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Vileep KS
Guest Lecturer, DoS in Physical Education, Kuvempu University, Shankaraghatta, Shivamogga, Karnataka, India

Sampath Kumar C
Guest Lecturer, DoS in Physical Education, Kuvempu University, Shankaraghatta, Shivamogga, Karnataka, India

Correlation between vital capacity and selected motor fitness variables among field hockey players

Vileep KS and Sampath Kumar C

Abstract

Introduction: Modern day endeavors by national governing sports bodies to improve the health of their societies have focused on highlighting the most common behaviour – related causes of chronic, life threatening diseases, thereby enabling individuals the opportunity to adopt more favourable health practices of the many life style factors associated with health, motor activity or exercise has emerged as one being of considerable importance. Apart from the numerous physiological benefits available, through motor activity is positively associated with aspects of psychological wellbeing. In particular, significant relationships have been identified between self-perceived health and motor activity. The argument exists, therefore, that the promotion of sports participation and achieve leisure pursuits may atleast be rewarded by better health perceptions.

Purpose: The purpose of the study was to know correlation between vital capacity and selected motor fitness variables among field hockey players.

Methodology: The purpose of the present investigation was to find out the correlation between vital capacity and motor fitness variables of 60 field hockey players in the age group of 19 to 28 years, of different universities were measured for vital capacity by using spirometer and the raw score of vital capacity of subjects measured would represent the data for the investigation and motor fitness variable strength, endurance, speed, agility, flexibility measured the test.

Results: The statistical analysis shows coefficient of correlation in correlation between vital capacity and motor fitness variables of hockey players.

Conclusion: In view of the finding and limitation of the study, motor fitness variable, speed, and agility are correlated with vital capacity.

Keywords: Volleyball, flexibility, speed, endurance, strength, and leg power

Introduction

Modern day endeavors by national governing sports bodies to improve the health of their societies have focused on highlighting the most common behaviour – related causes of chronic, life threatening diseases, thereby enabling individuals the opportunity to adopt more favourable health practices of the many life style factors associated with health, motor activity or exercise has emerged as one being of considerable importance.

Apart from the numerous physiological benefits available, through motor activity is positively associated with aspects of psychological well-being. In particular, significant relationships have been identified between self-perceived health and motor activity. The argument exists, therefore, that the promotion of sports participation and achieve leisure pursuits may atleast be rewarded by better health perceptions

Motor fitness is the capacity for activity. It is closely related to the diet, exercise, rest and emotional outlook. Motor fitness is often referred to organic vigour or vitality. The motor element of behaviour that pursue the persons to be active is demonstrated through motor performance. In general, motor fitness is closely related to health but it is more specific when evaluated carefully.

The poor performance of Indian sportsman and sports women in the international competitions is the result of lack of motor fitness. Therefore, it is felt that there is a dire need to improve the motor fitness level of Indian youth for raising the performance and standard in games and sport.

Vital capacity main physiological function with determine performance during motor exertion, the respiration plays a twofold part in the body, it supplies the oxygen required by the muscles

Correspondence
Vileep KS
Guest Lecturer, DoS in Physical Education, Kuvempu University, Shankaraghatta, Shivamogga, Karnataka, India

on the one hand, and on the other it serves to keep the acid base balance of the blood constant with in certain narrow Vital capacity is known to fall immediately after a race, this has been explained on the basis of a greater amount of blood present in the pulmonary capillary bed, at the end of the race. Motor fitness relates to a set of attributes that people have or achieve that determine the ability to perform motor activity. Motor fitness is the ability of the body to respond or adapt to the demands stress of motor effort.

Motor performance is the ability to perform a motor task or sport at a desired level. Also called motor fitness or motor fitness. Motor performance depends on both skill and motor fitness. Motor fitness components can include aerobic power, and anaerobic power, agility, balance, co-ordination, flexibility, muscular fitness and timing.

Many men and women feel that, their daily work provides them with enough exercise for fitness, but in limited activities are not put to use the lungs fully, to provide adequate stimulation for the heart.

Methodology

The purpose of the present investigation was to find out the correlation between vital capacity and motor fitness variables of 60 field hockey players in the age group of 19 to 28 years, of different universities were measured for vital capacity by using spirometer and the raw score of vital capacity of subjects measured would represent the data for the investigation and motor fitness variable strength, endurance, speed, agility, flexibility measured the test.

Statistical Analysis

To investigate the correlation between vital capacity and motor fitness of field hockey players the Karl Pearson's coefficient of correlation has been computed for different test measures motor fitness.

Results and Discussion

Table 1: Shows the relationship between selected motor performance and vital capacity

Sl. No.	Variables	Coefficient of correlation
1.	Abdominal strength and vital capacity	0.13
2.	Speed and vital capacity	0.25*
3.	Endurance and vital capacity	0.01
4.	Flexibility and vital capacity	0.10
5.	Agility and vital capacity	0.27*

The above table shows the relationship of selected motor performance on pulse rate of hockey player players. There is a significant relationship between vital capacity and speed ($r = 0.25$), it is positive low correlation, agility ($r = 0.27$), it is positive low correlation. But there is no significant relationship between abdominal strength ($r = 0.13$), endurance ($r = 0.01$), flexibility ($r = 0.10$) and vital capacity.

Conclusion

In view of findings and limitations of the study, which have been already cited, the following conclusions were drawn.

1. The correlation between vital capacity and strength was found to be statistically not significant with r value 0.13.
2. The vital capacity and speed shows significant relationships between them with r value 0.25, it is a low positive correlation.
3. The correlation between vital capacity and endurance was found to be statistically not significant with r value 0.01.
4. The correlation between vital capacity and flexibility was found to be statistically not significant with r value 0.10.
5. The vital capacity and agility shows significant relationships between them with r value 0.27, it is a low positive correlation.

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