

Effect of Aqua and Ground Exercise of Physiological Variables of 12 to 14 years students

Dr. P.K. Lohote

Director of Physical Education & Sports, Mahatma Phule Mahavidyalya, Pimpri, Pune-17

Abstract

The study was an experimental research one group pretest post test Experimental research. The students of Jai Hind High school, Pimpri, Pune- 17 from age 12 to 14 years will be considered as the total population of the study. The sample of the study was selected using a convenience sampling method. The total sample is 20 students were selected for this study. For data collection the tools used was the study Breath Holding Capacity, Vital Capacity, Resting Heart Rate, Respiratory Rate, Blood Pressure. For this study Breath Holding Capacity, Vital Capacity, Resting Heart Rate, Respiratory Rate, and Blood Pressure. are dependent variables and aqua and ground exercise are independent variables. The population for the present study will be Jai Hindi High school, Pimpri, Pune boys age group between 12 to 14 years were selected as subjects. The convenience sample method was used for this study. To achieve the purpose of this present study 20 number of students of Jai Hind High school were selected. For this study, there was one group pre and post Experimental group. We have conducted a 6-week training programme for a selected subject. The pre and post-test data were collected before and after the training period of experimental groups. The Analysis of Paired sample 't' test was used to investigate the effect of Breath-Holding Capacity, Vital Capacity, Respiratory Rate, Blood Pressure. Aqua and ground exercise training programme has a significant impact on movement on Capacity, Vital Capacity, Respiratory Rate, and Blood Pressure. Conclusion: The Aqua and Ground exercise training programme is effective on study Breath Holding Capacity, Vital Capacity, Resting Heart Rate, Respiratory Rate, Blood Pressure.

Keywords: Breath Holding Capacity, Vital Capacity, Resting Heart Rate, Respiratory Rate, Blood Pressure. Aqua and Ground exercise.

Introduction:

The popularity of water exercise and ground exercise is increasing rapidly. Exercise enthusiasts, athletes, the elderly, and physically challenged are exploring aquatic exercise programs that suit their fitness desires. One advantage of aqueous exercise is that it may include breathing holding capacity, significant capacity, resting heart rate, improving students' blood pressure levels.

Aquatic exercises, which use water eagerness, can help increase Heart rate, Respiratory Rate, decrease resting heart rate, Level of Blood presser are thus highly recommended to develop from physiological variables.

In contrast, aquatic exercises with resistance, such as swimming, can partially improve physical strength factors, with endurance. These exercises not only improve the functions of the respiratory system and circulating system, they also help to develop muscle strength, endurance and flexibility, effectively affecting changes in one's body structure. Advanced research, in particular, concerns increased blood pressure and circulatory disorders (other variables related to Salvadori et al. obesity also show that the vascular compliance of obese children, 2008) is also related.

It is important to discuss the heart rate response to the aquatic environment. It has been shown that the heart rate of the reaction in the water depends significantly on the temperature of the water (Avellini, Shapiro, and Pandolf, 1983). Head-out, underwater exercise at 25 &mac251; C (77 °f) has been shown to produce a lower heart reaction than the ground, with certain oxygen consumption. The rise in water temperature to 30-35 &mac251; C (86 °-95 °f) shows little difference from the reaction of the heart rhythm on a terrestrial basis (Craig and Dvrak, 1969).

In addition, the hydrostatic effects of the water cause a change in the volume of blood from the periphery of the body to the thorax (Arborelius, Balldin, Lilja, and Lundgren, 1972). This increases the central pressure, the volume of impact and the cardiac output, which leads to a decrease in the heart rate. This is evidenced in water, which is at the level of the chest. The combined influence of water temperature and hydrostatic pressure explains why, at a given VO₂, the heart rate is shown to be up to 20 beats lower in the water than on land (Mougiios & Deligiannis, 1993).

An physiological adaptation to regular cardiovascular exercise is a reduction in heart rate at rest. However, little research has been conducted to support this reduction after shallow or deep water exercises. Currently, two research projects have seen decreases in resting heart rate after training for shallow water exercises (Hoeger et al., 1992; Simpson and Lemon, 1995) Simpson and lemon were found resting heart rate were reduced by 11 beats in Minute (before = 77.7 ± 2.4 bpm; after = 66.3 ± 1.7 beats per minute) (p 0.01) after completing an 8-week exercise for a water training program. 8-week training of Hoeger and para. Both shallow and ground aerobics lead to similar decreases in resting heart rate (pre-tonal water = 77 ± 9.3 beats per minute, then = 70 ± 7.5 beats per minute, land = 76 ± 10.8 beats per minute, then = 70 ± 7.7 beats per minute). These research projects confirm the idea that sedentary individuals can achieve decreases in resting heart rate, which averages approximately one stroke for each week of study during the initial weeks of training exercises (Wilmore & Costill, 1994). Therefore, the purpose of this study is firstly to examine the effects of aqueous exercise on the breath holding capacity, critical capacity, resting heart, breath-holding capacity, critical capacity, resting heart rate, blood pressure of school students.

Research Method: The present research is an experimental study. For this study pre and post-test was taken to collect the data and then experimental research method was used. The data collected after the 6 weeks training programme. Study Breath

