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RELATIONSHIP OF MUSCULAR ENDURANCE IN RELATION TO THE PLAYING ABILITY OF FEMALE BASKETBALL PLAYERS

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Abstract: In this study, relationship of selected physical fitness variable with playing ability of female basketball players was examined. For the purpose of selection of the subjects, around one hundred and fifty two (N=152) female basketball players (State Level position holders) of 18-25 years of age group from Punjab region were chosen to act as subjects. The physical fitness variable, considered to be the independent variable chosen was: muscular endurance. The playing ability which was taken as the performance factor i.e. dependent variable was subjectively assessed by qualified basketball coaches. The present study consists of four dependent variables namely: speed shot shooting test, passing test, control dribble test and defensive movement test. The subjects were selected on the basis of purposive sampling technique as the female basketball players of state level positon holders from Punjab region were selected. The inter relationship among the selected physical fitness variables and basketball paying ability were calculated using pearson product-moment correlation. The results showed that muscular endurance was significantly correlated with playing ability parameters passing test and control dribble test and was negatively correlated with speed shot shooting and defensive movement test.

Key words: Muscular endurance, dependent variables, correlation, basketball players.

Introduction:

For the purpose of selection of the subjects, around one hundred and fifty two (n=152) female basketball players (state level position holders) of 18-25 years of age group from Punjab region were chosen to act as subjects. The chosen subjects were the volunteers to participate in the study. Keeping in mind the objectives of the study and availability of standard instruments for measurements, the physical fitness variable selected among the female basketball players was muscular endurance. The test item selected for muscular endurance was sit ups. The dependent variables selected for the study were: speed shot shooting test, passing test, control dribble test and defensive movement test. The subjects were selected on the basis of purposive sampling technique as the female basketball players of state level positon holders from Punjab region were selected. The purpose of the study was to find out the relationship of selected physical fitness variable in relation to the playing ability of female basketball players.

Physical fitness is the most important factor required for a good health, in order to carry on daily routine activities, even under the condition of fatigue and to tackle unexpected happenings. Fitness relates to

physical fitness components and health related components. Physical fitness consists of speed, agility, power and reaction time, whereas health related components consists of muscular strength, muscular endurance, cardiovascular endurance, body composition and flexibility. According to **Clarke (1971)** it is the skill or energy possessed by an individual, to carry out daily routine tasks, with enough or more than enough energy to spend free time and to tackle unexpected happenings. Generally bodily fitness depends upon the nature of hobby performed by means of an character i.e. A sportsman required absolutely different sort of bodily fitness level as examine to a everyday layman, alternatively a baby required different sort of bodily health level as compare to adult and older. Every character has different form of duties in their each day ordinary and their bodily health stage depends upon their work. Physical fitness divided into fitness associated health or skill related health **(Caspersen et al., 1985)**.

Research Methodology:

Around One Hundred and Fifty two (N=152) Female Basketball Players (State Level position holders) of 18-25 years of age group from Punjab region were chosen to act as subjects. The chosen subjects were the volunteers to participate in the study. The independent variable selected was: muscular endurance and dependent variables selected were: Speed Shot Shooting Test, Passing Test, Control Dribble Test and Defensive Movement Test. The test items selected for muscular endurance was sit ups. The objectives and importance of the study were described to the players prior to the measurements to motivate them and to get their cooperation during the tests. The study was delimited to the selected Physical Fitness and AAHPERD (American Alliance for Health, Physical Education, Recreation and Dance) Basketball Skill Test Variables. 0.05 was considered an appropriate level of confidence to test significance.

Statistical Technique:

1. Statistical analysis was performed using SPSS version 16.0 for windows (SPSS Inc, Chicago, IL, USA).
2. Karl Pearson's product moment co-efficient of correlation was computed to assess the relationship of physical fitness variables with various basketball skill abilities among the basketball players.

Results and Discussions:

Relationship of selected Physical Fitness Variable in relation to playing ability of Female Basketball Players:

S. No.	Variables	N	Speed Shot Shooting		Passing Test	
			Pearson Correla-tion	Sig. (2-tailed)	Pearson Correla-tion	Sig. (2-tailed)
1.	Muscular Endurance	152	0.052	0.523	0.161	0.048

Table 1: this table shows the analysis regarding relationship of muscular endurance in relation to the playing ability (speed shot shooting, passing test) of female basketball players.

S. No.	Variables	N	Control Dribble Test		Defensive Movement Test	
			Pearson Correla-tion	Sig. (2-tailed)	Pearson Correla-tion	Sig. (2-tailed)
1.	Muscular Endurance	152	-0.168	0.038	-0.137	0.093

Table 2: this table shows the analysis regarding relationship of muscular endurance in relation to the playing ability (control dribble test, defensive movement test) of female basketball players.

The results showed that the physical fitness variable (muscular endurance) selected was significantly correlated with playing ability parameters passing test and control dribble test and was not significantly correlated with speed shot shooting and defensive movement test.

Conclusion:

From the above results, we can conclude that the physical fitness variable i.e. muscular endurance has significantly positive relation with playing ability parameters passing test (0.161) and control dribble test (-0.168) but has negative correlation with speed shot shooting (0.052) and defensive movement test (-0.137). Therefore, this parameter must be trained in order to get performance of the players.

Recommendations:

1. This study will help to get the knowledge about the Physical Fitness characteristics of Female Basketball Players.
2. This study will help in identifying the Physical Fitness variables that may add to the Playing Ability of Female Basketball Players.
3. The results will help the Coaches, Instructors and Administrators to select appropriate Basketball Players.
4. This study will help the Coaches, Instructors to select and provide the appropriate Training Method in accordance to their present level of Physical Fitness variables.
5. The study will help in motivating the Players to excel more by knowing the present status of their Physical Fitness variables.

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