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A comparative study of selected motor fitness components among badminton table tennis and squash

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Abstract
The purpose of this study was to compare selected motor fitness component levels among the Uttarakhand state level racket sports players. one hundred fifty (150) subjects, 50 badmintons, 50 table tennis and 50 squash players were selected from the Uttarakhand State for this study. The age of the selected subjects ranges from 16 to 19 years. Motors fitness tests were administered to find out the various motor fitness components (muscular power, strength and endurance) among the different racket sports. For statistical analysis and interpretation of data 'F' test (Anova) was conducted to test for significatant difference (0.05) among the groups. Result showed that Badminton players were comparatively better than table tennis and squash sports player in all the selected motor fitness components.

Keywords: Cardio-vascular endurance, Speed and Agility, Badminton, table tennis and squash players

1. Introduction
General motor ability has been considered as one's level of ability in wide range of activities in has been thought of as an integrated composite of such individual are as power strength, endurance speed agility, balance and coordination Rackets sports are very fitness demanding sports. Badminton table tennis and squash are almost similar games.
Motor fitness refers to the ability of an player to perform successfully at their sports muscular power, strength and endurance are the basic components of motor fitness and are required for good performance in sports like badminton table tennis and squash. Fitness can be described as conditions that help us look, feel and do our best performance in sports. It is that state of body in which a person can do work for a longer duration without under fatigue it is the ability to endure, to bear up to withstand stress to carry on in circumstance where an unfit player could not continue and is a major basis for good health and well-being. The result of present study will give knowledge regarding motor fitness ability of Badminton, table tennis and squash players in Uttarakhand state.

2. Methodology
One hundred fifty (150) players who participated in state level completion of badminton, table tennis and squash were selected as subject for this study. Selected motor fitness components namely cardio-vascular endurance, speed and agility were selected for this study. The data were collected for each of selected motor fitness component at Uttarakhand different district player. The standard tests which were selected for each variable of selected motor fitness component are as follows 600yards run for cardio-vascular endurance, 30 meter run for Speed and Shuttle run for Agility were administrated to the subjects. The Analysis of data using Analysis Variance (ANOVA) used to compare these selected variables of badminton, table tennis and squash state (Uttarakhand) male players.

3. Result & Discussion

Cardio-Vascular Endurance

(600 YARDS RUN)

Table 1: An Analysis of Variance of Cardio-Vascular Endurance of the Scores of the Badminton, Squash and Table tennis Players

Source of Variation	Sum of Squares	Degree of Freedom (d.f.)	Mean Squares	F
Between the Group	915.4	2	457.7	11.65*
Within the Group(Error)	5777	147	39.30	
Total	6693	149		

*Significant at 0.05 level (F value required to be significant at 2, 149 d,f. = 3.04)

Table-1 revealed that the obtained 'F' value of Cardio-Vascular Endurance (600 Yards Run) was 11.65, found to be significant at 0.05 level, since this value was found higher than the tabulated value 3.04 at 2, 149 d.f. Thus, the hypothesis is rejected.

In order to locate the pairs where significant differences exist, L.S.D test has been applied. The results are presented in Table –08.

Table 2: Least Significant Difference (L.S.D.) among the Badminton, Squash and Table tennis Players on Cardio-Vascular Endurance

Games (Mean Scores)			Mean Difference	L.S.D. SCORE
Badminton Players	Squash Players	Table tennis Players		
78.720	84.000		6.720*	2.477
78.720		83.920	5.200*	2.477
	84.000	83.920	0.080	2.477

*Significant difference

It is clear from the table - 8 that the differences between the paired means for the Badminton Players – Squash Players (6.720) and Badminton Players – Table tennis Players (5.2000) were found to be significant as the critical difference value of 2.477 is less than these value. Whereas differences between the paired means for the Squash Players – Table tennis Players (0.080) were not found to be significant as the critical value of 2.477 were more than these values.

These indicate that the students of Badminton Players – Squash Players, Badminton Players – Table tennis Players differ significantly between them in their Cardio-Vascular Endurance (600 Yards Run) variable of motor fitness. Whereas Squash Players – Table tennis Players did not differ significantly between them in their Cardio-Vascular Endurance (600 Yards Run) variable of motor fitness. The L.S.D comparisons of the mean scores of the Badminton Players, Squash Players, and Table tennis Players are also presented graphically in figure – 1

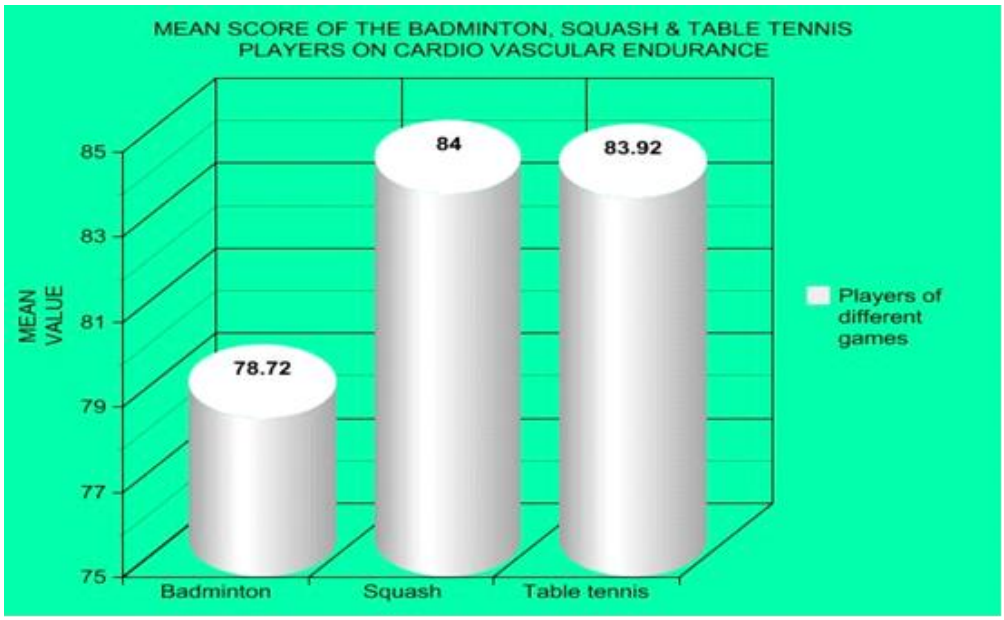

Fig 1

Speed

(30 meter Dash)

Table 3: An Analysis of Variance of Speed of the Scores of the Badminton, Squash and Table tennis Players

Source of Variation	Sum of Squares	Degree of Freedom (d.f.)	Mean Squares	F
Between the Group	2.142	2	1.071	2.893*
Within the Group(Error)	54.42	147	0.3702	
Total	56.56	149		

*Not Significant at. 05 level (F value required to be significant at 2, 149 d,f. = 3.04)

Table-3 revealed that the obtained 'F' value of Speed (30 meter Dash) was 2.893, found not to be significant at 0.05 level, since this value was found lower than the tabulated value 3.04 at 2, 149 d.f. Thus, the hypothesis is accepted. The mean scores of the Badminton Players, Squash Players, and Table tennis Players are presented graphically in figure - 2.

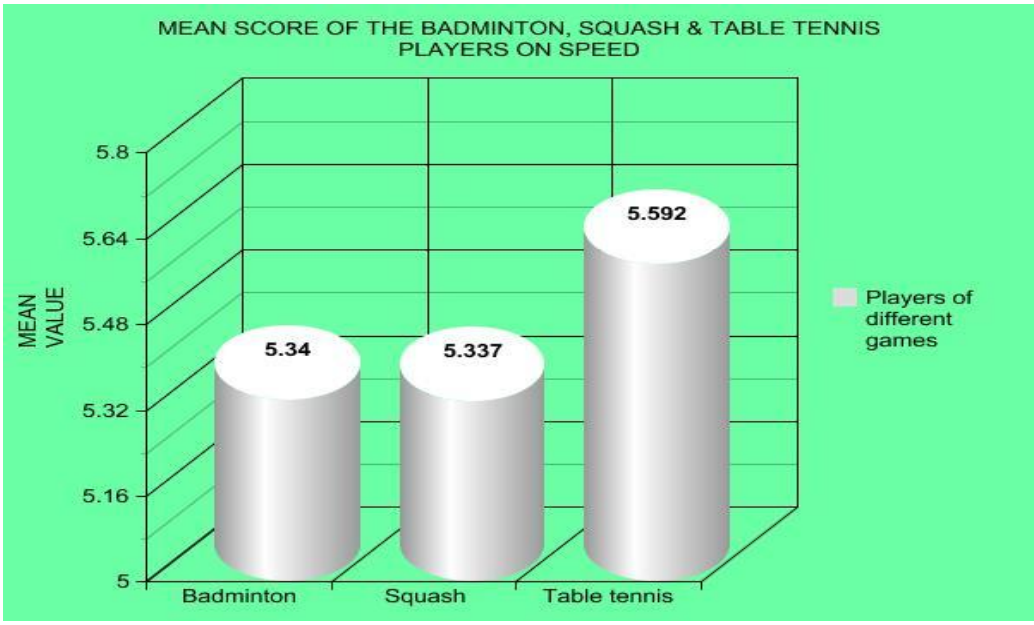

Fig 2

Agility
(SHUTTLE RUN)

Table 4: An Analysis of Variance of Agilitly of the Scores of the Badminton, Squash and Table tennis Players

Source of Variation	Sum of Squares	Degree of Freedom (d.f.)	Mean Squares	F
Between the Group	32.99	2	16.50	12.24*
Within the Group(Error)	198.1	147	1.348	
Total	231.1	149		

*Significant at. 05 level (F value required to be significant at 2, 149 d,f. = 3.04)

Table-4 revealed that the obtained 'F' value of Agility (Shuttle Run) was 12.24, found to be significant at 0.05 level, since this value was found higher than the tabulated value 3.04 at 2, 149 d.f. Thus, the hypothesis is rejected.

In order to locate the pairs where significant differences exist, L.S.D test has been applied. The results are presented in Table –5.

Table 5: Least Significant Difference (L.S.D.) among the Badminton, Squash and Table tennis Players on Agility

Games (Mean Scores)			Mean Difference	L.S.D. SCORE
Badminton Players	Squash Players	Table tennis Players		
10.973	11.596		0.623*	0.458
10.973		12.120	1.147*	0.458
	11.596	12.120	0.524*	0.458

*Significant difference

It is clear from the table - 11 that the differences between the paired means for the Badminton Players – Squash Players (0.623), Badminton Players – Table tennis Players (1.147) and Squash Players – Table tennis Players (0.524) were found to be significant as the critical difference value of 0.458 is less than these value.

These indicate that the students of Badminton Players – Squash Players, Badminton Players – Table tennis Players and Squash Players – Table tennis Players differ significantly between them in their Agility (Shuttle Run) variable of motor fitness.

The L.S.D comparisons of the mean scores of the Badminton Players, Squash Players, and Table tennis Players are also presented graphically in figure - 3

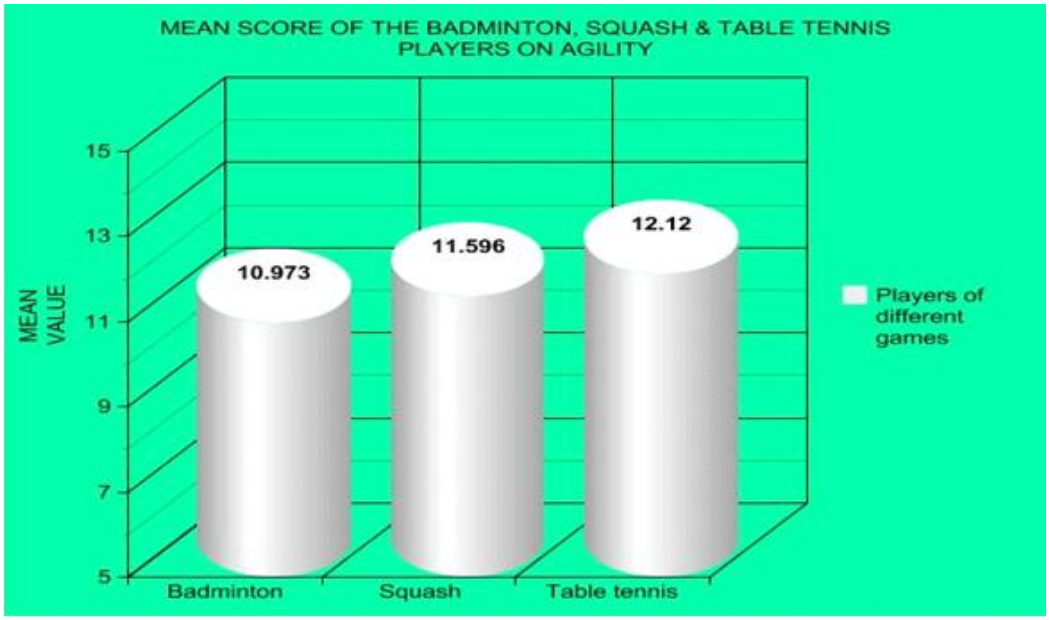

Fig 3

4. Conclusion

Based on the result of the present study and within the limitation. The following conclusions may be drawn.

- The cardio-vascular endurance of squash players is highest fallowed table tennis players and badminton players in that order.
- Speed it seems more or less same in the entire three groups.
- Table tennis players, the agility is highest followed by squash players and badminton players in that order**.**

5. Reference

1. Arright Margrite A. Study of Effect on Competitive Lonb Tennis on Motor Efficiency of the College Women as Measured by a Selected Battery Completed Research in Health Education and Recreation, 1963; 5:55.
2. Del. Cab Comparison of Physical Fitness over A Four Year period At University of North Dakota, Research Quarterly, 1968, 9.
3. Gary Pricnce N. The Relationship of College Footbal.
4. Craig Andrews Barry, Physical Fitness Values of Canadian and South African School Boys Dissertation Abstract International, 1976; 36:5912.
5. Dient Pamele Suell. Effect of Off- Season Training and Competition of Selected Physiological in Female College Lonb Tennis Players Dissertation Abstracts International, 1974; 35:2748.