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Influence of selected anthropometric measurement on power of volleyball men players

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Abstract

An anthropometric measurement has wide applications as one of the essential parameters consisting of the selected diagnostics of any game or sport. The anthropometric indices aided in evaluating potentiality for athletic performance. International sports performance in various sports and games are influenced by many factors such as level of physical, physiological, anthropometric measurements and psychological abilities. In volleyball, technical and tactical skills, anthropometric characteristics and individual physical performance capacities are most important factors that contribute to the success of a team in competitions. The study was to know the influence of selected anthropometric measurements such as height, leg length, thigh girth and calf girth on leg power of inter university volley ball players. The purpose of the study forty inter University volleyball players were randomly selected during inter university tournament and standardized tests were used to collect the anthropometric measurements and leg power tests. Data was collected on height, Leg length Thigh girth, calf girth and leg power. The collected data was analyzed by using Carl Pearson co-efficient of correlation statistical technique was used to know the influence of selected anthropometric measurements on leg power of inter university volley ball players. The relationship of selected anthropometric measurements on leg power of volley ball men players. There is a significant relationship between power and calf girth of volleyball players when 'r' value is tested at 0.05 level of significance. But the 'r' value of rest of the selected anthropometric measurements shows a positive correlation with leg power.

Keywords: Anthropometric measurement, power, volleyball

Introduction

Sports have been of great interest to people from times immemorial. Even today a sport is on the world map. Olympic Games, world cup tournaments, Asian games, test matches and national occupy the headlines in news papers. Everyday columns after columns are devoted to the sports news. The importance and the recognition which the sports have received from government, press and public clearly indicate that sports are not taken up for mere recreations or prestige purpose of participation in sports.

In volleyball, technical and tactical skills, anthropometric characteristics and individual physical performance capacities are most important factors that contribute to the success of a team in competitions (Hakkinen, 1993).

An anthropometric measurement has wide applications as one of the essential parameters consisting of the selected diagnostics of any game or sport. The anthropometric indices aided in evaluating potentiality for athletic performance. International sports performance in various sports and games are influenced by many factors such as level of physical, physiological, anthropometric measurements and psychological abilities.

Volleyball players require well-developed muscular strength, power and endurance, speed, agility, and flexibility, and have a high level of jumping ability, fast reaction time and swift movements (She, 1999). Considerable demand is also placed on the neuromuscular system during sprints, jumps (blocking and spiking), and high-intensity court movements that occur repeatedly during competition (Hakkinen, 1993). Optimal physique is apparently an advantage to volleyball performance. Only when a volleyball team is collectively equipped with the entire ideal anthropometric characteristics can the team win the dominance in a game (Chen, 2005).

Objective

The main objective of the study was to know the influence of selected anthropometric measurements such as height, leg length, thigh girth and calf girth on leg power of inter university volley ball players.

Methodology

To achieve the purpose of the study forty inter University volleyball players were randomly selected during inter university tournament and standardized tests were used to collect the anthropometric measurements and leg power tests. Data was collected on height, Leg length Thigh girth, calf girth and leg power.

Statistical Technique

The collected data was analyzed by using Carl Pearson coefficient of correlation statistical technique was used to know the influence of selected anthropometric measurements on leg power of inter university volley ball players.

Table 1: Relationship between selected anthropometric measurements and power

Sl no	Variables	Correlation co-efficient
1	Power and height	0.023
2	Power and leg length	0.198
3	Power and thigh girth	0.299
4	Power and calf girth	0.341*

* Significant at 0.05 level

The above table shows the relationship of selected anthropometric measurements on leg power of volley ball men players. There is a significant relationship between power and calf girth of volleyball players when 'r' value is tested at 0.05 level of significance. But the 'r' value of rest of the selected anthropometric measurements shows a positive correlation with leg power.

Conclusion

The present investigation shows that there is a significant relationship between leg power and calf girth of inter university volleyball men players. But there is a negligible correlation between height and power, and leg length and power. There was a low correlation between Thigh girth and power of inter university volleyball men players.

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