E-ISSN: 2707-7020
P-ISSN: 2707-7012
JSSN 2020; 1(2): 22-25
Received: 24-05-2020
Accepted: 29-06-2020

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Analysis of selected physical fitness variables of large area middle area and small area games inter district school level players

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Abstract
Physical fitness is generally performance related sports and games various skills of abilities than an individual possesses in order to perform specific types of physical activity efficiently and effectively. Fitness includes the mental, emotional, social as well as the physical aspects and all these components of total fitness play a significant role for a full and happy life fitness achieving proficiency in the various motor skills some on who is not natural athlete con still be extremely fit it. Includes five basic components they are cardio respiratory endurance muscular strength flexibility and body composition participating in sports activities improve these fitness components often requires certain motor skills like agility, balance, co-ordination explosive power, speed and reaction time. The purpose of this study was to find out status of the selected physical fitness variables namely speed, agility and leg explosive strength inter distric school level large area, middle area and small area games players. Toachive this purpose a total of ninety subjects and in various size area games namely large area games namely football and hockey (N=30), middle area games namely basketball and handball (N=30) small area games namely volleyball and throwball (N=30), players from inter district schools Tamilnadu. They were selected by purposive sampling method. Their age ranged between16 to 18 years. Physical fitness variables namely speed, agility and leg explosive strength were selected as dependent variables. Speed is measure using 50 yards run agility using measure 4x10m shuttle run and leg explosive strength is measure using vertical jump tests.

Keywords: Speed, Agility, Leg explosive strength

Introduction
Physical fitness is generally performance related sports and games various skills of abilities than an individual possesses in order to perform specific types of physical activity efficiently and effectively. Fitness includes the mental, emotional, social as well as the physical aspects and all these components of total fitness play a significant role for a full and happy life fitness achieving proficiency in the various motor skills some on who is not natural athlete con still be extremely fit it. Includes five basic components they are cardio respiratory endurance muscular strength flexibility and body composition participating in sports activities improve these fitness components often requires certain motor skills like agility, balance, co-ordination explosive power, speed and reaction time. (Borrow and MC: Gee 1974) [2].

Methodology
The procedure adopted for selection of test, selection of variables, instrument reliability, tester reliability, orientation of subject, the test administration test collection of data and statistical technique presented.

Selection of Subjects
The purpose of the present study 30 subject of from each game and are named group I consisting of large area games and group II consisting of middle area games and group III consisting of small area games. The subject selected from inter districts school level player Tamilnadu. The age of the subject ranged from the 16 to 18 years.

Analysis of Data and Results
The purpose of study was to find out status of the selected physical fitness variables namely speed, agility, and leg explosive strength inter district school level player's large area, middle

area and small area games players. The data collected were statistically analyzed with one way analysis of variance (ANOVA). If obtained 'F' ratio is significant, scheffe"s post hoc test was used. The level of significance was fixed 0.05 level confidence.

Table 1: Analysis of variance on speed among inter district schools large area middle area and small area games players

variable		Large area games	Middle area games	Small area games	Source of variance	Sum of square	Df	Mean square	'F'
speed	X	8.18	8.31	8.35	between	6.866	2	3.433	7.97*
	E	0.45	0.77	0.79	within	37.430	87	0.430	

*significance at 0.05 level of confidence

Table 1 show that speed mean values and standard deviation of large area, middle area and small area games players are 8.18+ 0.45 and 8.31+ 0.77 and 8.35+ 0.79 respectively The obtained 'F' values is 7.97 which is greater than table value of 3.10 in the level of 0.005.so the researcher"s hypothesis is rejected null hypothesis is accepted.

Table 2: Schiff's post hoc test difference between the paired means on speed

Large Area Games	Middle Area Games	Small Area Games	Mean difference	C I
8.18	8.31	8.35	0.04	0.16
8.18			0.17*	
	8.31	8.35	0.13	

Table-2 shows that the adjusted post-test mean difference in speed between large area middle area and small area and speed were 0.04 and 0.17 which are greater than the confidence interval value of 0.16 at 0.05 level confidence. It may be concluded from the results of the study that large games players have better speed compared to small area games players middle area games players. Have better speed compared to small area games players. The table shows that there is in significant difference on speed of small area and middle area games players.

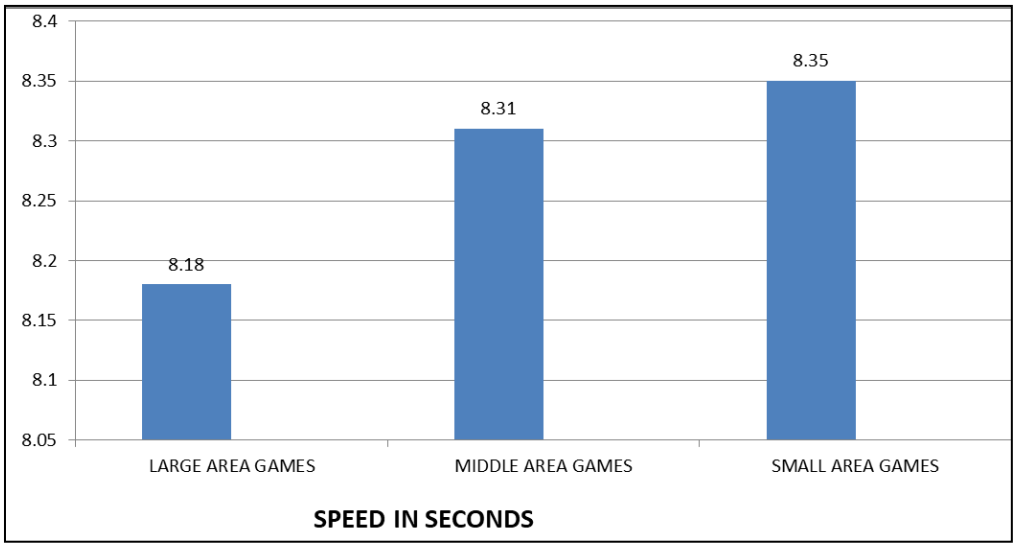

Fig 1: Mean values show that speed in (1/10th seconds) of large area middle area and small area games players

Table 3: Analysis of variance on agility among inter district schools large area middle area and small area games players

variable		Large area games	Middle area games	Small area games	Source of variance	Sum of square	Df	Mean square	'F'
agility	X	15.0	14.04	13.78	between	24.631	2	12.315	12.48*
	E	1.14	0.95	0.86.14	within	85.799	87	0.986	

*significance at 0.05 level of confidence

Table 3 show that agility mean value and standard deviation of large area, middle. Area and small area games players. 13.78+ 0.86 and 14.04+ 0.95 and 15.0+ 1.14 respectively. The obtained 'F' value is 12.48 which is greater than table value of 3.10 in the level 0.05. so the researchers' hypothesis is accepted and null hypothesis is rejected. To find out mean difference schffe's post hoc test was used and presented in table-3

Table 4: Scheff's post hoc test difference between the paired means on agility

Large area games	Middle area games	Small area games	Mean difference	C I
15.0	14.04		0.26	0.42
15.0		13.78	1.22*	
	14.04	13.78	0.96*	

Table-4 shows that the adjusted post-test mean difference in speed between large area middle area and small area and agility were 1.22, and 0.96 which are greater than the confidence interval value of 0.42 at 0.05 level confidence. It may be concluded from the results of the study that small area games players have better agility compared to large area games players middle area games players. Have better agility compared to large area games players. The table shows that there is in significant difference on agility of small area and middle area games.

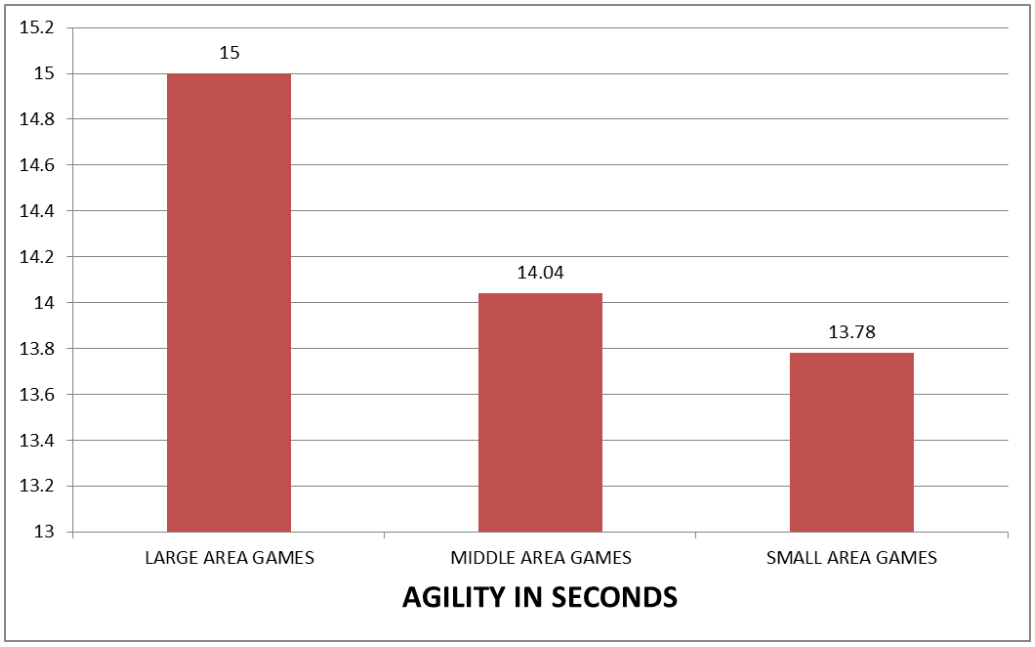

Fig 2: Mean values show that agility in (1/10th seconds) of large area middle area and small area games players

Table-5 show that agility mean value and standard deviation of large area, middle.area and small area games players. 21.16+ 0.86 and 14.04+ 2.88 and 21.8+ 2.42 19.26+3.17 respectively.The obtained 'F' value is 6.436 which is greater than table value of 3.10 in the level 0.05. so the researchers' hyphothesis is accepted and null hyphothesis is rejected. To find out significant difference between large area, middle area,and and small area games players mean difference schffe's post hoc test was used and presented in table-5

Table 5: Analysis of variance on leg explosive strength among inter distric schools large area middle area and small area games player

variable		Large area games	Middle area games	Small area games	Source of variance	Sum of square	Df	Mean square	'F'
Leg explosive strength	X	19.26	21.8	21.26	between	104.289	2	52.144	6.436*
	E	3.17	2.42	3.17	within	704.833	87	8.1102	

*significance at 0.05 level of confidence

Table-5 show that agility mean value and standard deviation of large area, middle.area and small area games players. 21.26+ 2.88 and 21.8+ 2.42 and 19.26+ 3.17 respectively.The obtained 'F' value is 6.436 which is greater than table value of 3.10 in the level 0.05. so the researchers' hypothesis is accepted and null hypothesis is rejected. To find out significant difference between large area middle area and small area games players. scheffe's post hoc test was used and presented in table-5

Table 6: Scheff's post hoc test difference between the paired means on leg explosive strength

Large area games	Middle area games	Small area games	Mean differance	C I
19.26	21.8		0.64	1.73
19.26		21.26	1.96*	
	21.8	21.26	0.54*	

Table-6 shows that the adjusted post-test mean difference in leg explosive strength between large area middle area and small area and leg explosive strength were 1.90 and 2.54 which are greater than the confidence interval value of 1.73, at 0.05 level confidence. It may be concluded from the results of the study that middle area games players better leg explosive strength compared to large area games players small area games players. Have better leg explosive strength compared to large area games players. The table shows that there is in significant difference on leg explosive strength of small area and middle area games players.

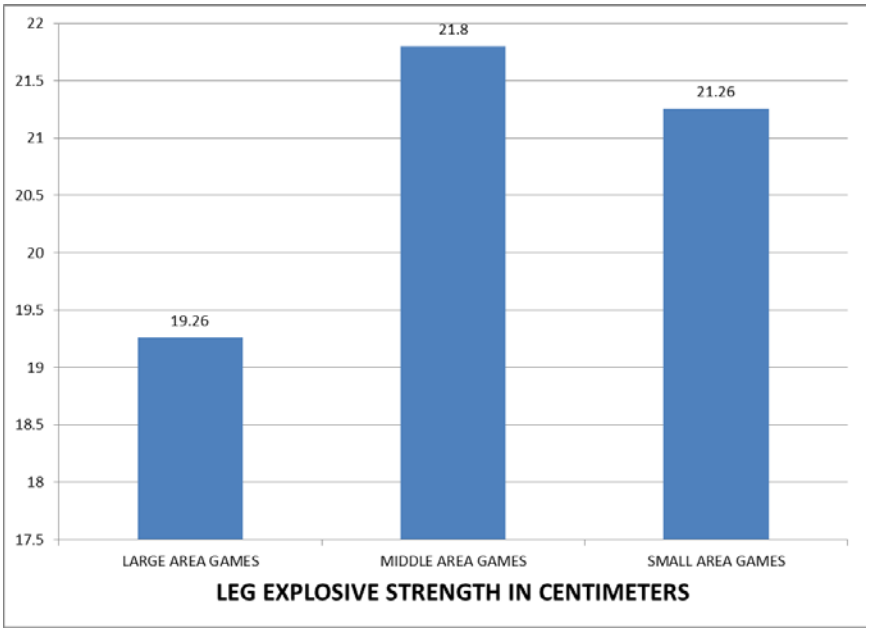

Fig 3: Mean values show that leg explosive strength (centimeters) of large area middle area and small area games players

Conclusions

On the basis of the results obtained by statistically analysis the data on the selected physical fitness variables namely speed, agility and leg explosive strength of the players of large, middle and small area games the following conclusions are drawn.

1. Large area game players are better in speed compared to small area games players.
2. 2. Middle area game players are better in speed compared to small area games players. But the difference is insignificant.
3. Small area game players have betters agility compared to large area game players.
4. Middle area game players have better compared to large area game players. But the difference is insignificant
5. Middle area game players have better leg explosive strength compared to large area game players.
6. Small area game players have better leg explosive strength compared to large area game players. But the difference is insignificant

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