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ANTHROPOMETRIC AND MOTOR FITNESS PREDICTOR OF VOLLEYBALL PERFORMANCE OF INTER COLLEGE LEVEL PLAYERS

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Abstract:

Introduction:
Physical education, sports and motor fitness are interrelated terms. One of the significant aim of every physical education and sports program is to develop motor fitness meant nearly muscular strength. This concept of motor fitness has also undergone a change, now a new concept of "total physical fitness mean that which characteristic the degree to which the person is able to function."

Physical education is one of the objectives of physical education as there objective is round by physical education alone. Further this objective is basic to their functioning of man in every walk of life. Let alone sports performance, motor fitness is acclaimed as one of the essential requirement of personality development. It is equally required for man and women of all sphere of life.

In the field of physical education one of the objective of testing and measuring is to place a proper person in to a proper activity and thus to avoid misfit as for as possible. For all sort of activity Physical fitness is very essential. It is repeated to the ability to meet the demands of the environment specifically to preserves to with stand stress to resist fatigue and to possess the energy for and abundant life.

Objectives of the Study :
Following were the objectives of the present study :-

1) To find out the some anthropometric measurement of Volleyball players.
2) To find out the motor fitness of Volleyball players.
3) To evaluate the performance of Volleyball players.
4) To find out the relationship of anthropometric measurement with performance ofVolleyball players.
5) To find out the relationship of motor fitness with performance of Volleyball players.
6) To find out the relationship of motor fitness with anthropometric measurement.

Hypothesis :
It was hypothesized that there would be significant difference in
Motor fitness and anthropometric measurement with performance of Volleyball players.

Scope of the Study :
Delimitation :
The study was delimited in following aspects : -

1) The study was delimited to YavatmalDistrict only.
2) The study was depend upon the data collected from Volleyball players.
3) The study was delimited on 20 male subjects.
4) Only inter collegiate Volleyball players was taken into consideration.
5) The age group of selected subjects was ranging from 18 – 25 yearsonly.
7) Only male Volleyball players was included

Limitation:
In this study following are the limitations, which was consider while interprets the result

1) Economic – status, social status and political situations was not take
2) into consideration.
3) Personality traits and habits was not cover in the study.
4) There was no control on these factor like diet, daily routine.
5) Motivational technique was not be consider.
6) Environmental factor.
7) Personal habits of subject would not be under the control of
8) researcher.
9) Knowledge of the subject about the importance of the motor
10) Fitness would also be out of control of the researcher.
11) Interest of the subject towards the conductance of testes would be beyond the control of the researcher.

Source of Data :
The source of data was college level Volleyball players ofYavatmal District of Maharashtra.

Selection of Subjects :
The researcher was selected 20 Volleyball players from yavatmal district who had participated at inter college level in santGadge Baba Amravati University Amravati.

Selection of Test :
For present study the research scholar used different equipment for the anthropometric measurement , J.C.R. motor fitness and Brady Volleyball test was conducted for motor fitness and performance it will be checked by mean of the score given by three judges.

Collection of Data :
Data was collect the data by administering motor fitness and anthropometric measurement as given previously. Scores of administrated test was recorded as raw score of the present study. Further raw score was converted into standard score and was put for analysis.

Statistical techniques used :
Present researcher was use product movement method for finding out co-relation between given variables for the study.

Table ITable showing the Correlation of Vertical Jump Test with anthropometric items of Volleyball players.

Variables	Coefficient	Relationship	'r'Table
Body Height	0.33*	Low	**0.312**
Body weight	0.10@	Negligible	
Arm Length	0.19@	Negligible	
Leg Length	0.62*	Moderate	
Foot Length	0.89*	High to very High	

@ = insignificant * =significant
38df. of at 0.05 level of significant

Table I show that significant difference was found in relation of Vertical Jump with body height, leg length and foot length. Because calculated value of 'r' 0.33, 0.62, and 0.89. weregrater than table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

Above table also reveal that the significant difference was not found in relation of Vertical Jump with body weight and arm length because calculated value of 'r' i.e. 0.10 and 0.19 where less than the table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

It can also be seen that the obtained value of correlation for body height and leg length with Vertical Jump was found low and moderate. Where as correlation of body weight and arm length with Vertical Jump was found negligible.Where as the correlation of Vertical Jump with foot length was found 0.89 which is high to very high.

It can also be revealed form the table that moderate and high to very high correlation with Vertical Jump also indicate the importance anthropometric measurement in Volleyball performance.

Table II Table showing the Correlation of Chinning Up Test with anthropometric items of Volleyball players.

Variables	Coefficient	Relationship	'r'Table
Body Height	0.63*	Moderate	**0.312**
Body weight	0.18@	Negligible	
Arm Length	0.32*	Low	
Leg Length	0.64*	Moderate	
Foot Length	0.17@	Negligible	

@ = insignificant * =significant
38 df. of at 0.05 level of significant

Table II show that significant difference was found in relation of Chinning up with body height, arm length and leg length. Because calculated value of 'r' 0.63, 0.64, and 0.32. weregrater than table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

Above table also show that the significant difference was not found in relation of chinning up with body weight and foot length because calculated value of 'r' i.e. 0.18 and 0.17 where less than the table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

It can also be seen that the obtained value of correlation for body height and leg length with chinning up was found moderate. Where as correlation of body weight and foot length with chinning up was found negligible.Where as the correlation of chinning up with arm length was found 0.32 which is low.

It can also be revealed form the table that moderate and low correlation with chinning up also indicate the value of anthropometric items of Volleyball performance.

Table III Table showing the Correlation of Shuttle Run Test with anthropometric items of Volleyball players.

Variables	Coefficient	Relationship	'r'Table
Body Height	0.36*	Low	**0.312**
Body weight	0.60*	Moderate	
Arm Length	0.24@	Low	
Leg Length	0.80*	High to very High	
Foot Length	0.19@	Negligible	

@ = insignificant * =significant
38 df.of at 0.05 level of significant

Table III show that significant difference was found in relation of Shuttle Run with body height, body weight and leg length. Because calculated value of 'r' 0.36, 0.60, and 0.80. weregrater than table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

Above table show that the significant difference was not found in relation of Shuttle Run with arm length and foot length because calculated value of 'r' i.e. 0.24 and 0.19 was less than the table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

Above table shows that the obtained value of correlation for body height and arm length with Shuttle Run was found low. Where as correlation of body weight and foot length with Shuttle Run was found moderate and negligible.Where as the correlation of Shuttle Run with leg length was found 0.80 which is high to very height.

It can also be revealed form the table that moderate and high to very high correlation with Shuttle Run also indicate the value of anthropometric items of Volleyball performance.

Table IV Table showing the Correlation of Volleyball performance test with anthropometric measurement and motor fitness.

Variables	Coefficie	Relationship	'r'Tabl
Vertical jump	0.66*	Moderate	**0.312**
Chinning up	0.87*	High to very High	
Shuttle Run	0.11@	Negligible	
Body height	0.83*	High to very High	
Body weight	0.27@	Low	
Arm length	0.57*	Substantial	
Leg Length	0.62*	Moderate	
Foot Length	0.32*	Low	

@ = insignificant * =significant
38 df.of at 0.05 level of significant

Table IV show that significant difference was found in relation of Volleyball performance test with vertical Jump, chinning up, body height, arm length and foot length. Because calculated value of 'r' 0.66, 0.87, 0.83, 0.57, 0.62 and 0.32. weregrater than table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

Above table also show that the insignificant difference was found in relation of Volleyball performance test with shuttle run and body weight because calculated value of 'r' i.e. 0.11 and 0.27 where less than the table value of 'r' i.e. 0.312 at 38 degree of freedom at 0.05 level of significance.

Above table shows that the obtained value of correlation vertical jump and leg length with Volleyball performance was found moderate. Where as correlation of shuttle run and arm length with Volleyball performance was found substantial and negligible. Where as the correlation of Volleyball performance with chinning up and body height was found high to very high. Where as correlation of body weight and foot length with Volleyball performance test was found 0.27 and 0.33 which is low.

Conclusion:

On the basis of finding of the present study following conclusion were drawn.

It was seen in table I that there was significant difference in relation of body height of 0.33, leg length 0.62 and foot length 0.89 with vertical jump because the obtained value was grater than the tabulated value 'r' 0.312. 38 degree of freedom at 0.05 level of significance. Where there was no significant difference in relation of body weight 0.10 and arm length 0.19 with vertical jump because the obtained value is less than the tabulated value 'r' 0.312 with 38 degree of freedom at 0.05 level of significance.

It is also shown in table II there was significant difference in relation of body height 0.63, arm length 0.32 and leg length 0.64 with chinning up because both the value are higher as compared to table value 'r' 0.312 with 38 degree of freedom at 0.05 level of significance. Where as body weight 0.18 and foot length 0.17 with chinning up because both value are higher as to compared 'r' 0.32 with 38 degree of freedom at 0.05 level of significance.

It was seen in table III that there significant difference in relation of body height 0.36 body weight 0.60 and leg length 0.80 with shuttle run because both the obtained value are higher than the table value 'r' 0.312 with 38 degree freedom at 0.05 level of significance. Where as arm length and foot length i.e. 0.24 and 0.19 was found insignificant in relation with shuttle run because the obtained above value are less than the table value 'r' with 38 degree freedom at 0.05 level of significance.

It is also shown by table IV that there was significant difference in relation of vertical jump 0.66 chinning up 0.87 body height 0.83 arm length 0.57, leg length 0.62 and foot length 0.32 with volleyball performance, because all the obtained above values are higher than the table value 'r' 0.312 with 38 degree of freedom at 0.05 level significances. Where as shuttle run, and body weight i.e 0.11and 0.27 was found insignificant in relation with volleyball performance because obtained above values are less than the table value are 0.312 with 38 degree of freedom at 0.05 level of significance. Which means moderate correlation was found in leg length and vertical jump with volleyball performance were as high to very high correlation was found in chinning up and body height with volleyball performance. Where as low correlation was found in foot length and body weight with volleyball performance. Where as negligible and substantialcorrelation was found in arm length and shuttle run with volleyball performance

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