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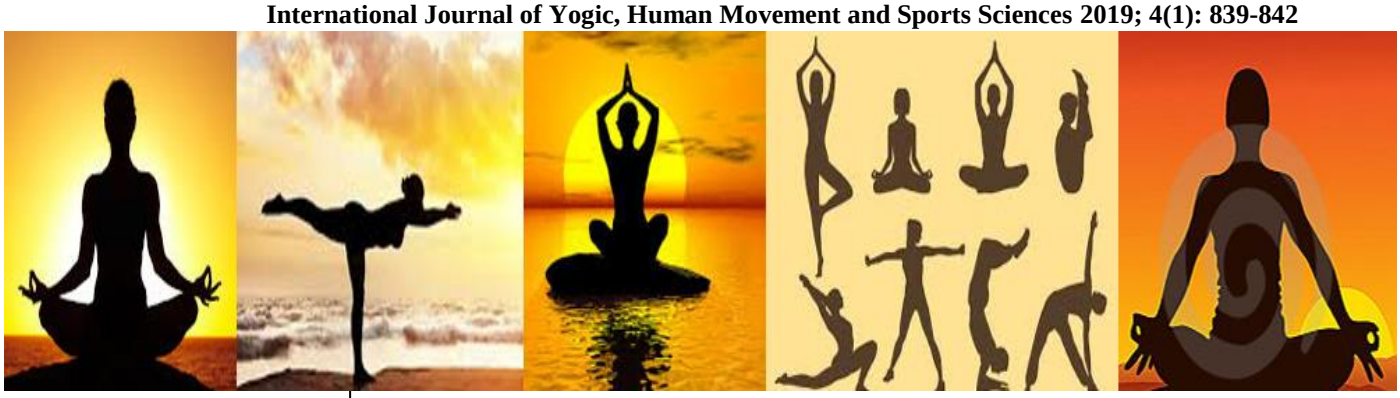

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Effect of playing volleyball as an intervention on motor fitness variables for untrained volleyball players

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Abstract
The purpose of the present study was to determine the effect of playing volleyball game as an intervention on specific motor fitness for untrained adolescent boys. Recent years have witnessed a revolution in the area of sports and sports performance has been receiving phenomenal attention. In this new orientation the emphasis has shifted to a more progressive research leading to an understanding of performance factor of various sports. Scientific information is being gradually accumulated which will serve as the problem for the present investigation was to "Study the effect of speed, agility, muscular endurance, muscular strength, muscular power and reaction time of volleyball players".

The experimental group was progressively introduced to the practice of playing volleyball game. The subjects played volleyball skills 5 days in a week for a period of 45 minutes with rest in between and had only one session a day; Sunday was observed as rest day. The results, in general, support the theory that playing volleyball game improve skills motor fitness related performance among school level untrained adolescent boys. We found that volleyball training group improved significantly which was finding between pre to post test. The rate of improvement was higher, however, for the experimental group. Finally, results shows that the participants who followed the treatment of playing volleyball game improved motor fitness for untrained adolescent boys.

Keywords: Playing, Motor Fitness, Volleyball

Introduction
Physical Education & Sports provide an opportunity likes communication, contact and collaboration with others peoples. Playing sports is positive for the growth of body and social skills. Sports give confidence mutual thinking, control planning and delegation skills and also enhance self-reliance. Success in a sport gives a common sense of achievement, which as a result arouses one's recognition further. Sports are not just a religion, moral idea or an art but it is the mixture of all these things. It is a competitive physical activity which can either be casual or organized and its aim is to utilize, maintain and improve skills and physical ability while provide entertainment to participants and spectators. Sports activities are governed by a set of rules or customs, which make sure fair competitions.

The sports member of the electorate at various levels usually considers the performance during the practice match and qualifies competitions but the physiological basis is usually unseen most of the time. So, physical fitness must be needed for vigorous participation in games and sports. It is across the world accepted phenomena that if the players are physically fit then he / she can achieve success in various games and sports activities. The basic stage of physical fitness plays an important role in improving the performance of an individual to achieve something in a particular game. Sports activities can be broadly organize into several areas like, health and fitness, physical education, performance sports, rehabilitation sports, leisure sports and adventure sports etc.

Hypothesis
- It was hypothesized that there would be a significant improvement on physical fitness performance among school level non-volleyball players due to the playing of volleyball training
- It was hypothesized that playing volleyball training would be a significant improvement on physical fitness performance in the experimental group.

Delimitations

The purpose of the study was restricted to the following aspects:

- The study was confined to twenty-five school level when non volleyball players from the school of Assisi matriculation Chennai and their age ranging from 11 to 13 years.
- The selected training method was playing volleyball with specific motor abilities
- The experimental period was limited to six weeks only.

The study was restricted to play volleyball to develop the physical fitness performance of speed, agility, reaction time, muscular strength, muscular endurance and muscular power.

Methodology Selection of Subjects

To achieve the purpose of study 25 adolescent boys were selected randomly from the Assisi matriculation school in Chennai. The requirement of the experiment procedures, testing as well as exercise was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study.

Experimental Design

The selected subjects (N=25) were make as an experimental group. The experimental group was treated with their respective training for five days a week for a period of six weeks.

Selection of Criterion Variables

The research scholar reviewed the various scientific literatures pertaining to playing volleyball with specific motor fitness from books, journals, and research papers, taking into consideration the feasibility of criteria, availability of instruments and the relevance of the variables of the present study, the following variables were selected.

Dependent Variables

The following motor fitness was selected as dependent variables.

1. Speed
2. Agility
3. Muscular strength
4. Muscular power
5. Muscular endurance
6. Reaction time

Variables and Ceititeron Measures

Sl.no	Specific motor fitness variables	Criterion measures
1	Speed	50 meters dash
2	Agility	Shuttle run
3	Muscular Endurance	Sit ups
4	Muscular power	Standing board jump
5	Muscular strength	Push ups
6	Reaction time	Drop the ball

Volleyball Training Programmes

The experimental group met 5 days per week for the period of six weeks. Each experimental session was of 45 minute of duration, which was made available for the experimental group for volleyball training. The training was administrated to the experimental group, which include speed, agility, reaction time, muscular power, muscular strength and muscular endurance and reaction time respectively for 5 days in a week i.e. (Monday, Tuesday, Wednesday, Thursday and Friday). A week schedule was repeated to the proceeding week and the load was adjusted progressively.

The procedure adopted for the adjustment of load was follows:

1. The load intensity was kept low to moderate in first week and increased progressively in proceeding week moderate to high.
2. The frequency of training was 5 days in a week.
3. The density was adjusted according to intensity because it is inversely related to intensity.
4. The repetition and sets were increased progressively from first week to proceeding week.
5. The duration of training was 45 minutes for each experimentalday.

Statistical Procedure

The data collected from the experimental group were statistically analyzed for significance; paired T-test was used. In all the cases to test the significance, 0.05 levels of significance were fixed. The data were analyzed by computer using statistical packages.

Computaton of Paried 'T' Ratio

Table I: Muscular Power

Mean		N	SD	't' value	df	Significant (2 tailed) P value	Table Value
Pre	1.65	25	0.28	7.303	24	.000	2.064
Post	1.79	25	0.27				

Significance at 0.05 level of confidence df (24) is = 2.06

An examination of table I shows that the obtained mean values of pretest and posttest were 1.65, 1.79 respectively. The standard deviations were 0.28 and 0.27, the obtained 't' ratio is 7.303; the required table value is 2.064. The obtained 't' ratio is greater than the table value found to be significant.

Table 2: Muscular strength

Mean		N	SD	't' value	df	Significant (2 tailed) P value	Table Value
Pre	16.5	25	4.46	8.200	24	.000	2.064
post	22.79	25	5.11				

Significance at 0.05 level of confidence df (24) is = 2.064

An examination of table II shows that the obtained mean values of pretest and posttest were 16.5,22.79 respectively. The standard deviations were 4.46 and 5.11, the obtained 't' ratio is 8.200 the required table value is 2.064; significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to besignific

Table 3: Muscular Endurance

Mean		N	SD	't' value	df	Significant (2 tailed) P value	Table Value
Pre	18.79	25	5.42	6.018	24	.000	2.064
post	22.83	25	5.16				

Significance at 0.05 level of confidence df (24) is = 2.064

An examination of table III shows that the obtained mean values of pretest and posttest were 18.79, 22.83 respectively. The standard deviations were 5.42and 5.16, the obtained 't' ratio is 6.018 the required table value is 2.064; significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to be significant.

Table 4: Speed

Mean		N	SD	't' value	df	Significant (2 tailed) p	Table Valu e
Pre	8.81	25	0.83	3.148	24	.004	2.064
post	8.57	25	0.79				

Significance at 0.05 level of confidence df (24) is = 2.064

An examination of table IV shows that the obtained mean values of pretest and posttest were 8.81, 8.57 respectively. The standard deviations were 0.83 and0.79, the obtained 't' ratio is 3.148 the required table value is 2.064; significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to be significant.

Table 5: Reaction time (in seconds)

Mean		N	SD	't' value	Df	Significant (2 tailed)	Table Value
Pre	1.15	25	0.13	7.903	24	.000	2.064
post	1.007	25	0.13				

Significance at 0.05 level of confidence df (24) is = 2.064

An examination of table V shows that the obtained mean values of pretest and posttest were 1.15,1.007 respectively. The standard deviations were 0.13 and0.13, the obtained 't' ratio is 7.903 the required table value is 2.064; significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to be significant.

Table 6: Agility

Mean		N	SD	't' value	Df	Significant (2 tailed)	Table Value
Pre	12.02	25	2.25	6.256	24	.000	2.064
post	10.06	25	1.14				

Significance at 0.05 level of confidence df (24) is = 2.064

An examination of table VI shows that the obtained mean values of pretest and posttest were 12.02, 10.06 respectively. The standard deviations were 2.25 and1.14, the obtained 't' ratio is 6.256 the required table value is 2.064; significance at 0.05 level. The obtained 't' ratio is greater than the table value. It is found to be significant.

Discussion on Hypothesis

The formulated hypothesis one stated that there would be a significant improvement on specific motor fitness variables among untrained adolescent boys due the playing volleyball. The results presented in tables I, II, III, IV, V and VI on motor fitness variables such as speed, agility, muscular endurance, muscular strength, muscular power, and reaction time respectively proved that there was a significant improvement due to six weeks Playing Volleyball, hence the hypothesis was accepted at 0.05 level.

Conclusions

Based on the findings and within the limitations of the study it was noticed that practice of playing volleyball game helped to improve motor fitness for untrained adolescent boys. It was seen that there was progressive improvement in the motor fitness related performance of playing volleyball game for untrained adolescent boys after six weeks of training programme. There was significant improvement found in playing volleyball game of experimental group, while comparing pretest and post test mean score following conclusion were drawn.

- It was concluded that motor fitness performance variable such as speed respectively proved that there was significant improvement due to six weeks playing volleyball game.
- It was concluded that motor fitness performance variable such as agility respectively proved that there was significant improvement due to six weeks playing volleyball game.
- It was concluded that motor fitness performance variable such as muscular endurance respectively proved that there was significant improvement due to six weeks playing volleyball game.
- It was concluded that motor fitness performance variable such as muscular strength respectively proved that there was significant improvement due to six weeks playing volleyball game.
- It was concluded that motor fitness performance variable such as muscular power respectively proved that there was significant improvement due to six weeks playing volleyball game.
- It was concluded that motor fitness performance variable such as reaction time speed respectively proved that there was significant improvement due to six weeks playing volleyball game.
- The playing volleyball game achieved significant improvement of experimental group towards improving the motor fitness variables such as speed, agility, muscular endurance, muscular strength, muscular power and reaction time.

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