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ANALYSIS OF REVERSIBILITY RATE ON SELECTED FITNESS COMPONENTS AMONG SENIOR LEVEL SCHOOL FOOTBALL PLAYERS

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ABSTRACT

The purpose of this study was to find out the analysis of reversibility rate on selected fitness components among senior level school football players. To achieve the purpose of this study 15 football players from MSP Solai Nadar Memorial Higher Secondary School, Dindigul were selected. The subjects were randomly selected among the football players who represented the state level tournaments. The subjects were in the age group of 14 to 16 years. Single group design pre and posttest research design was followed by the investigator. In this study the investigator measured the speed by 50m dash, agility by shuttle run and cardio vascular endurance by 12 minutes copper's Test initially. After reversibility rate of the subjects for six weeks, the subjects were measured again the physical variables through same test. The difference between the initial and final scores was the reversibility of the senior level school football players. The obtained data were subjected to statistical treatment using t-test. Result revealed that there is significant improvement on physical fitness component after reversibility rate among senior level school football players.

KEYWORDS: *Speed, Agility, Cardio Vascular Endurance, Football.*

INTRODUCTION

The term training refers to a planned program of exercises directed towards improving the functional capacity of a particular body system. This improvement does not occur all of a sudden, but requires adherence to carefully planned and executed activities. Attention is focused on factors such as frequency, length of workout, type of training, speed, intensity and repetition and the principles such as overload, specificity and reversibility. Reversibility refers to the cessation of regular physical training. This is otherwise known as detraining. Unlike machines which deteriorate with use, the human body possesses the ability to adapt itself to use and increase the capacity and efficiency of the body system being utilized. Conversely, the principle of disuse dictated that if one is fit and stops training the level of fitness will decline.

REVIEW OF RELATED LITERATURE

Robert Thomas **(2016),** Seventeen male collegiate swimmers were studied before, during, and after 14 days of reduced training (tapering). Maximal arm power was measured using a bio- kinetic swim bench and during a tethered (power) swim test and each swimmer also swam 200 yards (182.9m) at an evenly spaced velocity corresponding to 90% of his best performance of the season. Tapering had no influence on post exercise acid-base balance, but there was a significant increase ($p<.05$) in power output on both the bio-kinetic swim bench and the power swim test. Performance times improved an average of 3.1%. The improvements are in part due to significant gains in muscular power.

Nader Rahnama **(2008),** The purpose of this study was to determine the effect of sprint exercise and a detraining period on lipid peroxidation (malondialdehyde, MDA) and response of antioxidant system (ferric reducing ability of plasma (FRAP), uric acid, bilirubin and total protein). Forty-two male rats were divided randomly into two groups: sprint group (experimental) (N=24) and control group (N=18, without any training programme). The experimental group trained for 12 weeks, 3 times per week, with given intensities. Five trained rats experienced the detraining, so the effects of detraining were also studied (from the 8th to 12th weeks). Data were analysed using a two-way repeated ANOVA. A significant difference between the two groups was observed for MDA (p=0.022), FRAP (p=0.005) and bilirubin (p=0.002) but for total protein and uric acid no significant change occurred. In the experimental group, a significant difference was found through various assessments for MDA (p=0.001), FRAP (p=0.001), bilirubin (p=0.008) and uric acid (p=0.012). It can be concluded that this protocol of sprint exercise training causes adaptation in the antioxidant system and lipid peroxidation, but by detraining these results will be reversed.

HYPOTHESIS

1. The selected fitness components would significantly decreases of reversibility rate among senior football players.

METHODOLOGY

The purpose of this study was to find out the analysis of reversibility rate on selected fitness components among senior level school football players. 15 football players from MSP Solai Nadar Memorial Higher Secondary School, Dindigul were selected as subjects. They were in the age group of 14 to 16 years. Proper orientation about the study, such as purpose of the study and the subjects' role in the study were given in detail to the coaches, physical education teachers and caretakers with a view to get full cooperation and also to motivate them to exhibit their maximum level of performance in the test and to participate actively in the training programme. Before starting the actual training programme, three days were spent to explain and teach the minor games and calisthenics exercise. The following Variables are Speed 50m dash for speed, Shuttle run for Agility and 12m coopers test for cardiovascular endurance were tested. The following statistical procedures were followed to estimate the reversibility rate of players. Since pre-test scores were equated, the final scores of the subjects were reversibility rate on transitional period among senior level school football players. Compared using t-test to find out the differences between treatments.

DATA ANALYSIS

Table 1: t-value on Speed of Reversibility Rate among Senior Level School Football Players

Test	Mean	MD	SD	t-value
Pre	7.74	2.98	0.50	19.053*
Post	10.69			

**Significant at 0.05 level, required table value df (1, 14), 1.73.*

Fig 1: Speed to among Senior Level School Football Players

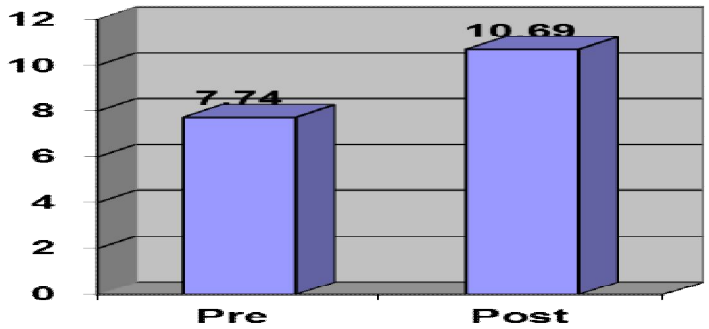


Table-1 shows that the pre-test mean value of speed (7.74) is reversed to 10.69 after six weeks with mean difference of 2.98. The obtained value of 19.053 is greater than the required value of 1.73. Hence, it is proved that there is significant no improvement on reversibility on speedamong senior level school football players.

Table 2: t-value on Agility of Reversibility Rate among Senior Level School Football Players

Test	Mean	MD	SD	t-value
Pre	9.80	1.01	0.41	6.61*
Post	10.80			

**Significant at 0.05 level, required table value df (1, 14), 1.73.*

Fig 2: Agility to Reversibility Rate among Senior Level School Football Players

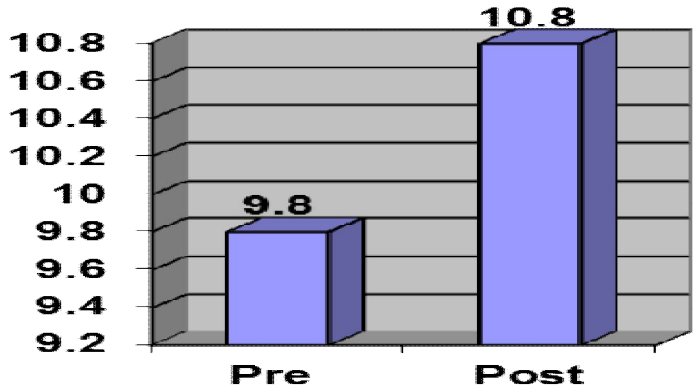


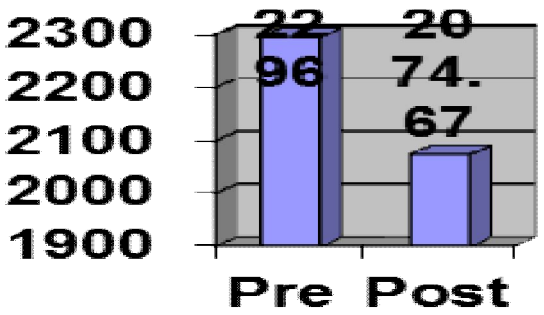
Table-2 depicts that the pre-test mean value of agility (9.80) is reversed to 10.80 after six weeks with mean difference of 1.01. The obtained value of 6.61 is greater than the required value of 1.73. Hence, it is proved that there is no significant improvement on reversibility on agility among senior level school football players.

Table 3: t-value on Cardio Vascular Endurance of Reversibility among Senior Level School Football Players

Test	Mean	MD	SD	t-value
Pre	2296	25.29	3.21	19.260*
Post	2074.67			

**Significant at 0.05 level, required table value df (1, 14), 1.73.*

Fig 3: Cardio Vascular Endurance of Reversibility Rate among Senior Level School Football Players



From Table-3, the pre-test mean value of cardio vascular endurance (2296) is reversed to 2074.67 after six weeks with mean difference of 3.21. The obtained value of 19.260 is greater than the required value of 1.73. Hence, it is proved that there is no significant improvement on cardio vascular endurance onreversibility among senior level school football players.

DISCUSSION ON HYPOTHESIS

The formulated hypothesized that the selected fitness components would significantly decrease of reversibility rate among senior level school football players. The results showing that the physical fitness variables are speed, Agility and Cardiovascular endurance is decrease in the transitional period. So the formulated hypothesis is accepted

SUMMARY OF FINDINGS AND CONCLUSION

Detraining occurs within a relatively short time period after an athlete ceases to train. Performance reductions may occur in as little as two weeks or sooner. In trained athletes, research indicates that detraining may result in greater losses in muscular power than strength. Strength losses are due to first to neural mechanisms, and next due to atrophy of muscles.It was concluded that six weeks Reversibility rate significantly reduced speed, agility, cardio vascular enduranceamong senior level school Football players.

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