



## Effect of Sand and Offshore Training on Agility among College Men Football Players

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### Abstract

*Sand training is the training on the surface full of dry and loose sand in the seashore away from the portion of water flow and its adjacent area. Running on the soft sand is definitely a step up from road running when it comes to intensity but with the right preparation. Offshore training is another form of sand training where the surface is wet and hard in nature. Offshore training minimizes the impact force while foot hits the sand. Systematic offshore training can improve quickness, muscle strength and agility of a player. The purpose of the research was to find out the effect of sand and offshore training on agility among college men football players. To achieve this purpose, eighty men football players were randomly selected from various colleges of University of Madras. The selected subjects aged between 18 and 21 years and they were divided into four equal groups of twenty subjects each. The groups were Experimental group I assigned as isolated sand training group, group II assigned as isolated offshore training group, group III assigned as combined sand and offshore training group and group IV as control group respectively. Pre –tests were conducted for all the eighty subjects on agility. The experimental groups participated in their respective isolated sand, isolated offshore and combined sand and offshore training for a period of twelve weeks. The post-tests were conducted on the above said dependent variable after twelve weeks of isolated sand, isolated offshore and combined sand and offshore training. Analysis of covariance (ANCOVA) statistical technique was used to test the adjusted post-test mean differences among the experimental groups. If the adjusted post-test result was significant, the Scheffe's post-hoc test was used to determine the significance of the paired mean differences. It was concluded that isolated offshore training significantly improved the agility than isolated sand training and combined sand and offshore training among college men football players.*

**Keywords:** Sand Training, Offshore Training, Agility.

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### Introduction

Sports training is a systematic scientific programme of conditioning exercises and physical activities designed to improve the physical fitness and skills of the players or athletes participated. Sports training are a continuous process of perfection, improvement and creation of means and methods of improving sports performance and factors of performance (Hardayal Singh, 1991). Sand training offers resistance that develops strength endurance as it works all of the leg muscles, ligaments and tendons against the resistance of the sand. Working out in soft sand burns more calories than on solid surfaces. Running on sand requires more energy than running on a firm surface. Sand provides greater resistance than other surfaces so it consumes more energy than running on a harder surface. Offshore training is the training on the wet sand that lies closer to the sea. In offshore training, one can run close to the edge of the water which provides firmer surface compared to the soft dry sand.

Offshore training minimizes the impact force while foot hits the sand. Offshore training can enhance the overall physical fitness and various components desired to be developed for better performance among young players. Agility plays a vital role in football because when a football player participates in the game of football, he has to change directions and movement of various parts of the body while dribbling the ball, tackling the opponent and in the case of the goalkeeper to save the goal (Harold, M. Barrow, et. al., 1971). Success in soccer depends upon a variety of factors including the physical characteristics and physiological capacities of the players, their level of skill, their degree of motivation and tactics employed by them against the opposition (Mosher, R.E., 1985). The purpose of the research was to determine the effect of isolated sand, isolated offshore and combined sand and offshore training on agility among college men football players.

### Methodology

To achieve the purpose of this research study, eighty men football players were randomly selected in the age group of 18 to 21 years from various colleges of University of Madras. The research study was formulated as a true random group design, consisting of

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a pre-test and post-test. The subjects (n=80) were randomly assigned into four equal groups of twenty men each. The groups were Experimental group I assigned as isolated sand training group, group II assigned as isolated offshore training group, group III assigned as combined sand and offshore training group and group IV as control group respectively. Pre –tests were conducted for all the eighty subjects on agility. The experimental groups participated in their respective isolated sand, isolated offshore training, and combined sand and offshore training for a period of twelve weeks. The post-tests were conducted on the above said dependent

variable after twelve weeks of isolated sand, isolated offshore training, combined sand and offshore training. The investigator administered 4x10 Yards Shuttle Run Test to measure agility. Pre –test and post –test scores were statistically examined by applying Analysis of Covariance (ANCOVA) and Scheffe’s Post –hoc test was used to find out the paired adjusted mean difference when the results were significant. The level of confidence was fixed at 0.05 level to test the significance.

**Table I.** Computation of analysis of covariance of agility (Score in Seconds)

	Isolated Sand Training Group	Isolated Offshore Training Group	Combined Sand and Offshore Training Group	Control Group	Sources of Variance	Sum of Squares	df	Mean squares	Obtained F-ratio
Pre – test Mean	7.83	7.84	7.78	7.86	Between Within	0.06 3.51	3 76	0.02 0.05	0.43
Post – test Mean	7.69	7.36	7.67	7.82	Between Within	2.35 2.88	3 76	0.78 0.04	20.67*
Adjusted post –test Mean	7.69	7.34	7.71	7.80	Between Within	2.38 0.40	3 75	0.79 0.01	148.18*
Mean Gains	0.14	0.48	0.11	0.04					

Table F ratio at 0.05 level of confidence for 3 and 75 (df) = 2.73, 3 and 76(df) =2.72.

\*Significant

**Results and Discussion**

As shown in Table I, the obtained F ratio for the pre test means 0.43 which was lesser than the table F value of 2.72, hence there was no significant difference in agility among the groups before the training. The obtained F ratio for the post test means 20.67 which was higher than the table F value of 2.72, hence there was a

significant improvement in agility among the groups after the treatment. The obtained F value for the adjusted post test means 148.18 was also higher than the table F value. Since there was significant difference between the groups, the Scheffe’s post-hoc test was used to determine which of the paired means had a significant difference.

**Table II.** Computation of analysis of scheffe’s post-hoc test of agility (Score in seconds)

Isolated Sand Training Group	Isolated Offshore Training Group	Combined Sand and Offshore Training Group	Control Group	Mean Difference (MD)	C.I. Value
7.69	7.34			0.35*	0.03
7.69		7.71		0.02	
7.69			7.80	0.11*	
	7.34	7.71		0.37*	
	7.34		7.80	0.46*	
		7.71	7.80	0.09*	

Table F ratio at 0.05 level of confidence for 3 and 75 (df) = 2.738.

\*Significant at 0.05 level.

As shown in Table II, the adjusted post-test mean differences of 0.35, 0.11, 0.37, 0.46 and 0.09 were greater than the required confidence interval value of 0.03 and these comparisons were significant at 0.05 level. There was no significant difference between isolated sand training group and combined sand and offshore training group.

The multiple mean comparisons shown in the above table proved that there were significant differences between the adjusted means of the groups. Isolated Offshore Training group had better improvement in agility than the other groups; however isolated sand training group and combined sand and offshore training group also had significant improvement in agility among

the selected subjects. The findings of the study on agility were supported by Gortsila, Eugenia (2013) who conducted the study on surface training and found that sand training was an effective surface training method to improve agility.

### Conclusion

It was concluded that isolated offshore training significantly improved the agility than the isolated sand training and combined sand and offshore training among college men football players.

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