INTERRELATIONSHIP OF SELECTED ANTHROPOMETRIC MEASUREMENTS AND SPIKING ABILITY IN INTERUNIVERSITY VOLLEYBALL PLAYERS

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Abstract: The main purpose of the study was to know the interrelationship of selected anthropometric measurements and spiking ability in interuniversity volleyball players.
Methodology: To achieve the purpose of the study data was collected from 80 (eighty) volleyball players who have represented their university volleyball teams in the intervarsity tournament. Variables considered for this study was Height, weight, Leg length, Arm length, Fore arm length, Fore arm circumference, Upper arm girth, Chestgirth,Thighgirth,and Calf girth and performance variable spiking . Data was collected by using standardized method. Results: Data collected was treated with the product moment correlation statistical technique, the results showed that there was a significant relationship between the selected anthropometric measurements and the volley ballplayers spiking ability.

Key Words: Spiking, Volleyball, Anthropometric Measurements.

INTRODUCTION

Physical education, an integral part of the total education process in a field of Endeavour that has as its aim of the development of physically, mentally, emotionally, and socially fit. The modern world appears to be much more concerned with the world of sports. The hold of sports has grown very strong on the mind of individual in the society at large. Sportsmen and spectators are very clear about the values and significance of sports. There is hardly any individual who has been left out of its impact in the countries of the present world. Now winning the competition involves national prestige as each nation strives to win a tournament in which they compete. There are certain nations/states, which try to project the superiority of their political ideology and socio-political system through spectacular achievements in the field of sports. They show their excellence by winning the maximum number of medals at the international competitions like Olympic Games, world cup and world championship etc. The participating competitors in sports, at the international level bring name, fame and laurels for their countries and raise their prestige high in the world.

Anthropometry is the measurement of body size and proportions. The measurements include body weight, height, circumference, skin fold thickness and bony widths and lengths. Anthropometry is a branch of science concerned with comparative measurements of the human body, its parts, and its proportions and composition. It is the study of measurement of the human body in terms of the dimensions of bone, muscle and adipose tissue. Anthropometry has been used to assess gross structure and function. There are numerous factors which are responsible for the performance of a sportsman. The physique and body composition, including the size, shape and form are known to play a significant role in this regard. At present, sportsman for superior performance in any sports is selected on the basis of physical structure and body size. Anthropometric measurements are widely used to assess and predict performance in various sports.

Anthropometric measurements and morphological characteristics play an important role in determining the success of a sportsperson. An athlete's anthropometric and physical characteristics may represent important prerequisites for successful participation in any given sport Indeed, it can be assumed that an athlete's anthropometric characteristics can in some way influence his/her level of performance, at the same time helping to determine a suitable physique for a certain sport. It has been well established that specific physical characteristics or anthropometric profiles indicate whether the player would be suitable for the competition at the highest level in a specific sport.

Volleyball which is an excellent all-round team sport has been widely accepted as a highly competitive as well as a recreational game throughout the world. It is now recognized as one of the most breath taking and dramatic sport of the Olympics both from the players and spectators view Point. There are many sports which a person can choose from. One such sport is volleyball which is a very popular modern indoors and out door game with fast and quick action. Volleyball is a complex game of simple skills. It is a sport played by two teams consisting of 12 players each on a playing court, divided by a net. 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 front row players' task is to attack and "spike" the ball, or "block" a ball, to prevent the ball crossing the netThe volleyball spike is a gross, open, and continuous skill.

Purpose of the study

The purpose of the study was to know interrelationship of selected anthropometric measurements and spiking ability in interuniversity volleyball players

Methodology

To achieve the purpose of the study the data was collected from eighty volleyball male players, who participated in the Inter University volleyball tournament.

Selection of Variables

For this study Anthropometric measurements such as Height, weight, Leg length, Arm length, Fore arm length, Fore arm circumference, Upper arm girth, Chestgirth,Thighgirth,and Calf girth and playing ability variable Service accuracy were selected .Data pertaining to anthropometric measurements were collected by The height was measured with an stadiometer, The weight was measured with an weighing machine ,and other anthropometric measurements was measured with an gulicktape,and standardized tests were used for spiking ability.

RESULTS

The data collected from the subjects were treated with Product Moment Correlation to know the correlation of anthropometric measurements and volley ballplayers service accuracy ability By using Statistical package for social sciences 20th version and results are presented in the following tables.

Table-1. Shows the interrelationship of spiking ability and the anthropometric measurements.

Variables	Correlation coefficient
Spiking ability and height.	.880
Spiking ability and weight.	.526
Spiking ability and leg length.	.794
Spiking ability and arm length.	.790
Spiking ability and fore arm length.	.812
Spiking ability and Fore arm circumference	.420
Spiking ability and Upper arm girth.	.425
Spiking ability and Chest girth.	.444
Spiking ability and Thigh girth	.226
Spiking ability and Calf girth	.284

Significance at the 0.05 level

The above table indicates the Spiking ability significantly related to Height(r=.880), weight(r=.526), Leg length(r=.794), Arm length(r=790), Fore arm length(r=812), Fore arm circumference(r=.420), Upper arm girth(r=425), Chest girth(444.),Thigh girth(r=.226),and Calf girth(r=284). Therefore, it is evident that Height, weight, Leg length, Arm length, Fore arm length, Fore arm circumference, Upper arm girth, Chestgirth, Thigh girth, and Calf girth contributed to spiking ability.

CONCLUSIONS

Within the limitation of the study, the Anthropometric Measurements Height, weight, Leg length, Arm length, Fore arm length, Fore arm circumference, Upper arm girth, Chest girth, Thigh girth, and Calf girth, are significantly related to volley ball player spiking ability. Athletic success is multifactorial and that anthropometric attributes are not only and definitive factor in athletic performance. Despite this, in a sport such as volleyball, several elements in the in anthropometric profile such as Height, weight, Leg length, Arm length, Fore arm length, Fore arm circumference, Upper arm girth, Chestgirth,Thighgirth,and Calf girth all can influence competitive success.

REFERENCES

[1] AAHPER. "Skill TEST Manual Volleyball for Boys and Girls", Washington: D.C. 1965.

[2] Amasay, T. (2008) Static block jump techniques in volleyball: Upright versus squat starting positions. Journal of Strength and Conditioning Research, 22(4):1242- 1248.

[3] Baker, D. 1996. Improving Vertical Jump Performance Through General, Special and Specific Strength Training: A Brief Review. Journal of Strength and Conditioning Research. 10(2): 131-136.

[4] Bhola, P.K. "Relationship between Anthropometric Measurements and Jumping Abilities of Volleyball Players." Unpublished Ph.D. Thesis,LNUPE. 1984.

[5] Chen, X.R. (1989). Handbook of Volleyball, Published by Si Chuan Dictionary Press,

[6] Chen, X.R. (2005). Volleyball. Beijing: Higher Education Press.

[7] Joseph, V.K. (1983). Relationship of power, agility and measurement of selected body segments to volleyball playing ability, (unpublished Master's Thesis, Jiwaji University).

[8] Malatesta, D., Cattaneo, F., Dugnani, S., & Maffiuletti, N.A. (2003). Effects of electromyostimulation training and volleyball practice on jumping ability. J Strength Cond Res, 17(3), 573-9.

[9] Malatesta, D., Cattaneo, F., Dugnani, S., & Maffiuletti, N.A. (2011). Effects of electromyostimulation training and volleyball practice on jumping ability. J Strength Cond Res, 25(8), 2151-60.

[10] Murugesan, G. (1981). Relationship of height, agility and vertical jump to spiking in volleyball, (Unpublished Master's Thesis, Jiwaji University).