A prediction of playing performance from selected anthropometric, physical and physiological variables of state level volleyball players

B Manjunatha and Dr. AG Bujurke

Abstract
Purpose of the study is to find out the selected anthropometric, physical and physiological variables predict playing performance of state level volleyball players. 150 male state level Volleyball players participated as the samples for the study. Different anthropometric, physical and physiological variables namely (Weight, Standing height, Sitting height, Arm length, Arm span, Palm breadth, Chest girth, Waist girth, Hip girth, Thigh girth, Calf girth, Speed, Agility, Flexibility, Leg explosive strength, Muscular endurance, Harvard step up, Resting heart rate and Peak expiratory flow rate) measured of samples. Standard procedure was followed to measure the anthropometric, physical and physiological variables. To measure the playing performance of samples while playing the match five experts (Coaches) of volleyball were asked to assess the playing performance of the player in match situation and rate the players playing performance for 10 marks each. After that all five experts’ marks were added and averaged to get the consolidated marks of playing performance. Multiple regression analysis with step wise method was used as statistical tool to predict the playing performance of volleyball players. Results revealed that two anthropometric measurements and one physical fitness variable predicted significant with skill performance. The implication of results are discussed.

Keywords: Anthropometric, physical, physiological, playing performance and volleyball players

Introduction
Sports is the activity through which the physical ability is maintained and improved by participating in competitive physical activity or games. It provides the enjoyment to participants and entertains the spectators. There are many kinds of sports. Some of them include single participants while some include more than one participant. Sport is recognized through the system of activity which is based on the physical ability of an individual. However, there are certain sport which is recognized through the mental ability of an individual such as chess. Sports contains some rules which ensures fair competition and allow the best person to win. Winning depends on the ability of a person who is capable of defeating the opponent by following the game rules.
These days’ sports have become the major source of entertainment. It not only draws large crowd but also generates the revenue. A number of competitions is set to be a tournament where the winning person or the winning team is declared as champions. Some sports are played through leagues, whereas some are played in seasons and it follows by playoffs.

Volleyball
Volleyball is a sport played by two teams on a playing court divided by a net. There are different, versions available for specific circumstances in order to offer the versatility of the game to everyone. The object of the game is to send the ball over the net in order to ground it on the opponent’s court, and to prevent the same effort by the opponent. The team has three hits for returning the ball (in addition to the block contact). The ball is put in play with a service: hit by the server over the net to the opponents. The rally continues until the ball is grounded on the playing court, goes “out” or a team fails to return it properly. In Volleyball, the team winning a rally scores a point (Rally Point System). When the receiving team wins a
rally, it gains a point and the right to serve, and its players rotate one position clockwise.

**Objective of the study**
To find out which selected anthropometric, physical fitness and physiological variable significantly predict the playing performance of volleyball players

**Methods**
For the purpose of study 150 male state level volleyball players from various districts of Karnataka state served as the sample for the study. All samples age category was between 18 to 25. Standard procedure was followed to measure the anthropometric, physical fitness and physiological variables. To measure the Playing performance, samples were playing the match five experts of volleyball were asked to assess the skills of the player in match situation and give their marks for

**Results**
In the following table we can observe the R, R Square and R Square Change of anthropometric, physical and physiological variables and “r” value with significance level in relation to playing ability.

**Recommendations**
With the help of results derived from the present study. The following Recommendation can be made

1. The present study results can be very much useful for physical educators, coaches and trainers for screening and selecting potential volleyball players at university level.
2. Further the result of the study can help experts to frame different methods of training by emphasizing the development of factors which are significantly related to volleyball performance at different levels
3. It is recommended that the present study is limited to anthropometric, physical and physiological variables, further it can be extended to motor fitness variables and psychological variable.
4. It is recommended that the present study may be repeated by selecting subjects belonging to different age groups
5. This study is only limited to male volleyball player, further it can be extend to female volleyball players also.
6. This study is only limited to Karnataka state level players it can be further extended to University, Super division and A division tournament players.

**References**


