



# AN IMPACT OF LAND AEROBICS AND WATER EXERCISE ON CARDIO VASCULAR ENDURANCE PERFORMANCE AMONG COLLEGE MEN STUDENTS

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## ABSTRACT

*The purpose of the study was to find out the Impact of Land Aerobics and Water Exercise on Cardio Respiratory Endurance Performance among college men Students. To attain the purpose Sixty (N=60) College men students were selected. The subjects were selected equally into three groups of 20 each namely; land aerobics group, water aerobics group and control group. Cardiovascular endurance was selected as dependent variable for this study and it was assessed by Cooper's 12 minutes run/walk test. The training was resisted to 12 weeks and the number of sessions was limited to 3 days per week. The data for pre and post intervention was taken. Independent 't' test showed significant differences (0.05 Level) in Cardiovascular endurance among the groups. Land Aerobics are superior than Water Aerobics in Cardiovascular endurance. The present study demonstrated that differences in Cardiovascular endurance among Land and Water Aerobic and Control group. Land Aerobic Exercise may have potential role of increasing Cardiovascular endurance.*

**KEYWORDS:** *Land Aerobics, water Aerobics Cardiovascular endurance.*

## INTRODUCTION

Sport pertains to any form of competitive physical activity or game that aims to use, maintain or improve physical ability and skills while providing enjoyment to participants and, in some cases, entertainment to spectators.<sup>[2]</sup> Sports can, through casual or organized participation, improve one's physical health. Hundreds of sports exist, from those between single contestants, through to those with hundreds of simultaneous participants, either in teams or competing as individuals.

Training constitutes a basic concept in human resource development. It is concerned with developing a particular skill to a desired standard by instruction and practice. Training is a highly useful tool that can bring an employee into a position where they can do their job correctly, effectively, and conscientiously. Training is the act of increasing the knowledge and skill of an employee for doing a particular job.

All activities which are part of human behavior were subject to a long-term development. Let us take throwing, which is regarded a basic motor activity, as an example. In the deep past, throwing was necessary for feeding and defense. At present,

throwing has lost its importance as one of the above mentioned activities but it is involved in different sports to a great extent (e.g. athletics, handball, baseball, etc.). The task of a prehistoric hunter was to hit the target precisely to get food. The aim of a present-day athlete is to throw the javelin as far as possible. The result of the activity in both examples can be considered a performance. Performance is understood as an extent to which motor task is accomplished. With the prehistoric hunter, performance is evaluated dichotomically: hitting the target or missing and it is not restricted by any rules. In the case of the athlete, performance is evaluated following rules of the sports discipline which were set in advance, it is expressed by the length of the throw and is understood as a sports performance. An ability to achieve a given performance repeatedly is referred to as efficiency.

Sports training is understood as a process of systematic development of each component in dependence on the duration of preparation which leads to achieving maximum efficiency in senior age within the selected sports discipline.

Water fitness activity is an exercise that is performed in the water, which promotes and



enhances physical and mental fitness. Water fitness is among the most popular and widely prescribed fitness activities because it appears to be suitable for different groups: older, injured, and even healthy people (Benelli et al., 2004).

Water exercise programs had an enormous benefit in the improvement of physical fitness and are attributes for each physical fitness components (Barbosa et al., 2009). The density of water is approximately 800 times that of air, this has an important contribution to the energy cost of water exercise (Prampero, 1986).

Land-based fitness programs are those exercises which are performed as indoor and outdoor (on the ground) physical activities. They can refer to physical activities that carried various aerobic and anaerobic exercises. Both aerobic and anaerobic exercises are the most important to any workout and are the basis for a healthy lifestyle (<http://www.fitness>). Developing good conditioning programs based on the specific physiological demands of each sport is considered as a key factor (Balcilunas et al., 2006).

#### AIM OF THE STUDY

The aim of the study was to find out the Impact of Land Aerobics and Water Exercise on Cardio Respiratory Endurance Performance among college men Students.

#### OBJECTIVE OF THE STUDY

To determine the effectiveness of impact of Land Aerobics and Water Exercise on Cardio Respiratory Endurance Performance among college men Students.

#### HYPOTHESIS

There is significant improvement in increasing the level of cardiovascular endurance.

#### VARIABLES OF THE STUDY

##### Independent Variables

- Land Aerobics
- Water Aerobics

##### Dependent Variables

- Cardiovascular endurance

#### STUDY DESIGN

Pre and post-test experimental study, quasi experimental study design.

#### SAMPLE SIZE

Sixty (N=60) College men students, Land Aerobics n=20, Water Aerobics, n=20 & control group, n=20.

#### STUDY DURATION

- 12 weeks

#### TREATMENT DURATION

- 45 mins/day 3 days/week for 12 weeks

#### CRITERIA FOR SAMPLE SELECTION

##### Inclusive Criteria

- College men students age between: 18 to 21
- Gender: Male
- Willingness to participate.
- No serious medical problem.

##### Exclusive criteria

- Gender: Female
- Age below 18
- Not involved in sports and fitness training.
- Sever cardiac problems.

#### STATISTICAL ANALYSIS

The results of the independent 't'-test on the data obtained for Cardio vascular endurance of the subjects in the pre-test and post-test of the experimental groups and control group have been analyzed and presented in Table-1.

**Table 1**  
**Cardio Vascular Endurance in the Land Aerobics group, Water Aerobics group and Control group before and after interventions**

Groups	Before Interventions	After Interventions	Differences	t- value
<b>Cardiovascular Endurance (Scores in Meters)</b>				
<b>Land Aerobics group</b>	<b>2105.00</b>	<b>2535.00</b>	<b>430.00</b>	<b>15.81*</b>
<b>Water Aerobics group</b>	<b>2136.00</b>	<b>2347.00</b>	<b>211.00</b>	<b>6.20*</b>
<b>Control group</b>	<b>2128.50</b>	<b>2096.00</b>	<b>32.50</b>	<b>0.60</b>

\* Significant at 0.05 level.

The table value required for 0.05 level of significance with df 59 is 2.00.

A significant, positive impact on the measured variables was observed. The subjects increased in cardiovascular endurance 430.00 from

base line among Land Aerobics group and 211.00 in Water Aerobics group; however there was no statistical significance in the control group (32.50).

Cardiovascular endurance was altered by the treatments (cardiovascular endurance 't' is 15.81, 6.20).

The mean values of experimental groups and control group on Cardiovascular Endurance was graphically represented in the Fig.1.

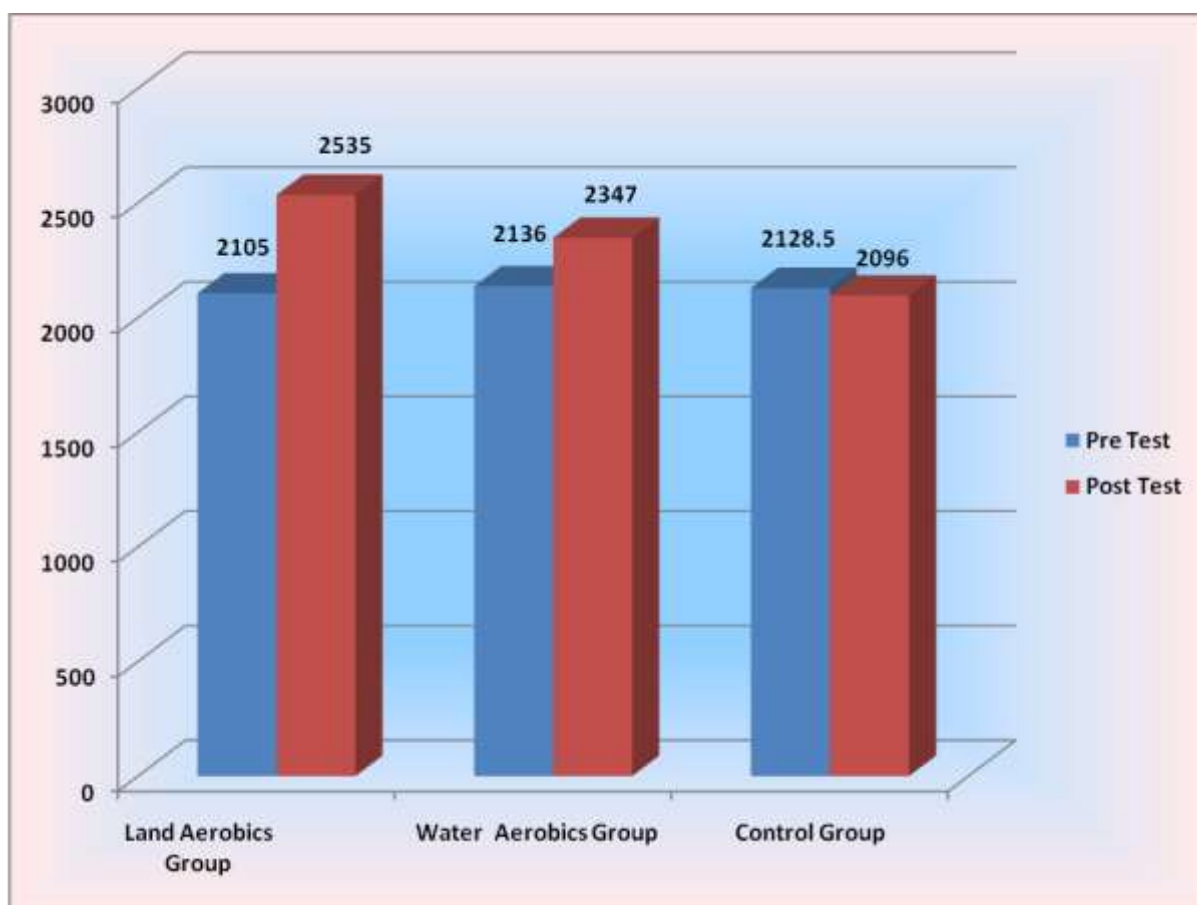


Fig.1 Bar Diagram showing the Pre and Post test mean values of Treatment groups and Control group on Cardiovascular Endurance

## CONCLUSIONS

The present study reveals that the 12 weeks of land aerobics and water aerobics shown significant differences among the three groups with respect to cardiovascular endurance. Finally it is also concluded that the subjects land aerobics has shown greater improvement comparable to the subject shallow water aerobics and control group regard to cardiovascular endurance.

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