

IMPACT OF MOTOR FITNESS VARIABLES AND PLAYING ABILITY AMONG BASKETBALL MEN PLAYERS

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Abstract

The purpose of the study was to find out the relationship between selected motor fitness variables and playing ability among Basketball players. To achieve the purpose of this study the investigator selected hundred college men Basketball players from the affiliated colleges of Tamil Nadu Physical Education and Sports University at randomly and their age ranged between 17 to 25 years. The following Motor Fitness variables will be selected to this study: muscular strength, muscular endurance, cardio-vascular endurance, flexibility, body mass index, power, speed, agility, balance and reaction time. Obtained data were analyzed with the Pearson product moment correlation. Power with muscular strength, muscular endurance, cardio vascular endurance, flexibility, body mass index, agility, balance and reaction time. Speed and muscular strength, muscular endurance, cardio -vascular endurance, flexibility, agility, balance, and reaction time. Agility flexibility, body mass index, power, speed and reaction time. balance with muscular strength, muscular endurance, cardio -vascular endurance, flexibility, power, speed, and reaction time. reaction time with cardio -vascular endurance, flexibility, power, speed, agility, and balance.

Keywords: Motor Fitness, Playing Ability and Basketball

Introduction

A person doing any physical activity or exercise with undue fatigue is called fitness. Motor fitness means ability to make a movements or motion in one place to another place through of the human body segments with undue fatigue. And also Suitability or preparedness for performing big muscle activity without undue fatigue; it is composed of muscular strength and

endurance, cardiovascular endurance, power, flexibility, coordination, balance, speed and agility. It helps to prepare capsules of training based on Basketball player's level of fitness.

Basketball game situations demands coordinated team-work, thereby instilling in every player a sense of personal and group responsibility by his individual performance and his ability to combine with the rest of the team. The ability of an individual to adapt their skill or techniques into a particular sport or events during a competition or a tournament is called as playing ability.

Methodology

The purpose of the study was to find out the relationship between selected motor fitness variables and playing ability among Basketball players. To achieve the purpose of this study the investigator selected hundred college men Basketball players from the affiliated colleges of Tamil Nadu Physical Education and Sports University at randomly and their age ranged between 17 and 25 years. The following motor fitness variables will be selected to this study: muscular strength, muscular endurance, cardio-vascular endurance, flexibility, body mass index, power, speed, agility, balance, and reaction time obtained data were analyzed with the Pearson product moment correlation.

Table I

Shows Mean Standard Deviation and Range of Motor Fitness variables and Playing Ability of Basketball players

S. No	Variables	Sample size	Mean	S D	Minimum	Maximum
1	Muscular strength	100	21.26	5.03	12	30
2	Muscular endurance		30	6.11	20	43
3	Cardiovascular endurance		42.50	5.65	30	52
4	Flexibility		24.87	3.97	18	31
5	Body Mass Index		21.72	2.01	17.96	25.39

Variables	Muscular strength	Muscular endurance	Cardiovascular endurance	Flexibility	body mass index	Power	Speed	Agility	Balance	Reaction time	Playing ability
Muscular		0.76*	0.52*	0.49*	0.35*	0.31*	0.24*	0.16	0.28*	0.09	0.22*

6	Power		2.61	0.28	2.05	3.11
7	Speed		6.10	0.21	5.70	6.50
8	Agility		4.66	0.30	4.10	5.13
9	Balance		4.59	0.38	3.28	5.22
10	Reaction time		0.12	0.03	0.06	0.18
11	Playing ability		86.93	3.38	78.00	92.00

Table 2 – shows coefficient correlation values of motor fitness variables and playing ability of basketball players

strength											
Muscular endurance	0.76*		0.82*	0.59*	0.42*	0.31*	0.39*	0.12	0.39*	0.18	0.06
Cardiovascular endurance	0.52*	0.82*		0.52*	0.22*	0.37*	0.52*	0.11	0.39*	0.30*	0.18
Flexibility	0.49*	0.59*	0.52*		0.47*	0.33*	0.33*	0.37*	0.30*	0.34*	0.38*
Body Mass Index	0.35*	0.42*	0.22*	0.47*		0.22*	0.10	0.26*	0.07	0.18	0.23*
Power	0.31*	0.31*	0.37*	0.33*	0.22*		0.14	0.29*	0.24*	0.32*	0.40*
Speed	0.24*	0.39*	0.52*	0.33*	0.10	0.14		0.32*	0.34*	0.20*	0.09
Agility	0.16	0.12	0.11	0.37*	0.26*	0.29*	0.32*		0.07	0.30*	0.51*
Balance	0.28*	0.39*	0.39*	0.30*	0.07	0.24*	0.34*	0.07		0.33*	0.23*
Reaction time	0.09	0.18	0.30*	0.34*	0.18	0.32*	0.20*	0.30*	0.33*		0.44*
Playing ability	0.22*	0.06	0.18	0.38*	0.23*	0.40*	0.09	0.51*	0.23*	0.44*	

*significant the required table value $r(99) = 0.19$ at 0.05 level of significance

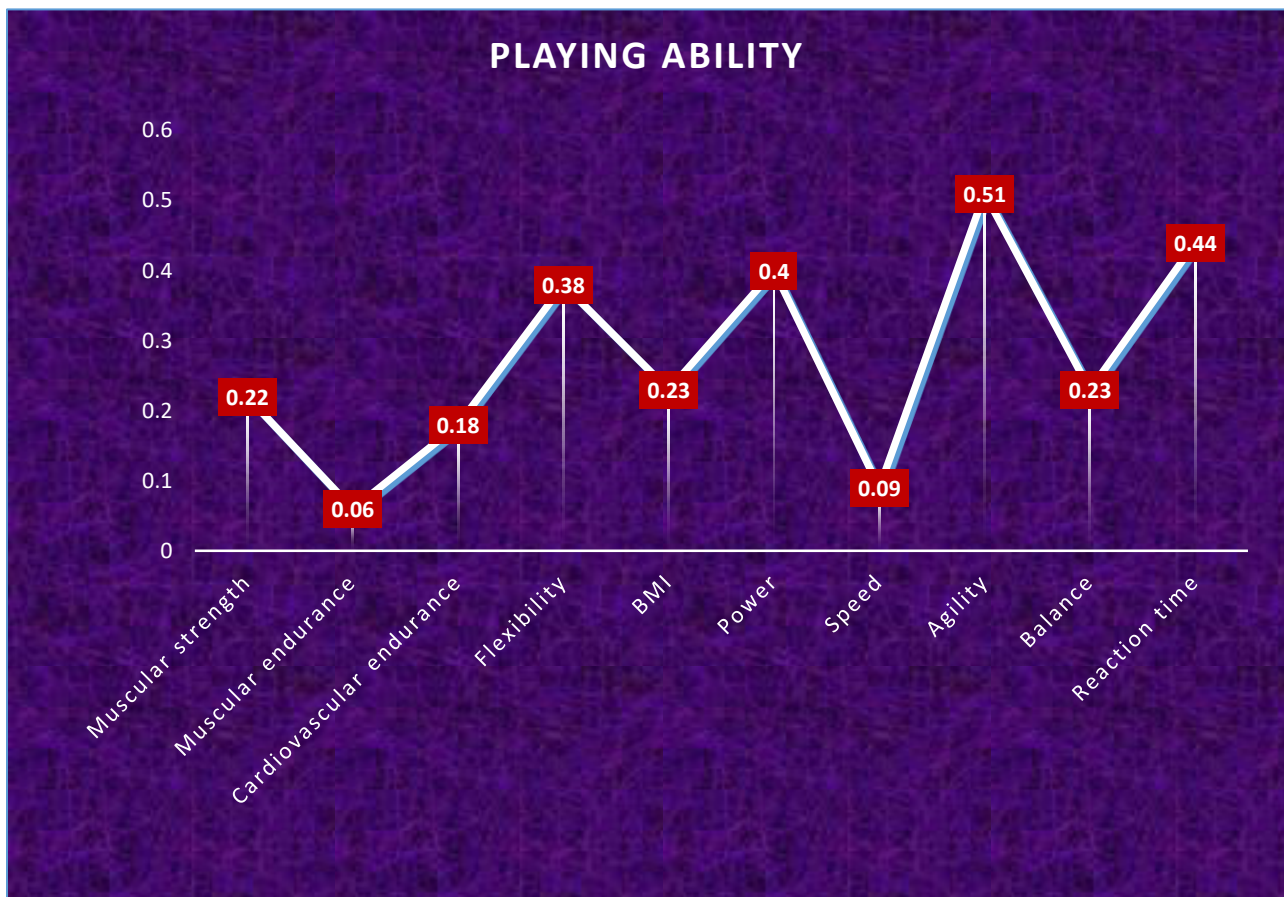
In table II shows pair wise correlation(r) values of playing ability with muscular strength=0.22, muscular endurance=0.06, cardio-vascular endurance=0.18, flexibility=0.38, body mass index=0.23, power=0.40, speed=0.09, agility=0.51, balance=0.23 and reaction time=0.44.

The result of this study there was a significant relationship between playing ability and motor fitness variables of muscular strength=0.22, flexibility=0.38, body mass index=0.23, power=0.40, agility=0.51, balance=0.23 and reaction time=0.44 at 0.05 level of significance.

The result of this study there was a significant relationship within motor fitness variables of muscular strength with muscular endurance=0.76, cardio - vascular endurance = 0.52, flexibility = 0.49, body mass index = 0.35, power = 0.31, speed = 0.24 and balance = 0.28. muscular endurance with muscular strength = 0.76, cardio -vascular endurance = 0.82, flexibility = 0.59, body mass index = 0.42, power = 0.31, speed = 0.39 and balance = 0.39. cardio -vascular endurance with muscular strength = 0.52, muscular endurance = 0.82, flexibility = 0.52, body mass index=0.22, power=0.37, speed = 0.52, balance = 0.39 and reaction time = 0.30. flexibility with muscular strength =0.49, muscular endurance = 0.59, cardio -vascular endurance = 0.52, body mass index = 0.47, power = 0.33, speed=0.33, agility=0.37, balance=0.30 and reaction time=0.34. body mass index with muscular strength=0.35, muscular endurance=0.42, cardio -vascular endurance = 0.22, flexibility=0.47, power=0.22 and agility=0.26. power with muscular

strength=0.31, muscular endurance=0.31, cardio -vascular endurance = 0.37, flexibility=0.33, body mass index=0.22, agility=0.29, balance=0.24 and reaction time=0.32. speed and muscular strength=0.24, muscular endurance=0.39, cardio -vascular endurance =0.52, flexibility=0.33, agility=0.32, balance=0.34 and reaction time = 0.20. agility with flexibility = 0.37, body mass index = 0.26, power=0.29, speed=0.32 and reaction time=0.30. balance with muscular strength=0.28, muscular endurance=0.39, cardio -vascular endurance =0.39, flexibility=0.30, power=0.24, speed=0.34 and reaction time=0.33. reaction time with cardio -vascular endurance=0.30, flexibility=0.34, power=0.32, speed=0.20, agility=0.30 and balance=0.33 at 0.05 level of significance.

Figure 1: Shows Relationship between Playing Ability and Motor Fitness Variables



Conclusion

1. The conclusion of the study that there was a significant relationship between playing ability and motor fitness variables of muscular strength, flexibility, body mass index, power, agility, balance, and reaction time.
2. The conclusion of the study that there was a significant relationship within motor fitness variables of muscular strength with muscular endurance, cardio-vascular endurance, flexibility, body mass index, power, speed, and balance.
3. The conclusion of the study that there was a significant relationship within motor fitness variables of muscular endurance with muscular strength, cardio -vascular endurance, flexibility, body mass index, power, speed, and balance.
4. The conclusion of the study that there was a significant relationship within motor fitness variables of cardio-vascular endurance with muscular strength, muscular endurance, flexibility, body mass index, power, speed, balance, and reaction time.
5. The conclusion of the study that there was a significant relationship within motor fitness variables of flexibility with muscular strength, muscular endurance, cardio -vascular endurance, body mass index, power, speed, agility, balance, and reaction time.
6. The conclusion of the study that there was a significant relationship within motor fitness variables of body mass index with muscular strength, muscular endurance, cardio -vascular endurance, flexibility, power and agility.
7. The conclusion of the study that there was a significant relationship within motor fitness variables of power with muscular strength, muscular endurance, cardio -vascular endurance, flexibility, body mass index, agility, balance and reaction time.
8. The conclusion of the study that there was a significant relationship within motor fitness variables of speed and muscular strength, muscular endurance, cardio -vascular endurance, flexibility, agility, balance and reaction time.
9. The conclusion of the study that there was a significant relationship within motor fitness variables of agility with flexibility, body mass index, power, speed, and reaction time. balance with muscular strength, muscular endurance, cardiovascular endurance, flexibility, power, speed, and reaction time.

10. The conclusion of the study that there was a significant relationship within motor fitness variables of reaction time with cardio -vascular endurance, flexibility, power, speed, agility and balance.

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