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"Relationship Of Motor Fitness Variables With Playing Ability Of Volleyball Athletes Of Punjab"

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ABSRACT

The purpose of the present research was to find out the relationship between selected Motor Fitness Variables with playing ability of Volleyball athletes of Punjab. 96 State level Volleyball Athletes from Punjab, age ranging from 16 to 18 years having minimum State level participation or position holders in state Volleyball competitions have been selected. The random sampling technique has been used to gather the required data. To established relationship between selected Motor Fitness Variables and performance in Volleyball test (dependent variables), Pearson's product moment coefficient of correlation was used. The results revealed that there was a significant relationship between Motor Fitness Variables and Playing ability of Volleyball athletes.

Keywords: Motor Fitness Variables, Playing ability, Volleyball, State Level.

INTRODUCTION

Spirited world of modern era is full of competition in every field. There is always fight for supremacy and fineness in Sports. It is aimed at revealing a Country's overall supremacy at the international level. Sports work well to highlight national pride and culture. Stress is placed on spotting talent, researching and training so that the brilliance can be produced from it and can bring international name, fame and glory and can enhance nation's status in the eyes of the world. Winning or losing in sports is depicted as nation's triumph or loss socially, economically and politically.

The term "motor fitness" is mostly used interchangeably with physical fitness by the physical education people, but it is very vital for the physical education pupils to know the basic alteration between physical fitness and motor fitness. Physical fitness is used to denote only four basic fitness components (muscular strength, muscular endurance, cardiovascular endurance and flexibility), whereas motor fitness is a more broad term which includes all the ten fitness components like four physical fitness, one health related fitness and five motor performance components, power, speed, agility, balance and reaction time, which is vital for the attainment of victory

in sports. In other words, motor fitness refers to the expertise in basic movements and in addition to terms of physical fitness.

METHEDOLOGY

For the present research 96 State Level Volleyball athletes from various districts of Punjab, age ranging from 16 to 18 years, having minimum State level participation or position holders in Volleyball state competitions have been selected. To gather the required data random sampling technique was used. Various Motor Fitness Variables, i.e. Speed, Explosive Shoulder Strength, Explosive Leg Strength, Agility, Reaction time, Cardiovascular Endurance. Five point rating scale with fifty points was used to assess the Volleyball Playing Ability, which have the following Basic Skill items:

- Attacking
- Blocking
- Setting
- Floor defense

STATISTICAL ANALYSIS

To find out relationship between selected Motor Fitness Variables and performance in Volleyball test (dependent variables) Pearson's product moment coefficient of correlation was used.

RESULTS AND DISCUSSION

Table 1: Correlation matrix for relationship between playing ability and Motor fitness parameters

	Playing Ability	**Speed**	**Explosive shoulder strength**	**Explosive leg strength**	**Agility**	**Reaction time**	**Cardiovascular Endurance**
Playing Ability	-						
Speed(Seconds)	-0.435**	-					

Explosive shoulder strength(Meter)	0.012	-0.039	-				
Explosive leg strength(Meter)	0.215*	-0.229*	-0.068	-			
Agility(Seconds)	-0.404**	0.221*	0.111	-0.182	-		
Reaction time(Seconds)	-0.305**	0.417**	-0.020	-0.070	0.209*	-	
Cardiovascular Endurance (Meter)	0.246*	0.002	0.041	0.123	-0.213*	-0.052	-

** Correlation is highly significant (P ≤ .01)

* Correlation is significant (P ≤ .05)

The correlation matrix shown in Table 1 suggested significant relationship between majority of motor fitness parameters and playing ability of male Volleyball athletes. The relation of motor fitness variables was very weak to weak strengthened. Speed (r -0.435), Agility (r -0.404) and Reaction time (r -0.305) were negatively correlated to playing ability. While Explosive shoulder strength (r 0.012), Explosive leg strength (r 0.215) and Cardiovascular endurance (r 0.246) were positively correlated to playing ability.

Table 2 : Relationship between playing ability and motor fitness among athletes

	Average (n-27)	**Good (n-69)**	**Total (n-96)**

	Mean ± SD	r	Mean ± SD	r	Mean ± SD	r
Playing ability	32.85 ± 0.62	-	38.93 ± 2.80	-	37.22 ± 3.64	-
Speed(Seconds)	7.14 ± 0.40	0.208	6.92 ± 0.44	-0.495**	6.98 ± 0.44	-0.435**
Explosive shoulder strength(Meter)	13.47 ± 2.00	-0.034	13.67 ± 1.81	-0.040	13.61 ± 1.85	0.012
Explosive leg strength(Meter)	2.36 ± 0.35	0.136	2.49 ± 0.36	0.162	2.45 ± 0.36	0.215*
Agility(Seconds)	12.87 ± 1.59	-0.313	12.15 ± 0.92	-0.415**	12.35 ± 1.19	-0.404**
Reaction time(Seconds)	6.15 ± 0.98	0.040	5.82 ± 0.89	-0.349**	5.91 ± 0.92	-0.305**
Cardiovascular Endurance (Meter)	2073.70 ± 203.09	0.074	2210.65 ± 231.96	0.075	2172.14 ± 231.59	0.246*

** Correlation is highly significant (P ≤ .01)

* Correlation is significant (P ≤ .05)

The relationship of motor fitness parameters according to average and good playing ability varies from very weak to nearly moderate relationship. The speed displayed by players for 50 meter dash run resulted in significant ($p<0.01$) nearly moderate correlation coefficient (r -0.495). Explosive shoulder strength was positive (r 0.012) and very weak for total athletes but very weak negative relationship was seen for

average (r -0.034) and good (r - 0.040) playing ability groups thus no direction of correlation could be certainly accepted for inference. Very weak positive correlation was visible between Explosive leg strength for both groups of playing ability and total volleyball athletes (r 0.215). Agility while doing shuttle run was negatively (r -0.404) related to playing ability but maximum in good playing ability group (r -0.415) having less mean time (M-12.15). Reaction time was found inversely correlated to playing ability (r -0.305). Similarly low mean reaction time (M-5.82 seconds) enhances the playing ability of athletes. Cardiovascular endurance was significant and positively correlated (r 0.246) to playing ability.

CONCLUSIONS OF THE STUDY

1. Speed of Volleyball players was having weak negative but significantly correlation (r -0.435) to playing ability. Good playing ability has more moderate negative relationship with lesser mean time (M-6.92 seconds).
2. Explosive shoulder strength was found positively (r 0.012) correlated to playing ability but both playing ability groups, i.e. -0.034 and -0.040 respectively, were inversely related to explosive shoulder strength.
3. Explosive leg strength had significant and very weak positive (r 0.215) correlation with playing ability along with average (r 0.136) and good (r 0.162) playing ability groups.
4. The correlation coefficient between agility and playing ability was significant weak negative (r -0.404) for total students. The same trend was seen in both playing ability groups.
5. The relationship of reaction time with playing ability was showing significant weak negative (r -0.305) correlation coefficient.
6. Cardiovascular endurance of male Volleyball players was having significant positive (r 0.246) correlation with their playing ability.

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