0.001 significance level between the pre-test and post-test measurements of the Body Mass Index (BMI) among the participants, in favor of the post-test measurement. The mean of the pre-test measurement was 30.93 with a standard deviation of

differences between the two measurements.

Table 02: Significance of the differences between pre-test and post-test measurements of waist circumference.

Source: Prepared by the researchers

The measured part	Unit of measurement	Pre-measurement		Post-measurement		T Calculated	T Tabular	Significance level	Statistical significance
Waist circumference	CM	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation				
		99.8	8.84	87.2	4.14	3.69	1.812	0.001	Signifier

*T-test: For single-sample paired pre- and post-measurements.

*Arithmetic mean and standard deviation.

*Pearson correlation coefficient.

11. Study Challenges:

*Difficulty for participants to adapt to testing procedures and tools, especially for first-time users.

*Partial adherence to the dietary recommendations by some participants.

*Irregular attendance of some participants during gym training sessions.

12. Presentation and Analysis of Results, Table 01: Significance of the differences between pre-test and post-test measurements in assessing the Body Mass Index (BMI).

3.37, while the mean of the post-test measurement was 26.99 with a standard deviation of 3.06. Accordingly, the calculated "t" value (Student's t-test) was 2.29, which is greater than the table "t" value (1.812) at 9 degrees of freedom, indicating statistically significant

based on the SPSSv20 program outputs.

It is evident from Table (2) that there are statistically significant differences at a significance level of 0.001 between the pre-test and post-test measurements of waist circumference among the participants, favoring the post-test measurement. The mean of the pre-test measurement was 99.8 with a standard deviation of 8.84, while the mean of the

Table 03: Significance of the differences between pre-test and post-test measurements of hip circumference.

The measured part	Unit of measurement	Pre-measurement		Post-measurement		T Calculated	T Tabular	Significance level	Statistical significance
Hip circumference	CM	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation				
		110.95	6.22	102.31	6.13	2.26	1.812	0.001	Signifier

Source: Prepared by the researchers based on the SPSS v20 program outputs.

post-test measurement was 87.2 with a standard deviation of 4.14. The results also showed that the calculated t-value (Student's t-test) was 3.69, which is greater than the table value of t (1.812) at 9 degrees of freedom, confirming the existence of statistically significant differences between the two measurements.

Table (03) indicates that there are statistically significant differences at a significance level of 0.001 between the pre-test and post-test measurements of hip circumference among the participants, favoring the post-test measurement. The mean of the pre-test measurement was 110.95 with a standard deviation of 6.22, while the mean of the post-test

Table 04: Significance of Differences Between Pre- and Post-Measurements of Thigh Circumference

The measured part	Unit of measurement	Pre-measurement		Post-measurement		T Calculated	T Tabular	Significance level	Statistical significance
Thigh Circumference	CM	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation	2.24	1.812	0.001	Signifier
		64.46	3.35	60.1	3.97				

Source: Prepared by the researchers based on the outputs of the SPSSv20 program

Table (04) shows statistically significant differences at a significance level of 0.001 between the pre- and post-measurements of thigh circumference among practitioners, in favor of the post-measurement. The mean of the pre-measurement was 64.46 with a standard deviation of 3.35, while the mean decreased in the post-

measurement decreased to 60.1 with a standard deviation of 3.97. The results also showed that the calculated t-value (Student's t-test) was 2.24, which is greater than the table value of t (1.812) at 9 degrees of freedom, indicating the existence of statistically significant differences between the two measurements.

The mean of the post-measurement was 60.1 with a standard deviation of 3.97. The results indicated that the calculated "t" value (Student's t-test) was 2.24, which is greater than the tabulated "t" value (1.812) at a degree of freedom of 9, indicating the presence of statistically significant differences between the two measurements

Table 05: The Significance of Differences Between the Pre-Test and Post-Test Measurements of Body Weight

The measured part	Unit of measurement	Pre-measurement		Post-measurement		T Calculated	T Tabular	Significance level	Statistical significance
Body weight	Kg	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation	3.32	1.812	0.001	signifier
		88.93	6.77	87.2	6.16				

Source: Prepared by the researchers based on the outputs of SPSSv2.

Table 05 shows statistically significant differences at the 0.001 significance level between the pre-test and post-test measurements of weight among practitioners, in favor of the post-test measurement. The mean for the pre-test was 88.93 with a standard deviation of 6.77, while the mean for the post-test

decreased to 87.2 with a standard deviation of 6.16. The results also indicated that the calculated t-value (3.32) exceeded the tabulated t-value (1.812) at a degree of freedom of 9, confirming the presence of statistically significant differences between the two measurements.

13. Discussion of Results

13.1 Discussion and Interpretation of the First Hypothesis

Based on the analysis of the results in Table (1), the calculated "t" value for the Body Mass Index (BMI) was 2.29, which is greater than the tabulated "t" value (1.812). Consequently, the null hypothesis (H_0), which states: "There are no statistically significant differences between the pre-test and post-test measurements of BMI among obese individuals," was rejected. Instead, the alternative hypothesis (H_1), which states: "There are statistically significant differences between the pre-test and post-test measurements of BMI, favoring the post-test," was accepted.

The results demonstrated that the proposed training program contributed to reducing weight gain by improving BMI. This improvement is attributed to the program's inclusion of a variety of aerobic exercises that effectively reduced fat, leading to enhanced physical appearance and alleviating self-concept issues associated with negative perceptions of increased weight.

Thus, the first hypothesis, which states: "There are statistically significant differences between the pre-test and post-test measurements of BMI among obese individuals, favoring the post-test," was confirmed.

13.2 Discussion and Interpretation of the Second Hypothesis

Through the analysis of the results in Tables (2, 3, and 4), the calculated "t" values for the circumference measurements of the abdomen, pelvis, and thigh were 3.69, 2.24, and 2.29, respectively. All of these values exceed the tabulated "t" value (1.812). Therefore, the null hypothesis (H_0), which states: "There are no statistically significant differences between the pre-test and post-test measurements of fat percentage among obese individuals," was rejected. The alternative hypothesis (H_1), which states: "There are statistically significant differences between the pre-test and post-test measurements of fat percentage among obese individuals, favoring the post-test," was accepted.

The findings indicate that the proposed training program significantly reduced weight, as evidenced by body measurements. The data showed statistically significant differences between the pre-test and post-test measurements favoring the post-test in the circumference of the abdomen, pelvis, and thigh.

Abdomen circumference: The pre-test mean was 99.8 cm, which decreased to 87.2 cm in the post-test.

Pelvis circumference: The pre-test mean was 110.95 cm, which decreased to 102.31 cm in the post-test.

Thigh circumference: The pre-test mean was 64.46 cm, which decreased to 60.1 cm in the post-test.

These results confirm the effectiveness of the proposed training program in improving body measurements and reducing fat percentage, emphasizing the importance of such programs in addressing excess weight.

13.3 Discussion and Interpretation of the General Hypothesis

Based on the analysis of the results in Table (5), the calculated "t" value for body weight was 3.32, which is higher than the tabulated value of 1.812. Accordingly, the null hypothesis (H_0), which states: "The proposed training program does not contribute to reducing excess weight among obese individuals (40-45 years old) attending the fitness center 'Hodna Gym' in M'sila," was rejected. Instead, the alternative hypothesis (H_1), which states: "The proposed training program contributes to reducing excess weight among obese individuals (40-45 years old) attending the fitness center 'Hodna Gym' in M'sila," was accepted.

The study results showed significant differences in the mean body weight between pre-test (88.93 kg) and post-test (87.2 kg). There were also statistically significant differences in BMI, with a pre-test mean of 30.93 (indicating mild obesity, grade 1) and a post-test mean of 26.99, reflecting weight improvement due to the program.

The pre-test BMI (30.93) indicated mild obesity (grade 1), while the post-test BMI (26.99) demonstrated improvement due to the program, which included structured aerobic exercises and a balanced diet during the application period. According to BMI standards:

Normal weight: 18.5–25

Overweight: 25–30

Mild obesity: 30–35

Moderate obesity: 35–40

Severe obesity: Above 40

The results highlight noticeable improvements attributed to aerobic exercises, which effectively reduced fat and enhanced physical appearance, thereby mitigating psychological issues associated with obesity. These findings align with Hoida Elsadek Atta Allah Mohamed's (2011) study, which demonstrated the effectiveness of training programs in reducing weight and body fat percentage, and Nashwa Jabara Allah's (2008) study on the impact of music-accompanied training programs on weight loss in women.

Based on the above, the general hypothesis, which states: "The proposed training program contributes to reducing excess weight among obese individuals (40-45 years old) attending the fitness center 'Hodna Gym' in M'sila," was confirmed.

14. Conclusions

The study aimed to investigate the impact of a proposed training program on reducing excess weight among obese individuals (40-45 years old) attending the fitness center "Hodna Gym" in M'sila. The program was based on precise training planning, incorporating a systematic distribution of training load components (intensity, volume, and frequency) and utilizing various recovery methods, in addition to a balanced diet aligned with the training sessions applied during the program period. After

conducting pre-test and post-test measurements on the research sample, the following conclusions were reached:

Improved Body Measurements: The proposed training program significantly improved body measurements in areas such as the abdomen, thighs, and hips. This was attributed to the effectiveness of aerobic exercises in reducing excess fat, improving overall appearance, and decreasing the risk of obesity-related diseases.

Statistically Significant Differences: Statistically significant differences were observed between the pre-test and post-test measurements of body weight and BMI, favoring the post-test results.

Hypotheses Confirmation: The training program proved effective in achieving the desired results, supporting the validity of the proposed hypotheses. It contributed to reducing excess weight among the participants at Hodna Gym.

15. Summary

The study aimed to design an effective and standardized training program to address the problem of excess weight. The program was implemented in fitness centers for individuals struggling with overweight issues. It focused on improving general fitness, enhancing metabolic rates, and considering health and psychological aspects. The results showed that the program significantly contributed to reducing excess weight, improving body composition, and enhancing participants' physical activity levels. The study recommends implementing similar programs to combat obesity and raising

awareness about the importance of physical activity.

16. Recommendations and Suggestions

*Adopt the proposed training program in fitness centers due to its effectiveness in reducing excess weight and improving fitness levels among the target group.

*Follow a balanced diet aligned with the training program to achieve optimal weight reduction and overall health improvement.

*Enhance health awareness campaigns through various media to educate individuals about the risks of obesity and the importance of physical activity and healthy eating.

*Encourage daily physical activity, especially walking, as it is a simple and beneficial activity for all age groups.

*Provide a supportive environment in fitness centers and equip trainers with scientifically tailored programs to address different age groups.

*Conduct additional research to study the impact of similar training programs on different age groups or specific medical conditions, such as diabetes or hypertension.

*Foster collaboration between fitness centers, health institutions, and educational organizations to develop integrated programs aimed at combating obesity.

*Implement regular monitoring and evaluation programs to assess the effectiveness of training programs and dietary plans on general health and weight.

*Organize group training sessions to motivate individuals to commit to and continue practicing physical activities.

*Apply the program in similar regions to expand the scope of its positive outcomes.

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