

Vol 4 Issue 5 June 2014

ISSN No : 2230-7850

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International Multidisciplinary  
Research Journal

*Indian Streams  
Research Journal*

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**RNI MAHMUL/2011/38595**

**ISSN No.2230-7850**

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## A COMPARATIVE STUDY OF EFFECT OF FUNDAMENTAL EXERCISES & FUNCTIONAL TRAINING ON SKILL PERFORMANCE OF VOLLEYBALL PLAYERS

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**Abstract:** -Intend of this study to analysis the effect of fundamental & functional these two different training on skill performance of volleyball plyers. Selected 20 volleyball players of the college level, divided in to two groups of 10 each] their average age was 19-25. One group was participating in fundamental exercises training and another was participating in the functional training for one month. For testing the effect of both training the volleyball skill tests were selected and applied before & after the training and data was collected. To accomplish the purpose of this study obtained data was treated by statistical formulas' ad mean, SD & t test. And conclusion made that the group who was participating in fundamental exercises they merely increased their skills according to comparison of pre & post test obtained values are greater than tabulated value. Functional training is further valuable than fundamental training for improving skills performance of volleyball players.

**Keywords:** Fundamental exercises, Functional training, skill performance and volley ball .

### INTRODUCTION

Volleyball is a team sport in which two teams of six players are separated by a net. Each team tries to score points by grounding a ball on the other team's court under organized rules. Volleyball is a sport that requires you to master a complex skill set. Because you rotate from playing front line positions to back line positions, you constantly areshifting from setting up offensive plays to completing an offensive play. You also must shift quickly from offense to defense. During an given sequence in volleyball] a player must be prepared to execute a variety of skills like

#### Passing

Passing also is known as “bumping” in an offensive sequence and “digging” when used to defend an offensive short. Passing is executed by interlocking your fingers, holding your arms straight and away from your body. Make contact with the ball on your forearm and follow through to your target. The only allowable service return is a pass so it frequently the first shot in a three-shot sequence.

#### Setting

Setting, or overhead passing, typically is the second shot in a three-shot sequence. A properly executed set is placed close and above the net. You want to place the ball about four feet from the net so on the third shot, typically a spike, your teammate won't hit the net on her follow through.

#### Hitting

Generally, you want to hit ball with the greatest force possible on the third shot of a sequence. When the ball is struck forcefully downward, above the height of the net, it is referred to as a “spike” or “kill” shot. To execute a kill shot, a player may use either a two-or three-step approach. Strike the ball at the top of your vertical leap, using the heel of your palm, followed by

wrapping your hand on the ball with your fingers and snapping your wrist.

### Blocking

Blocking is a defensive play made close to the net. The object of a block is to deflect an offensive shot directly back towards your opponent. Block attempts can be made by individual players or pairs of players. Blocking is not allowed on serves. Blocks often are utilized as a defense against “kill” shots

Each game having its own fundamental skill and players always use fundamental exercises to develop their skills action. Fundamental exercise's basic movements are running, jumping, bending, and stretching.

Now a day the new concept of training is developed that is functional training. Functional training means repeat the same function for number of times to bring perfection in the skills & strength.

Therefore it was thought by scholar to compare the effect of fundamental training and functional training on the skills of volleyball players. With the purpose to discuss the relevant status between fundamental exercise & functional training as well as to see the effect of both exercises on the volleyball players skills.

### Methodology

For this study the scholar selected 20 volleyball players of the college level, divided in to two groups of 10 each, from Yavatmal City Darda college of Physical education. Their average age was 19-25. One group was participating in fundamental exercises training and another was participating in the functional training. For testing the effect of both training the volleyball skill tests were selected and applied before & after the training. One month training was imparted to both the groups.

Group were participating five days a week in morning for 70 minutes. 10 minutes for warming up, 50 minutes for training & 10 minutes for relaxation. Regarding volume, intensity and frequency of exercises were decided based on the subject's maximum level of strength, determined by the 10-repetition maximum .

Functional training is any type of exercise that has a direct relationship to the activities you perform in your daily life. As meaning of functional training volleyball skill's related cognitive exercises were selected on the basis of functionality. For Core muscles function continuously to dynamically stabilize body.

Flexion and extension – used to train centre of the body area include the side bridge and the side jack-knife – Torso flexion is an action that rarely occurs in sports. Adding sit-ups or abdominal crunches to a workout may be less desirable because of their functionality. The abdominals should be mostly trained by or assisting movement of limbs.

Rotation- Rotation is key to many sporting movements. When thinking about exercises for rotation, remember the core should be used to stabilize body during movement. Rotational exercises can be used to increase the mobility of hips and shoulders. Exercises that single joint exercise such as the dumbbell bicep curl and machine leg curl. To keep in mind this fact training exercises are selected as below increase rotational strength and power.

Push-ups & pull-ups – to enhance upper body strength. These exercises have the benefit of training the scapular and humeral stabilizers which strengthens shoulder stability.

Back squat – is more specific to jumping and therefore preferred over the hip sled while leg pressing exercises may be used to strengthen hip and knee extensors. Doing exercises that use the triple extension of the hip, knee, and ankle enhance their ability to use the ground effectively.

### Single-leg squat (hopping on one leg alternately)

Again, the most functional exercises are closed chained. Most movements in sports occur on one leg. As a result, single leg squats are more muscularly specific than open-chained leg exercises.

Hamstring pull & pushups our body will continually learn to move and reposition itself when training the hamstrings Also, the hamstring acts more as a hip extensor than a knee flexor anyway. In movement, the hamstrings main role is to eccentrically decelerate the lower leg and extend the hip.

Medicine ball throw 5kg on wall and catch Medicine ball exercises can be a fun way of training to Exercise is considered more functional when it closely mimics basic human movement

Schedule For functional training group

Functional Exercises	Duration
Warming up	10 Minutes
Push-ups	08 Minutes
Back spuat	08 Minutes
Single-leg squat	09 Minutes
Hamstring pull & pushups	08 Minutes
Pull ups on bar	08 Minutes
Medicine ball throw	09 Minutes
Relaxation	10 minutes
Total	70 minutes

Schedule for Fundamental exercises training

Functional Exercises	Duration
Warming up	10 Minutes
Jumping Jack (leg strength)	08 Minutes
Throw & push ball by tips of finger (lifting)	09 Minutes
Under hand passing ball (passing & lifting)	08 Minutes
Smash ball over the net (Spiking)	09 Minutes
Tossing ball by one hand & hitting by another hand (Service)	08 Minutes
Sideways running ( to receiving the ball)	08 Minutes
Relaxation	10 minutes
Total	70 minutes

Collection of data

SAI Volleyball skill test was selected. SAI Volleyball skill test has tree items.

I)Accuracy of service test= to measure the exactness of service. Number of correct services converted into points.  
II)Wall volleying test= to test the subject's control on volleyball pass. One cycle is constituted by one volley pass and one over head pass that means one pass against the training wall in a standing position and one pass above head from the sitting position. Number of cycles in the best attempt is converted in to evaluation points.  
III)Medicine ball throw test= to measure the general throwing ability of the potential of player. Three medicine balls weight one kg each. Each subject is given tree trails and the best distance is measured for scoring.  
And conducted these test before & after the training for collection of data to test the effect of functional & fundamental training. Collected data were tabulated & statistical means & standard deviations were calculated & applied 't' test for comparison at 0.05 level of significance.

RESULTS

Table 1- SAI Volleyball skill pre & Post Test for fundamental & Functional Exercise group

Skills	Fundamental Exercise Group				Functional Exercise Group				Cal	Tab
	Pre test Means	SD	Post test Means	SD	Pre test Means	SD	Post test Means	SD	t	T
Accuracy of Service	9.8	1.32	12.3	2.2	9.1	1.1	14.3	1.8	3.12	2.03
Wall Test	5.9	0.92	11.2	1.6	5.6	1.1	13.2	2.01	2.27	
Medicine ball Throw	15.5	1.3	19.3	1.6	15.3	1.2	21.8	2.8	2.27	

At 0.05 level of significance with 8(df) degree of Freedom  
Source of data – Actual conducted Pre & post test of SAI Volley ball Skill

FINDING & DISCUSSION

From above table it is indicating that the group who was participating in fundamental exercises they increased their skills according to comparison of pre & post test mean Values as in accuracy of service pre test mean is 9.8 & post test is 12.3. In wall test pre test mean is 5.9 & post test mean is 11.2. Also in medicine ball throw pre test mean is 15.5 & post test mean is 19.3 but the group who was participating in a functional training they increased their skills noticeable in a comparison of pre & post

test means values. As indicating in a table mean of pre test of accuracy of service is 9.1 & post test mean is 14.3 In the skill of wall test pre test mean is 5.6 & post test mean is 13.2. Akin medicine ball throw test pre test mean is 15.2 & post test mean is 21.8. Hence the effect of functional training on the skills of volleyball players is positive. This means due to functional training on the skills of volleyball players is positive. This means due to functional training players astonishing improved in their physiological fitness which helps to improve the skill abilities

### **CONCLUSION**

The study showed very substantial gains and benefits in the functional training group over fixed training. The use of functional training that emphasizes the body's natural ability to move in six degrees of freedom. Hence it is concluded that the functional training is more effective than the fundamental training on volleyball skills of players. Functional training attempts to adapt or develop exercises which allow players to perform the activities of daily in practice more easily.

Hence it is recommended that for effectiveness functional training with equipment like sandbag load has significant physical & physiological benefits over conventional methods. So coaches, trainer and players should adopt this practical training in their conditioning programme to improve the skills of the games & sports.

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