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ORIGINAL ARTICLE

A COMPARISON OF MOTOR ABILITY AMONG WOMEN FOOTBALL, CRICKET AND VOLLEYBALL PLAYERS

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Abstract:

The purpose of the study was to measure & compare selected motor ability among Women football, cricket & volleyball players. For this study thirty players were selected (10 football, 10 cricketers & 10 volleyball players). Standing broad jump, medicine ball put & zig zag run tests were conducted for measuring motor ability. After collecting the data statistics analysis had done with the help of mean, SD, ANOVA & 't' value. From the statistics calculation it was found that standing broad jump ability of the women football players were significantly higher than women cricketers & women volleyball players. Zig zag running ability of the women football players was higher, since lower the time better the performance than the women cricket & women volleyball players. No significance difference was there in case of medicine ball putting ability among women football, women cricket & women volleyball players.

KEY WORDS:

Football, Cricket, Volleyball, strength, speed, agility.

INTRODUCTION

Football refers to a number of sports that involve, to varying degrees, kicking a ball with the foot to score a goal. The most popular of these sports worldwide is association football, more commonly known as just "football" or "soccer".

Cricket is a bat-and-ball game played between two teams of 11 players each on a field at the centre of which is a rectangular 22-yard long pitch. Each team takes its turn to bat, attempting to score runs, while the other team fields. Each turn is known as an innings.

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. It has been a part of the official program of the Summer Olympic Games since 1964.

In every games & sports physical fitness is very important & vital for the performance. Physical fitness is a general state of health and well-being or specifically the ability to perform aspects of sports or occupations. Physical fitness is generally achieved through correct nutrition, exercise, hygiene and rest. It is a set of attributes or characteristics that people have or achieve that relates to the ability to perform physical activity.

Physical strength is the ability of an animal or human to exert force on physical objects using muscles. Increasing physical strength is the goal of strength training.

A strength athlete is a person who trains for or competes in events in which muscular strength and power play a primary role. Such events include weightlifting and power lifting, strength athletics and strongman competitions, and arm wrestling, as well as the "heavy throws" of track and field: shot put, discus, and hammer. The players at certain positions in other sports are also considered strength athletes, including linemen in American football and forwards in rugby football.

The term is also sometimes used to refer to any athlete who participates in regular strength training or weight training, including bodybuilders.

A vertical jump or vertical leap is the act of raising one's center of gravity higher in the vertical plane solely with the use of one's own muscles; it is a measure of how high an individual or athlete can elevate off the ground (jump) from a standstill.

The vertical jump is divided into two different types.

Standing Vertical Jump: This refers to a vertical jump done from a standstill with no steps being involved at all.

Running Vertical Jump: This refers to a vertical jump after an approach or run to help add energy to the jump in an effort to improve on the standing vertical jump.

In general, the standing vertical jump is the one that is used as an official measurement for athletes.

Vertical jump measurements are used primarily in athletic circles to measure performance. The most common sports in which one's vertical jump is measured are track and field, netball, basketball, football, and volleyball, but many sports measure their players' vertical jumping ability during physical examinations. In addition, single and multiple vertical jumps are occasionally used to assess muscular strength and anaerobic power in athletes.

Testing and measurement are the means of collecting information upon which subsequent performance evaluations and decisions are made but in the analysis we need to bear in mind the factors that may influence the results.

The objective of this test is to monitor the development of the athlete's speed and agility.

Sprinting is the act of running over a short distance at (or near) top speed. It is used in many sports that incorporate running, typically as a way of quickly reaching a target or goal, or avoiding or catching an opponent. Human physiology dictates that a runner's near-top speed cannot be maintained for more than 30–35 seconds due to the accumulation of lactic acid in muscles.

Agility or nimbleness is the ability to change the body's position efficiently, and requires the integration of isolated movement skills using a combination of balance, coordination, speed, reflexes, strength, and endurance. Agility is the ability to change the direction of the body in an efficient and effective manner and to achieve this requires a combination of

Balance – the ability to maintain equilibrium when stationary or moving (i.e. not to fall over) through the coordinated actions of our sensory functions (eyes, ears and the proprioceptive organs in our joints);

Static balance – the ability to retain the centre of mass above the base of support in a stationary position;

Dynamic balance – the ability to maintain balance with body movement; speed - the ability to move all or part of the body quickly; strength - the ability of a muscle or muscle group to overcome a resistance; and lastly,

Co-ordination – the ability to control the movement of the body in co-operation with the body's sensory functions (e.g., in catching a ball [ball, hand and eye co-ordination]).

In sports, agility is often defined in terms of an individual sport, due to it being an integration of many components each used differently (specific to all of sorts of different sports). Sheppard and Young (2006) defined agility as a "rapid whole body movement with change of velocity or direction in response to a stimulus".

Agility is also an important attribute in many role playing games, both computer games and as Dungeons and Dragons. Agility may affect the character's ability to evade an attack or negotiate uneven terrain.

METHODOLOGY

Thirty (30) women players were selected for this study. 10 players were taken as the subjects form football, cricket & volleyball (Women). All the players were participated in district level games & sports. Playing ability of the players were measured by standing broad jump, medicine ball put & zig zag run test.

The data was analyzed with the help of mean, SD, ANOVA & 't' test.

RESULT

Table-1 Mean, SD, of height & weight of the subjects

Table-1

Parameter	Women Football Players		Women Cricket Players		Women Volleyball Players	
	Mean	SD	Mean	SD	Mean	SD
Height (cm)	166.10	±2.823	165.40	±3.219	168.39	±4.343
Weight (kg)	58	±3.017	57.80	±5.808	64.79	±7.22
Age (years)	24.10	±1.237	24.30	±1.237	22.5	±1.557

Table -1 represents that the mean height of the volleyball players was greater than of football & cricket players. Similarly mean weight of the volleyball players was greater than the football & volleyball players. The mean age of the cricket players was slightly higher than the football & volleyball players.

Table-2 Mean, SD, of standing broad jump, zigzag run & medicine ball put of the subjects

Table-2

Parameter	WomenFootball Players		Women Cricket Players		WomenVolleyball Players	
	Mean	SD	Mean	SD	Mean	SD
Standing broad jump (cm)	255.30	±9.024	237.60	±10.223	233.70	±10.729
Zig zag run (sec)	24.93	±0.709	25.53	±1.012	26.07	±0.450
Medicine ball put (mts)	8.39	±0.564	8.34	±0.848	8.64	±0.75

Table-2 represents that in standing broad jump & zig zag run tests the mean scores of the three groups were not equal. In case of medicine ball put test mean scores were not identical but were very close.

Science three sets of mean scores in three tests were not identical it was necessary to find the degree of difference. ANOVA test was conducted for the purpose.

Table-3 ANOVA among the three sets of scores of three tests among three groups.

Table-3

Variables	Sources of Variance	df	Sum of Squares	F value
Standing broad jump	S^2b = 2650.20	2	1325.10	11.67
	S^2w = 3064.60	27	113.50	
Medicine ball put	S^2b =0.51	2	0.26	0.51
	S^2w= 13.73	27	0.51	
Zig zag run	S^2b = 6.49	2	3.245	4.917
	S^2w = 17.83	27	0.660	

*At 0.05 level, F (2.27) = 3.35, * At 0.01 level, F (2.27) = 5.49

Table-3 represents the result of the competitive analysis on standing broad jump, medicine ball put

and zig zag run among football, cricket & volleyball players. It appears that significant difference among three sets of means do exist in standing broad jump & zig zag running ability. So there was need for further test.

However difference in mean scores of the three groups in medicine ball putting ability was not significant. To find the degree of difference among means & to identify responsible paired means to make F significant,'t' –test was conducted.

Table-4 Comparison of means ('t' value) of standing broad jump and zig zag run among women football, cricket & volleyball players.

Table-4

		Women Football Players	Women Cricket players	Women Volleyball Players	
Zig zag run (in sec)	Women Football Players		8.31*	10.14*	Standing Broad Jump (in cm)
	Women Cricket players	3.695*		1.83 NS	
	Women Volleyball Players	7.019*	3.325*		

Not Significant, *At 0.05 level of significant, t value is 2.05.

Table -4 represents that for standing broad jump out of three sets of paired means two (Women football vs cricket vs volleyball) were significantly different. However difference between women volleyball & cricket players, it was not significant. On the other hand in zig zag run test all the three means were significantly different among themselves.

As women football players look much less time in zig zag run than women cricket & women volleyball players, they were better than the later in this event.

On the other hand women cricket players were better than women volleyball players.
Women football players were best in standing broad jump among the groups.
On the other side women cricket players were better than women volleyball players. Women football players were best in standing broad jump among the groups.

CONCLUSIONS

On the basis of the results obtained in the present study following conclusions are drown.

i)The standing broad jump ability of the women football players was significantly higher than the women cricket & women volleyball players.
There was no significant different in standing broad jumping between women cricket & women volleyball players.
ii)The zig zag running ability of the women football players were higher, since lower the time better the performance than the women cricket & women volleyball players.
So it may be concluded that the women football players were more agile than the other two groups.
iii)There was no significance difference in medicine ball putting ability among women football, women cricket & women volleyball players.

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