Research Article

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A study to compare perception of weight training as an equally useful and proper exercise modality as compared to walking in obese men

Vikram A. Rajadnya¹*, Abhijeet Vijay Tilak², Chaitra V. Rajadnya³, Rahul Maruti Manjare², Bhalchandra T. Rane², Suhas H. Patil²

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*Correspondence:

Dr. Vikram A. Rajadnya,

E-mail: sportsdocind@rediffmail.com

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ABSTRACT

Background: This study was intended to evaluate perception of the young adult obese men towards weight training as a proper and useful modality as compared to walking.

Methods: The study was a questionnaire based and conducted in a weight management clinic in Maharashtra state, India. Obese men between 18-40 years of age during their first visit were studied for their perception about weight training.

Results: There was no significant difference between the scores with walking and weight training.

Conclusions: Our results clearly indicate that weight training is perceived to be an equally proper and useful modality of exercise as compared with walking amongst obese men.

Keywords: Weight training, Obesity, Walking

INTRODUCTION

The prevalence of chronic non communicable diseases such as diabetes mellitus, obesity, hypertension, ischemic heart disease is high, and the prevalence of premature deaths due to these diseases is also astounding. Obesity is the commonest chronic non communicable disease worldwide. Similar trends are observed in our country as well. With this tremendous rise in obesity prevalence, its understanding as a disease, its complications, and its treatment is evolving rapidly.

Currently, nutritional advice, exercise, psychological counseling, medications and in a few selected cases, surgery are considered as accepted modalities of management.² Amongst these, exercise is considered to be an important aspect in the management of weight in obese patients. The most preferred and accepted type, is

cardiopulmonary exercise, such as walking, cycling, swimming, aerobic dancing. Walking is the most preferred cardiopulmonary exercise amongst the obese.³ The role of weight training in the management of an obese patient is evolving rapidly .Many scientific organizations and scientists worldwide are studying it with great enthusiasm.^{4,5}

Against this background, we decided to study whether weight training is perceived as a useful and proper modality of exercise among obese men.

Aim and objective

The aim of this study was to evaluate perception of weight training as a proper and useful modality of exercise in obese men compared with walking, the most commonly accepted modality of exercise in the obese

¹Department of Pharmacology, Dr. D.Y. Patil Medical College, Kolhapur, Maharashtra, India

²Department of Pharmacology, Dr. D.Y. Patil Medical College, Pimpri, Pune, Maharashtra, India

³Department of Psychology, The New College, Kolhapur, Maharashtra, India

population. This was considered to provide a clinically important and directly applicable outcome.

METHODS

This is a questionnaire based study in obese men at their first visit to a weight loss clinic. Obese men between 18 years to 40 years were selected for this study. They were visiting the weight loss clinic for the first time. The body weight was recorded using a Tanita human body weighing scale with an accuracy of 100 gm. The height was measured to the nearest of 0.5 cm. Body weight was determined in light clothing without shoes to the nearest 0.1 kg on a digital scale.⁶ A BMI of 25 kg/m² was considered as a cutoff for the screening of obesity. This is in accordance with recently developed cutoffs to define obesity in Indian and other Asian men.^{7,8}

The study was approved by local research and ethics committee. A written informed consent was obtained from all the participants. The participants were free to withdraw at any time during the study. The study was conducted in accordance with nation and international regulations, guidelines and recommendations. A total of 30 men were included for the study. Study duration was for 6 months (July 2014 - December 2014).

Inclusion criteria

- 1. Healthy adult men volunteers aged between 18 years to 40 years.
- 2. Only those men who had completed their education till graduation level.
- 3. BMI of 25 kg/m² and above were selected.

Exclusion criteria

- 1. Men more than 40 years of age.
- Men suffering from co morbidities such as diabetes, hypertension, ischemic heart disease, knee arthritis were excluded.
- 3. Doctors.

The questionnaire

A 5 point Likert scale was used, in which a score of 5 indicated most proper exercise and number 1 indicated improper exercise. The details of the questionnaire and a sample questionnaire are presented here. Patients were advised to complete the questionnaire on their own without any interference by our advisers.

The questionnaire was formulated in Marathi, the local language where this study was conducted (Kolhapur city, Maharashtra state, India). In each patient it was confirmed that they understand Marathi language.

The actual questionnaire

With the help of a table provided below please decide and write your preference number indicating how proper, walking and weight training as modalities of exercise are for you.

Table 1: Preference number (Score) indicating how proper, walking and weight training as modalities of exercise.

| Score | Description |
|-------|-----------------------|
| 5 | Most proper exercise |
| 4 | Proper exercise |
| 3 | Less proper exercise |
| 2 | Least proper exercise |
| 1 | Improper exercise |

Please write number against each modality of exercise.

Table 2: Shows how to write the number against each modality of exercise.

| Modality of exercise | Score |
|----------------------|-------|
| Walking | |
| Weight training | |

Patient was supposed to write preference number against each mentioned modality of exercise. The data was analyzed by using Students' 't' test.

RESULTS

Our results indicate that, there is no significant difference between walking and weight training regarding preference amongst the study population.

Table 3: Baseline demographics of the study participants.

| Total number of participants | 30 |
|------------------------------|------------------------|
| Average age | 31.8 years |
| Average BMI | 29.21 kg/m^2 |



Figure 1: Showing the total scores for walking and weight training indicated by the study participants.

Table 4: Table showing mean difference, SD, t values between the exercise modalities.

| | Mean ± SD | df | t-value |
|-----------------|-------------------|----|----------|
| Walking | 4.8 ± 1.017 | 28 | 0.022608 |
| Weight-training | 3.833 ± 1.234 | | |

DISCUSSION

As described earlier, obesity is becoming a major health problem of the 21st century, worldwide, India being no exception. Obesity also is a risk factor for the development of and exacerbation of some other chronic non communicable diseases such as diabetes, knee osteoarthritis.⁹ The prevention and management of obesity is thought to be difficult, both at the population level and individual level. Exercise, being an important modality, both for the prevention and management of obesity is being studied extensively worldwide.

Traditionally, cardiopulmonary exercises such as walking, cycling, and swimming are favored modalities of exercise in the management of the obese patient. Recently an interest in the role of weight training as a modality of exercise in the obese is rising in the scientific circles. This is being studied as a part of a multipronged approach, which includes nutritional advice, counseling and medications.

Weight training offers multiple benefits, including improved self-esteem, preservation of lean body mass, if applied in a scientific way.

We were interested in studying the level of acceptance of weight training as a preferred modality of exercise. This was planned to study in obese men attending the weight loss clinic for the first time. This preference about weight training was compared with that of walking. Walking being the most preferred exercise by the obese men.

Our results clearly indicate that, as compared to walking weight training is perceived to be an equally useful and proper modality of exercise in this study population. Our findings are not in unison with those of Guess Nicola. 10

This preference order amongst obese men is thought to be shaped by print news, electronic media, and internet, discussion with the peers or by advice offered by a health adviser. It will be very interesting to study this aspect in detail.

It would be very interesting to study the correlation between the development of scientific discoveries and recommendations and these reaching the masses where it is intended to be used ultimately.

It is well known that weight training can be offered in various regimens for adult population. The type of weight training was not discussed with any study participant to avoid any bias. Future studies involving a larger sample size would be a logical next step in this direction. Similar studies may also be warranted in obese women, older obese populations, and obese children. We are considering these populations for our next study in a logical extension of this study.

CONCLUSION

Obesity has become a major health issue of the modern developed or developing countries, India being no exception. Principles of the management of the obese are evolving rapidly. Weight training as an effective modality of a multipronged approach is being studied worldwide. Our results clearly indicate that weight training is perceived to be an equally proper and useful modality of exercise as compared with walking amongst obese men.

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