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Study of relationship among physical fitness component of Haryana and Delhi badminton male players

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Abstract

The purpose of the study was to find out the relationship among physical fitness components between Haryana and Delhi badminton male players. Total three hundred male badminton players (Haryana 150 and Delhi 150) of 18-25 years were randomly selected from different badminton academies and different colleges of Haryana and Delhi state. Only selected physical fitness components i.e. the speed, explosive strength, agility, endurance and flexibility were measured by using respective techniques and equipment. To find out the relationship Karl Pearson coefficient of correlation movement method was applied. The level of $p \leq 0.05$ was considered significant.

Keywords: Physical fitness, Haryana, Delhi, Badminton

1. Introduction

Physical fitness is to the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us look, feel and do our best. More specifically, it is the “ability of the human body to function with vigor and alertness, without undue fatigue, and with ample energy to engage in leisure activities. (Physical).”

Physical fitness involves the performance of the heart and lungs, and the muscles of the body. And, since what we do with our bodies also affects what we can do with our minds, fitness influences to some degree qualities such as mental alertness and emotional stability.

Fitness in the human body what fine tuning is to an engine. It enables us to perform up to our potential. Fitness can be described as a condition that helps us for better look, pleasant feel and do our best. More specifically, it is “the ability to perform daily tasks vigorously and alertly, with energy left over for enjoying leisure time activities and meeting emergency demands. It is the ability to endure, to bear up, to withstand stress, to carry on in circumstances where an unfit person could not continue, and is a major basis for good health and wellbeing” (Singh., 1991).

1.1 Objective of the study

To find out the relationship among physical fitness component between Haryana and Delhi badminton male players.

2. Methodology

Total three hundred male badminton players (Haryana 150 and Delhi 150) of 18-25 years age were randomly selected from different badminton academies and different colleges of Haryana and Delhi state. Only selected physical fitness components i.e. the speed, explosive strength, agility, endurance and flexibility were measured by using respective techniques and equipment. To find out the relationship Karl Pearson coefficient of correlation movement method was applied.

3. Results and Interpretation

It may be observed from table - 1 that there were significant relationship between speed and other component of physical fitness namely explosive strength and agility, whereas there were insignificantly relationship between speed and other component of physical fitness namely

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endurance and flexibility of the male badminton players of Haryana and Delhi. Table -1 indicates that the coefficient of correlation between speed with explosive strength and agility were $r = .283$ and $r = .217$ respectively, whereas no coefficient of correlation were found between speed with endurance and flexibility $r = .036$ and $r = .002$. The graphical representation of data has been shown in figure - 1

Table 1: Coefficient of correlation between speed and other component of fitness between Haryana and Delhi badminton male players

S. No.	Components Correlated	(r)
1.	Speed with explosive strength	.283**
2.	Speed with Agility	.217**
3.	Speed with Endurance	.036 ^{NS}
4.	Speed with Flexibility	.002 ^{NS}

*Significant at 0.05 level

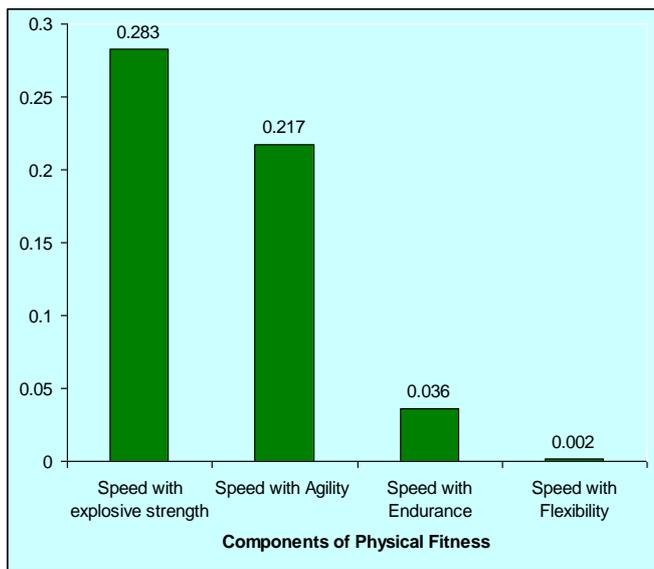


Fig 1

Table 2: Coefficient of correlation between explosive strength and other component of fitness between Haryana and Delhi badminton male players

S. No.	Components Correlated	(r)
1.	Explosive strength and Agility	.036 ^{NS}
2.	Explosive strength and Speed	.007 ^{NS}
3.	Explosive strength and Endurance	.010 ^{NS}
4.	Explosive strength and Flexibility	.060 ^{NS}

NS= Not Significant

It may be observed from table - 2 that there were no significant relationship between explosive strength and other component of physical fitness namely agility, speed, endurance and flexibility of the male badminton players of Haryana and Delhi. Table - 2 indicates that the coefficient of correlation between explosive strength with agility, speed, endurance and flexibility were $r = .036$, $r = .007$, $r = .010$ and $r = .060$ respectively. It is concluded that explosive strength has no relationship with agility, speed, endurance and flexibility. The graphical representation of data has been shown in figure - 2

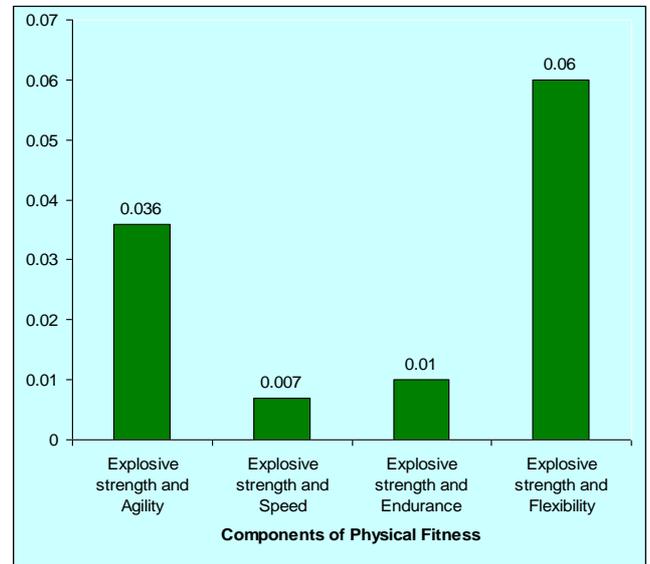


Fig 2

Table 3: Coefficient of correlation between agility and other component of fitness of Haryana and Delhi badminton male players

S. No.	Components Correlated	(r)
1.	Agility and Explosive strength	.029 ^{NS}
2.	Agility and Speed	.283**
3.	Agility and Endurance	.007 ^{NS}
4.	Agility and Flexibility	.025 ^{NS}

**Significant at 0.05 level; NS = No significant

It may be observed from table - 3 that there were significant relationship between agility speed, whereas there were no significant relationship between agility and other component of physical fitness namely explosive strength, endurance and flexibility of the male badminton players of Haryana and Delhi. Table - 3 indicates that the coefficient of correlation between agility with explosive strength is $r = .283$, whereas no coefficient of correlation were found between agility with explosive strength, endurance and flexibility are $r = .029$, $r = .007$ and $r = .025$ respectively. The graphical representation of data has been shown in figure - 3

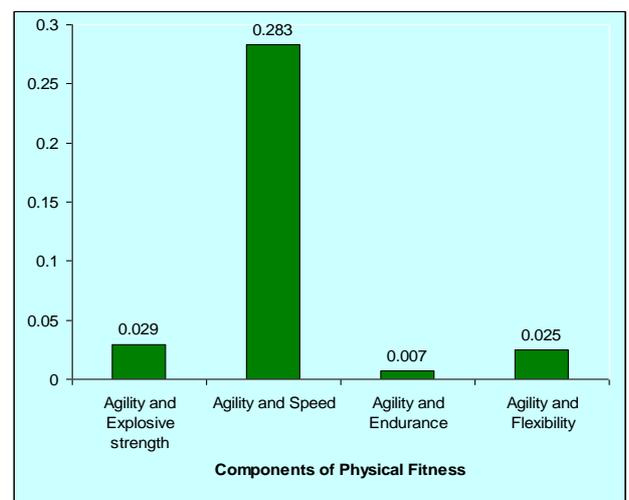


Fig 3

Table 4: Coefficient of correlation between endurance and other component of fitness of Haryana and Delhi badminton male players

S. No.	Components Correlated	(r)
3.	Endurance and explosive strength	.010 ^{NS}
4.	Endurance and Agility	.007 ^{NS}
5.	Endurance and speed	.036 ^{NS}
6.	Endurance and Flexibility	.060 ^{NS}

*Significant at 0.05 level

It may be observed from table - 4 that there were insignificant relationship between endurance and other component of physical fitness namely explosive strength, agility, speed and flexibility of the male badminton players of Haryana and Delhi. Table - 4 indicates that the coefficient of correlation between endurance with explosive strength, agility speed and flexibility were $r = -.010$, $r = .007$, $r = .036$ and $r = -.060$ respectively.

The graphical representation of data has been shown in figure - 4

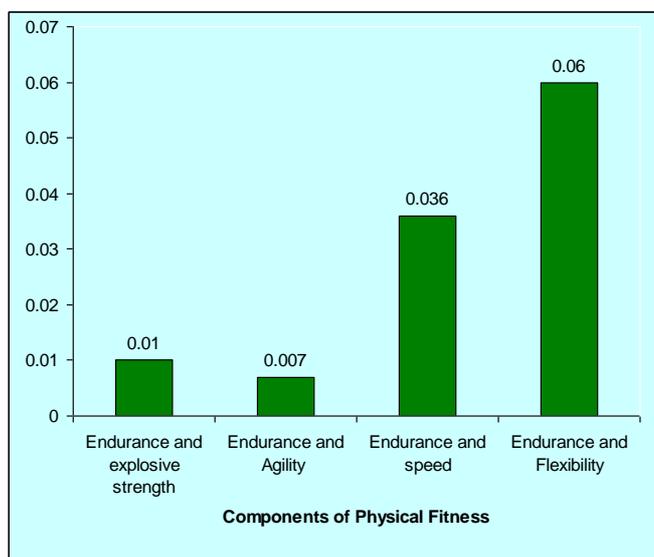


Fig 4

Table 5: Coefficient of correlation between flexibility and other component of fitness of Haryana and Delhi badminton male players

S. No.	Components Correlated	(r)
1.	Flexibility and explosive strength	.134*
2.	Flexibility and Agility	.025 ^{NS}
3.	Flexibility and speed	.002 ^{NS}
4.	Flexibility and Cardiovascular endurance	.060 ^{NS}

*Significant at 0.05 level; NS = Not significant

It may be observed from table - 5 that there were significant relationship between flexibility and explosive strength, whereas there were no significant relationship between flexibility and other component of physical fitness namely explosive strength, agility and endurance of the male badminton players of Haryana and Delhi. Table - 5 indicates that the coefficient of correlation between flexibility with speed were $r = .122$ whereas no coefficient of correlation were found between flexibility with explosive strength, agility and endurance $r = .013$, $r = .025$ and $r = .060$. It is concluded that flexibility has relationship with explosive strength, but no significant relationship were found between flexibility and other components (speed, agility and endurance) of physical fitness. The graphical representation of data has been shown in figure - 5

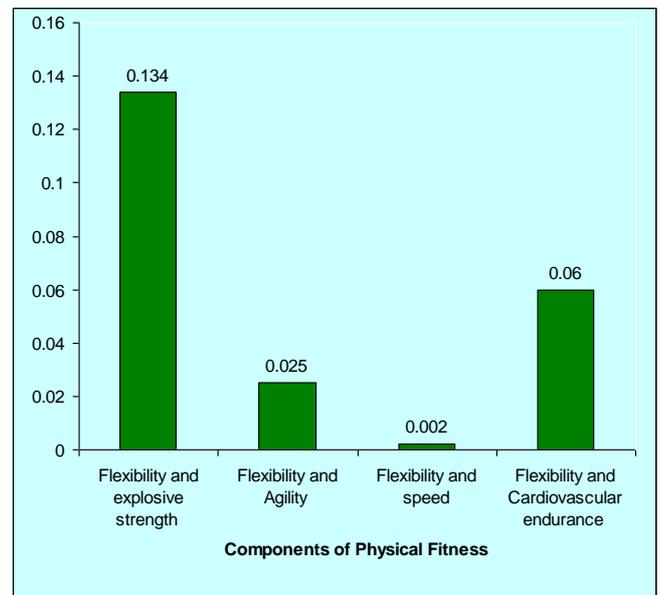


Fig 5

4. Conclusion

1. It may be observed from table - 1 that there were significant relationship between speed and other component of physical fitness namely explosive strength and agility, whereas there were insignificantly relationship between speed and other component of physical fitness namely endurance and flexibility of the male badminton players of Haryana and Delhi.
2. It may be observed from table - 2 that there were no significant relationship between explosive strength and other component of physical fitness namely agility, speed, endurance and flexibility of the male badminton players of Haryana and Delhi.
3. It may be observed from table - 3 that there were significant relationship between agility speed, whereas there were no significant relationship between agility and other component of physical fitness namely explosive strength, endurance and flexibility of the male badminton players of Haryana and Delhi.
4. It may be observed from table - 4 that there were insignificant relationship between endurance and other component of physical fitness namely explosive strength, agility, speed and flexibility of the male badminton players of Haryana and Delhi.
5. It may be observed from table - 5 that there were significant relationship between flexibility and explosive strength, whereas there were no significant relationship between flexibility and other component of physical fitness namely explosive strength, agility and endurance of the male badminton players of Haryana and Delhi.

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