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EFFECT OF AQUATIC AND NON AQUATIC TRAINING ON SPEED AND AGILITY AMONG MALE VOLLEYBALL PLAYERS

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Abstract

The purpose of the study was to find out the effect of aquatic and non-aquatic training on speed and agility among male volleyball players. To achieve the purpose of the study, sixty male volleyball players from various institutions of SRM University, Kattankulathur, Chennai District, Tamil Nadu, India, were selected as subjects. The age of the subjects ranged from 18 to 25 years. The subjects were divided into three groups of twenty each (n=20). Group I underwent aquatic training, Group II underwent non-aquatic training and Group III acted as Control. The duration of the training five days per week for twelve weeks. Prior to and after the training period the subjects were tested for, speed and agility was measured by 50 meters dash and shuttle run. The statistical tool were used for the present study is ANCOVA and Scheffe's Post-Hoc test. The result of the study was a significant increase on speed and agility after twelve weeks of aquatic and non-aquatic training programme. However the increase was favour of experimental groups. There was a significant difference was occurred between experimental groups and control group after twelve weeks of aquatic and non-aquatic training programme.

Keywords:- Aquatic Training, Non-Aquatic Training, Speed, Agility and Volleyball

INTRODUCTION

Aquatic workouts allow for the creation of unstable circumstances through the use of effects such as turbulence, which provides a wealth of sensory information and, as a result, promotes improvements in body balance reflexes.

Exercises in water are becoming the most popular form of physical fitness. Water is a natural environment where harmony between human nature and exercises can be achieved, an environment in which almost everyone can work hard without pain, and relax at the same time. Almost everybody can benefit from aquatic exercises despite the fact that there is very little research supporting the benefits of exercising in water. This review is an attempt to summarize published research on the subject.

One aquatic exercise technique uses simulated running movements in water deep enough to prevent contact with the bottom ofthe pool, often with participants wearing a floatation belt. This deep-water running (DWR) technique is an effective form of CV conditioning for both injured athletes and individuals who require a low-impact aerobic workout ***(Reilly, et al., 2003).***

Exercises conducted in a non-aquatic setting, on the other hand, are more similar to activities of everyday living since gravity is not cancelled out. There are no studies comparing the effectiveness of muscular endurance training in aquatic and non-aquatic conditions in the literature.

The Human body was created to walk, dance, jump and play. With no physical stimulants, the sensory receptors become starved, subsequently causing the body aches and pains. With proper fitness, one can relive much of this unnecessary pain and unpleasant complications. It is almost impossible to go through an entire day without

being exposed to something that involves physical fitness.

Speed is the distance covered divided by the time it takes to cover that distance. In sports such as swimming or running, the speed is covered in a straight line. However, speed for a football, basketball, netball or water polo player may mean changing direction while moving.

Agility is the ability to move and change the direction and position of the body quickly and effectively while under control. It requires quick reflexes, coordination, balance, speed, and correct response to the changing situation.

STATEMENT OF THE PROBLEM

The purpose of the study was to find out the effect of aquatic and non-aquatic training on speed and agility among male volleyball players

METHODOLOGY

To achieve the purpose of the study, sixty male volleyball players from various institutions of SRM University, Kattankulathur, Chennai District, Tamil Nadu, India, were selected as subjects. The age of the subjects ranged from 18 to 25 years. The subjects were divided into three groups of twenty each (n=20). Group I underwent aquatic training, Group II underwent non-aquatic training and Group III acted as Control. The duration of the training five days per week for twelve weeks. Prior to and after the training period the subjects were tested for, speed and agility was measured by 50 meters dash and shuttle run. The statistical tool were used for the present study is ANCOVA and Scheffe's Post-Hoc test.

ANALYSIS OF DATA

The data collected prior to and after the experimental periods on speed and agility on experimental groups and control group were analyzed and presented in the following table - I.

Table -I

Analysis of covariance on speed and agility for aquatic training, non-aquatic training and control group

Variable Name	Group Name	Aquatic training	Non-Aquatic training	Control group	F ratio
Speed	**Pre-test Mean ± S.D**	7.9140 ± 0.086	7.9173 ± 0.093	7.9207 ± 0.098	0.041
	Post-test Mean ± S.D.	7.6393 ± 0.204	7.7850 ± 0.194	7.9307 ± 0.087	29.201*
	Adj. Post-test Mean ± S.D.	7.7234	7.8301	7.9277	56.278*
Agility	**Pre-test Mean ± S.D**	11.0120 ± 0.126	11.0101 ± 0.130	11.0110 ± 0.136	0.024
	Post-test Mean ± S.D.	10.7747 ± 0.120	10.8760 ± 0.109	10.9713 ± 0.150	24.444*
	Adj. Post-test Mean ± S.D.	10.8262	10.9041	10.9823	55.008*

* Significance at 0.05 level of confidence df 2 and 58 and 2 and 57 is 3.14 and 3.13

Further to determine which of the paired means has a significant improvement, Scheffĕ *S* test

was applied as post-hoc test. The result of the follow-up test is presented in Table - II.

Table - II

Scheffẽ S Test for the Difference Between the Adjusted Post-Test Mean on speed and agility of aquatic training, non-aquatic training and control groups

Adjusted Post-test Mean of Speed				
Aquatic Training Group	**Non-aquatic Training Group**	**Control Group**	**Mean Difference**	**Confidence interval at .05 level**
7.7234	7.8301		0.1067	0.097
7.7234		7.9277	0.2043	0.097
	7.8301	7.9277	0.0976	0.097
Adjusted Post-test Mean of Agility				
10.9282	10.9041		0.0779	0.069
10.9282		10.9823	0.1561	0.069
	10.9041	10.9823	0.782	0.069

* Significant at 0.05 level of confidence.

RESULTS

Table - I showed that the results of the study there was a significant difference between aquatic training, non-aquatic training and control group on speed and agility. Further the results of the study showed that there was a significant increase on speed and agility after twelve weeks of aquatic training and non-aquatic training. However the improvement was in favour of experimental groups. There was a significant difference was occurred between aquatic training, non-aquatic training and control group after eight weeks of specific training programme. Aquatic training programme have better improvement in speed and agility compared with other groups.

CONCLUSIONS

Within the limitations and delimitations of this study the following conclusions were drawn from the result.

1. It was concluded that there was significant improvement in speed and agility among volleyball players due to aquatic training and non-aquatic training.

2. The result of the study reveal that Aquatic training programme have better improvement in speed and agility compared with other groups.

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