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EFFECT OF SPECIFIC EXERCISES ON NEURO-MOTOR VARIABLES OF VOLLEYBALL PLAYERS

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Abstract
The study was conducted in order to improve the performance of the men volleyball players by enhancing their Neuro-Motor variables with the specific training. Forty male Volleyball players, age ranging between14-16 were randomly selected as subjects for this Experimental study from the volleyball playing population of Hiranandani Founadation School, Powai. The parallel group was designed for this study. The selected forty subjects were divided into two equal groups consisting twenty on each group. ie experimental group and control group. The specific exercises training were given to the experimental group for a period of eight weeks, 3 days in a week in the morning session for 45 minutes. The control group was kept sedentary. The pre-test and the post-test were conducted for both the groups on the Neuro-Motor variables of Agility, Co-ordination and Reaction time by conducting Shuttle Run, Eye-Hand co-ordination and Nelson Reaction time test respectively. The collected data were analyzed by using't' test and the result revealed that the specific exercises training significantly improved the neuro-motor variables of the male volleyball players.

Key words: specific exercises, neuro-motor, agility

INTRODUCTION

Life is symbol of active movement which was considered synonymous by Plato who said "When and where movement finishes life finishes itself." Essence life is vigorous physical movement. Sports scientist and researchers have made the field of sports highly competitive and specialized in nature. Today specialized training programmes are developed taking into the consideration the physical and psychological ability of a player therefore every sport is played in a highly competitive and organized manner.

Modern day Volleyball is very fast and aggressive and skilful, it requires a high degree of motor fitness and skills .The need was felt to develop a training program which would help to improve the Motor fitness and in turn the Skill performance of Volleyball players, considering the interrelationship of Motor fitness and Skill performance in Volleyball .

OBJECTIVES OF THE STUDY

- To study the effect of specific exercise on Hand-Eye coordination of the volleyball players.
- To study the effect of specific exercise on Agility of the volleyball players.
- To study the effect of specific exercise on Reaction Time of the volleyball players.

HYPOTHESES

H_1 The specific Exercises significantly enhance Agility of Volleyball players
H_2: The specific Exercises significantly enhance the Hand eye-Coordination of the of Volleyball players

H_3 The specific Exercises significantly enhance the Reaction time of Volleyball players

DESIGN OF THE STUDY

Forty male Volleyball players, age ranging between14-16 were randomly selected as subjects for this Experimental study from the volleyball playing population of Hiranandani Founadation School Powai The parallel group was designed for this study. The selected forty subjects were divided into two equal groups consisting twenty on each group. ie experimental group and control group. The specific exercises training were given to the experimental group for a period of eight weeks, 3 days in a week in the morning session for 45 minutes. The control group was kept sedentary. The pre-test and the post-test were conducted for both the groups on the Neuro-Motor variables of Agility, Co-ordination and Reaction time by conducting Shuttle Run, Eye-Hand co-ordination and Nelson Reaction time test respectively. The collected data were analyzed by using‘t’ test .

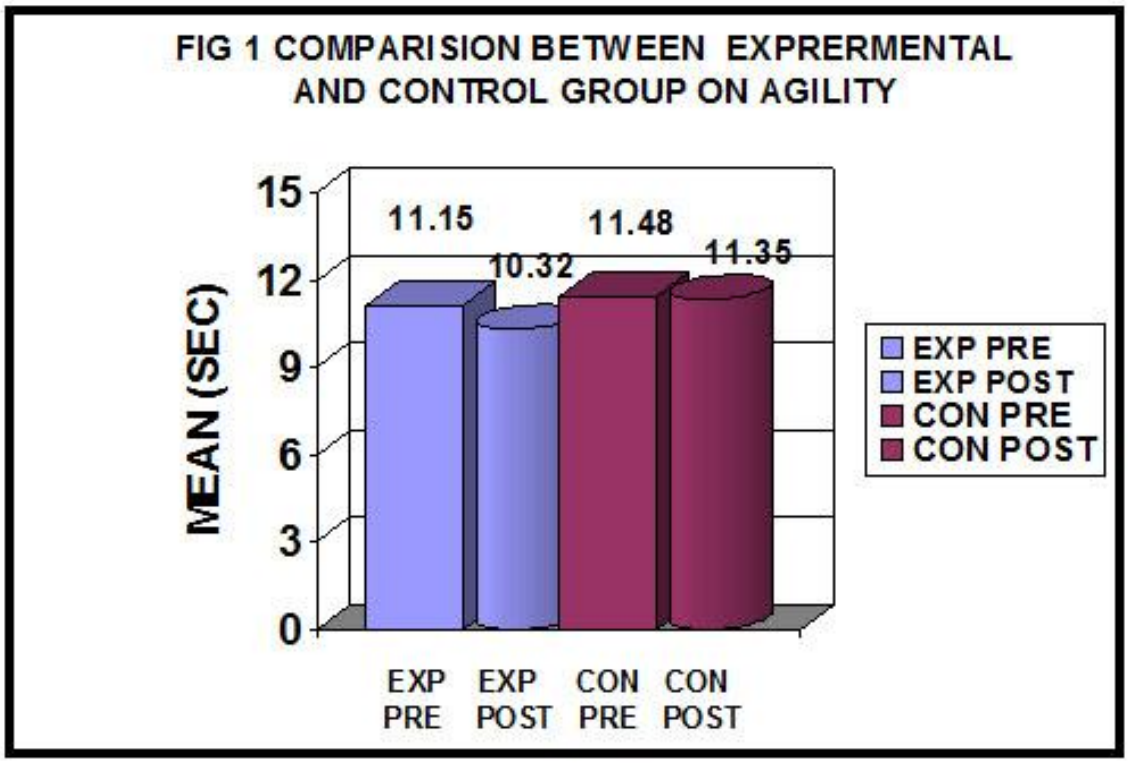
FINDINGS OF THE STUDY

Comparison between Experimental and Control groups on Agility, Co-ordination and Reaction time

Variables	Experimental Group				Control Group			
	Pre Mean	Post Mean	MD	‘t’	Pre Mean	Post Mean	MD	‘t’
Agility	11.15	10.32	0.83	2.18	11.48	11.25	0.23	0.52
Co-ordination	18.15	16.59	1.56	4.23	18.61	19.36	0.75	-1.36
Reaction Time	16.809	13.637	3.173	5.05	16.78	16.84	-0.42	-0.14

Comparison between Experimental and Control groups on Agility (Shuttle Run)

It is seen from the table in the case of Agility the mean gain of Experimental group of pre test **11.15** and post test **10.32** where as the Control group pre test **11.48** and post tests **11.25**. The difference in mean gain of experimental group was **0.83** and **0.23** for control group which shows the improvement in Experimental group, where t value of the same was **2.18** which is significance at **$p<0.05$** and shown a Fig.1



As it is clearly seen from the Graph 1 that there is significant improvement in Agility of Experimental group, which may be because of the training given to the subjects of Experimental group. Hence the Hypotheses H_1**:** "The Specific exercises significantly enhance Agility of Volleyball players" is positively accepted.

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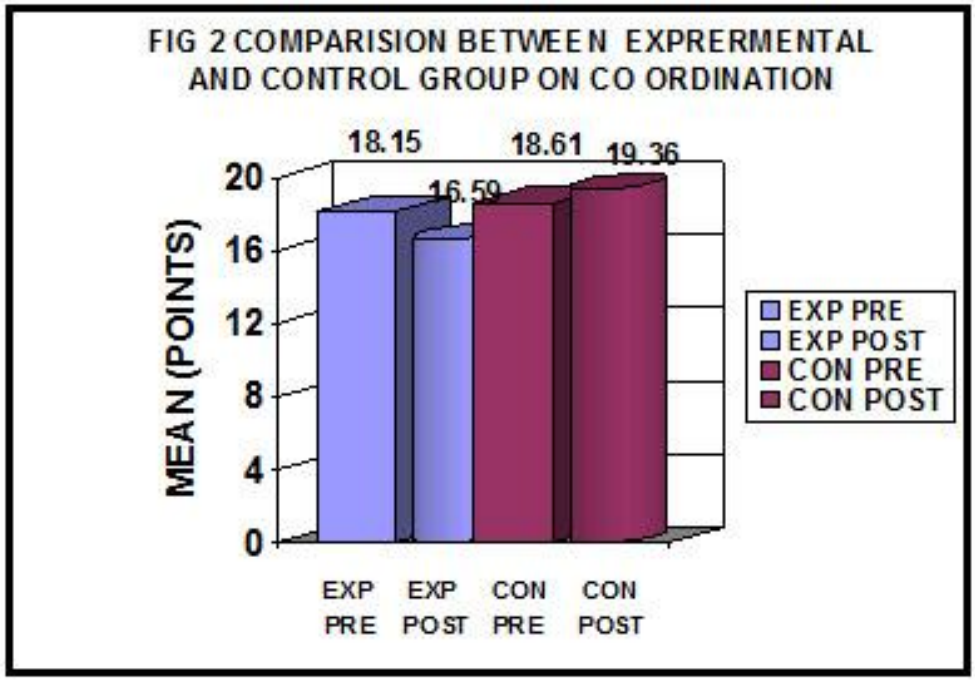
Comparison between Experimental and Control Groups in Eye Hand co-ordination (Ball transfer).

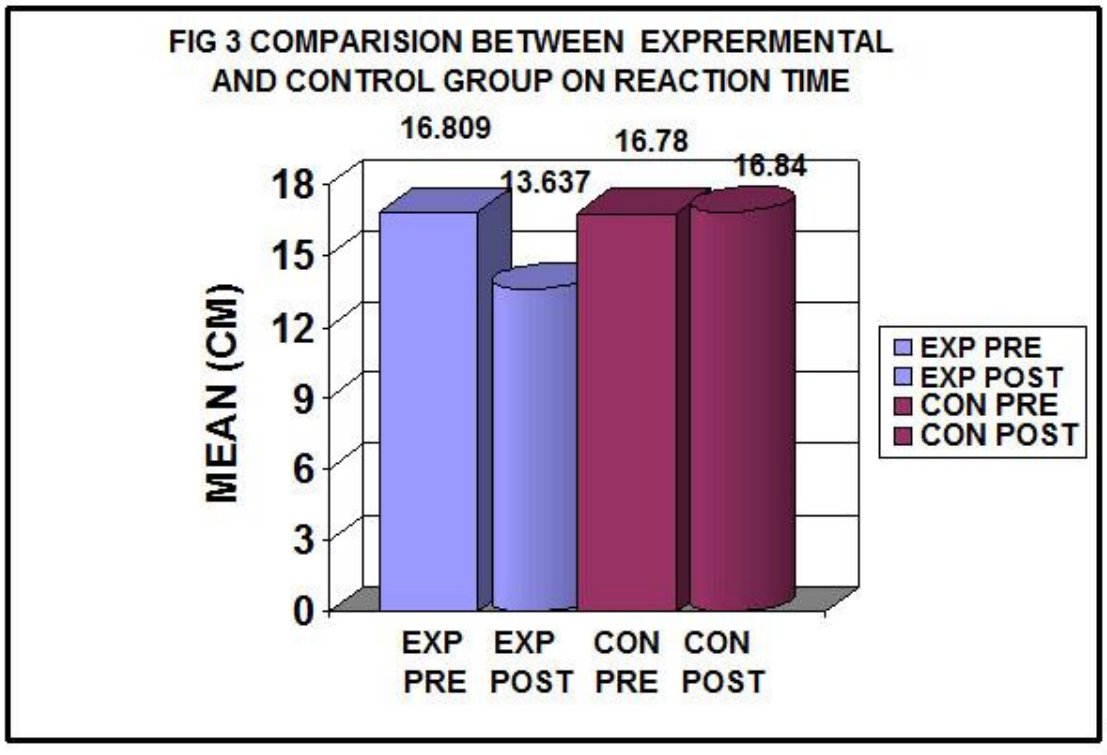
It is seen from the table in the case of Eye hand co-ordination (Ball transfer) Test the mean gain of Experimental group of pre test **18.15** and post test **16.59** where as the Control group pre test **18.61** and post tests **19.36**. The difference in mean gain of experimental group was 1.56 and **-0.75** for control group which shows the improvement in Experimental group, where t value of the same was **4.23** which is significance at **p<0.05**. and shown in Fig. 2



As it is clearly seen from the Graph 2 that there is significant improvement in Co-ordination of Experimental group, which may be because of the training given to the subjects of Experimental group. Hence the Hypotheses H_2**:** "The Specific exercises significantly enhance Co-ordination of Volleyball players" is positively accepted.

Comparison between Experimental and Control Groups of Nelson Hand Reaction Time.

It is seen from the table, in the case of Nelson Hand Reaction Time Test the mean gain of Experimental pre test **16.809** and post test **13.637** where as Control group pre test **16.78** and post tests **16.84** There is difference in mean gain of experimental group was **3.172** and **-0.06 for** control group, which is shows the improvement in favourer of Experimental group, where t value of the same was **5.05** which is significance at p<0.05 and shown in Fig.3



As it is clearly seen from the Graph 3 that there is significant improvement in Reaction Time test of Experimental group, may be because of the training given to the subjects of Experimental group. Hence the Hypotheses

H_3**:** "The Specific exercises significantly enhance the Reaction time of Volleyball players" is positively accepted.

CONCLUSION

While concluding, it may be stated that

- The effect of specific exercises showed significant improvement on Agility of the volleyball players.
- The effect of specific exercises showed significant improvement on Eye-hand coordination of the volleyball players.
- The effect of specific exercises showed significant improvement on Reaction time of the volleyball players.

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