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# An Impact of Yoga Practices and Aerobic Dance on Shooting Performance among College Men Soccer Players

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**Abstract**

*The purpose of the study was to find out the impact of yoga practices and aerobic dance on shooting performance among college men Soccer players. The study was conducted on forty five (N=45) men Soccer players studying various colleges affiliated to Anna University, Chennai, during the year 2014-2015 were selected as subjects at random and they were divided randomly into two experimental groups and on control group of fifteen each, namely Group-I Yoga Practices, Group-II Aerobic Dance and Group III acted as Control. The training period was limited to twelve weeks and for three days per week. The experimental groups underwent their respective experimental treatment for 6 weeks. Among various Soccer skill performances only shooting skill only selected as dependent variables and it was assessed by Mor- Christian General Soccer Ability Test. All the subjects were tested prior to and after the training for all the selected variables. The data collected from the three groups prior to and post experimentation was statistically analyzed by using Analysis of Covariance (ANCOVA). Scheffe's post hoc test was applied to determine the significant difference between the paired means. In all the cases 0.05 level of significance was fixed. The result reveals significant differences in Soccer shooting skill among the experimental groups.*

**Keywords:** Soccer, Yoga Practices, Aerobic Dance, Shooting.



## Introduction

Soccer is a game which calls for strenuous, continuous, thrilling action and therefore appeals to the youth of the world. It is one of the world's most popular games comprising of two teams trying to kick or head a ball to opposing goals (Pick, 1952). Soccer is a game of physical and mental challenges. You must execute skilled movements under generalized conditions of restricted space, limited time, physical and mental fatigue, and opposing players. You must be able to run many miles during a game, mostly at sprint like speed and respond quickly to a variety of rapidly changing situations during play. Finally, you need a thorough understanding of an individual, group and team tactics. Your ability to meet all these challenges determines how well you perform on the soccer field (Luxbacher, 1996). Soccer as it is seen today has undergone a tremendous improvement since its birth. Of all the events in human history the one to attract the largest audience was neither a great political occasion nor a special celebration of some complex achievements in art or science, but simple ball game a soccer match. If we examine it more carefully we would soon realize, that each soccer match is a symbolic event of some complexity. One of the greatest strengths of the game is its simplicity. At its crudest level all that are needed is a ball and an open space with something to act as a goal post. No other sport is so easily available and so immediately inspiring (Morris, 1981). Although the word 'yoga' has many connotations, etymologically it means "Integration". The term 'Samatva' of Bhagavat Gita conveys the same meaning. Other terms like homeostasis, equilibrium, balance, harmonious development etc. more or less suggest the same things. The aim of yoga itself is an integration of personality in its all aspects. In order to help the development of such an integration various techniques are employed. These techniques or practices enjoined in Yogic literature and handed down in different traditions also go under the name of yoga (Gharote, 1976). Aerobics, also known as the aerobic dance, is a common craze among most people today. It is one of the best ways to enjoy a fitness program and also a way to achieve better health. It is always preferable to find opportunities to do the 'health jig' either by oneself or under the guidance of an instructor. The aerobic dance is a feet tapping exercise that is accompanied with musical beats and the signals of an instructor. Aerobic dancing also induces fast breathing for a long period of time by pumping more oxygen into the bloodstream. Also known as "aerobics", the aerobic dance can be done with hip hop or country folk music. In numerous researches related to fitness, health, recreation and training, what was cited as being the main subject matter was the effects of various kinds of aerobic exercise training used with the aim of improving the

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functional abilities of the human body, body composition, motor abilities, psychological characteristics and cognitive abilities. It is also the ability to endure stress, which is of great importance for one's health. Since exercising can influence brain activity, one could claim that fitness activities, to a certain extent, lead to the improvement of mental liveliness and emotional stability (Kostic, 1999).

**Methodology**

To achieve the purpose of the study, forty five men Soccer players studying under Graduate Engineering Degree course in various Engineering Colleges affiliated to Anna University during the year 2014-2015 were selected as subjects of this study. The age of the subjects were ranged from 18 to 21 years. The subjects were assigned at random into three groups of fifteen each (n=15). Group-I underwent Yoga Practices, group-II underwent Aerobic Dance and group-III acted as Control (n=15). Among the various Soccer skills shooting only selected for this study. All the experimental groups underwent their respective training for 6 weeks in addition to the regular training as per College curriculum. All the groups were tested on selected criterion variables prior to and immediately after the training periods. Soccer shooting skill was assessed by Mor-Christian General Soccer Ability Test.

**Training Protocol**

During the training period, the experimental groups underwent their respective training programmes. Group I underwent Yoga Practices, Group II underwent Aerobic Dance, for Monday to Saturday for four weeks. The duration of training session in all the days was between thirty and forty five minutes approximately which included warming up and limbering down.

**Results**

For Yoga Practices the following yoga's where given

| Asana | Pranayama | Meditation |
|---|---|---|
| • Padmasana<br>• Vajrasana<br>• Paschimottanasana<br>• Matsyasana<br>• Bhujangasana<br>• Sarvangasana<br>• Shalabhasana<br>• Pavanmuktasana,<br>• Dhanurasana,<br>• Halasana,<br>• Utkatasana,<br>• Shavasana | • Nadi Suddhi,<br>• Nadi Sothana,<br>• Ujjayi,<br>• Bhramari,<br>• Sitali<br>• Sitakari | • Mantra<br>• Object<br>• Breathing<br>• Yoga Nidra |

For Aerobic Dance the following Exercises were given.

| On the Spot Movement | Dynamic Movement | Sitting and Lying Position |
|---|---|---|
| • Rhythmic toe<br>• Heel action<br>• Fast Marching on the spot<br>• Bending<br>• Half squats | • Forward Marching<br>• Backward Marching<br>• Diagonal Marching<br>• Forward Stepping<br>• Backward Stepping<br>• Sideward Stepping<br>• Diagonal Stepping<br>• Hopping | • Abdominal Exercises<br>• Bend Knee sit-ups<br>• Lying with elbow support |

**Analysis of the Data**

The data collected from the three groups prior to and post experimentation on Soccer shooting skill were statistically analyzed by using Analysis of Covariance (ANCOVA). Hence, whenever the obtained f-ratio value was significant the Scheffe's test was applied as post hoc test to determine the paired mean differences, if any. In all the cases 0.05 level of significance was fixed. The Analysis of covariance

(ANCOVA) on Soccer shooting skill of Experimental Groups, have been analyzed and presented in Table -I.

**Table I.** Analysis of covariance on shooting skill of yoga practices group, aerobic dance group and control group

| Dependent Variables | Adjusted Post-test Means | | | Source of Variance | Sum of Squares | df | Mean Squares | 'F' Ratio |
|---|---|---|---|---|---|---|---|---|
| | Yoga Practices Group (I) | Aerobic Dance Group (II) | Control Group (III) | | | | | |
| **Shooting (In Numbers)** | 119.42 | 103.12 | 87.49 | Between<br>With in | 7458.20<br>2019.12 | 2<br>41 | 3729.10<br>49.25 | 75.72* |

** Significant at .05 level of confidence*

Table I shows that the adjusted post test mean value of Soccer shooting skill for Yoga Practices group, Aerobic Dance group and control group are 119.42, 103.12, and 87.49 respectively. The obtained F-ratio of 75.72 values of 3.23 for df 2 and 41 required for significance at 0.05 level of confidence. The results of the study indicate that there are significant differences among the adjusted post test means of experimental groups on the increase of shooting skill. To determine which of the paired means had a significant difference, Scheffe's test was applied as Post hoc test and the results are presented in Table II.

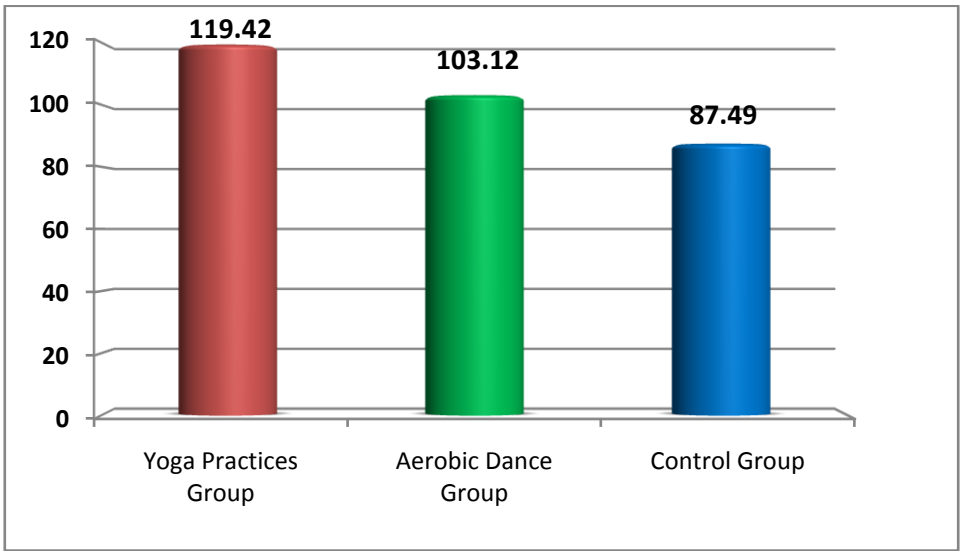
**Table II.** The scheffe's test for the differences between the adjusted post tests paired means on football shooting skill

| Dependent Variables | Adjusted Post-test means | | | Mean Difference | Confidence Interval |
|---|---|---|---|---|---|
| | Yoga Practices Group - (I) | Aerobic Dance Group - (II) | Control Group - (III) | | |
| **Football shooting skill (In Numbers)** | 119.42 | 103.12 | | 16.30* | 6.43 |
| | 119.42 | | 87.49 | 31.93* | 6.43 |
| | | 103.12 | 87.49 | 15.63* | 6.43 |

** Significant at.05 level of confidence*

Table II shows that the adjusted post-test mean differences on Yoga Practices Group and Aerobic Dance Group, Yoga Practices Group and Control Group, Aerobic Dance Group and Control Group are 16.30, 31.93 and 15.63 respectively. These values are greater than the confidence interval value 6.43, which shows significant differences at .05 level of confidence. It may be concluded from the results of the study that there is a significant difference in shooting skill between the adjusted post-test means of Yoga Practices Group and Aerobic Dance Group, Yoga Practices Group and Control Group, Aerobic Dance Group and Control Group. However, the improvements of Football shooting skill were significantly higher for Yoga Practices Group than Aerobic Dance and Control Group. It may also be concluded that Yoga Practices Group is better than Aerobic Dance and Control Group in improving shooting skill. The adjusted post test mean values of experimental groups and control groups on shooting skill are graphically represented in the Figure -I.

**Figure I.** The adjusted post tests mean values of experimental groups on Shooting




## Results and Discussion

The results of the study indicate that all the experimental groups namely Yoga Practices group and Aerobic Dance group had significantly improved in the selected dependent variable such as Shooting skill. It is also found that the achieved by the Yoga Practices group was greater when compared to Aerobic Dance group and control group. These results are in conformity with the findings of the following studies undertaken by Boyle C.A. Sayers, and et.al.,(2004), Bruce (1986) and Cady Hart, and Tracy, Brian (2008). It is inferred from the results of the present study that systematically designed Yoga Practices and Aerobic Dance enhance the performance standard, as the selected dependent variable are very important qualities for better performance in almost all sports and games. Hence, it is concluded from the results of the study that systematically and scientifically designed Yoga Practices and Aerobic Dance may be given due recognition and implemented properly in the training programmes of all the disciplines in order to achieve maximum performance.

## Conclusions

From the analysis of the data, the following conclusions were drawn.

1. The experimental groups namely, Yoga Practices group and Aerobic Dance group had significantly improved in Soccer shooting skill.
2. Significant differences in achievement were found among Yoga Practices group and Aerobic Dance group with regard to all the selected criterion variables such as Soccer shooting skill.

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