



ISSN: 2456-0057

IJPNPE 2019; 4(2): 251-255

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www.journalofsports.com

Received: 21-05-2019

Accepted: 24-06-2019

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## Impact of Special Olympics football and basketball Practices in unified mode on selected physical fitness components among intellectually disabled mild male athletes

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### Abstract

The purpose of this study was conducted to find out the impact of Special Olympics football and basketball practices in unified mode on physical fitness components among intellectually disabled mild male athletes. For this purpose investigator selected 20 subjects {10-experimental group-I (Football), 10-experimental group-II (Basketball)} in the age group of 12-15 years from Ramakrishna Mission Vivekananda Educational and Research Institute, Faculty of Disability Management and Special Education (FDMSE), Coimbatore, Tamil Nadu-641020. The collected data were treated with applying Correlated 't' test and ANCOVA to find out the significant improvement among pre-test and post-test data. The result shows that there was a significant improvement in the experimental groups on selected criterion variables were speed and muscular endurance of intellectually disabled mild male athletes.

**Keywords:** Special Olympics, unified mode sports, unified volleyball, unified basketball, speed and muscular-endurance

### Introduction

The inability to carry out the regular activities is termed as disability. Some people in our community have difficulties which other people do not have. For instance, some people have difficulty in seeing. Some people have difficulty in hearing, speaking, learning, or moving around in the same way as others. Some people show strange behavior or have fits. Other people have no feeling in hands and feet. Such difficulties are called disabilities. Every community has some people with disabilities. We find people with disabilities live their lives in the same way as others in our community. But we also find that because of their disabilities some people have problem living their lives in same way like others. It is difficult for them to do all activities that other family and community members do.

“Individuals with a slower rate of learning and a limitation capacity to learn (typically scoring lower than 70 on a standardized IQ test) are identified as having an intellectual disability. Such may have difficulty managing the ordinary activities of daily living, understanding the behavior of others, and determining their own appropriate social responses.” (Special Olympics Bharat-Trainer Manual - 2010). This study may be utilized by physical educators, teachers, coaches, and fitness instructors to bring about desired effects among intellectually disabled.

### Methodology

The purpose of this study was to find out the impact of Special Olympics football and basketball practices in unified mode on physical fitness on speed and muscular endurance among intellectually disabled mild male athletes. For this purpose investigator selected 20 subjects {10-experimental group-I (Football), 10-experimental group-II (Basketball)} in the age group of 12-15 years from Ramakrishna Mission Vivekananda Educational and Research Institute, Faculty of Disability Management and Special Education (FDMSE), Coimbatore, Tamil Nadu-641020. The collected data were treated with correlated 't' test and (ANCOVA) to find out the significant improvement among pre-test and post-test data.

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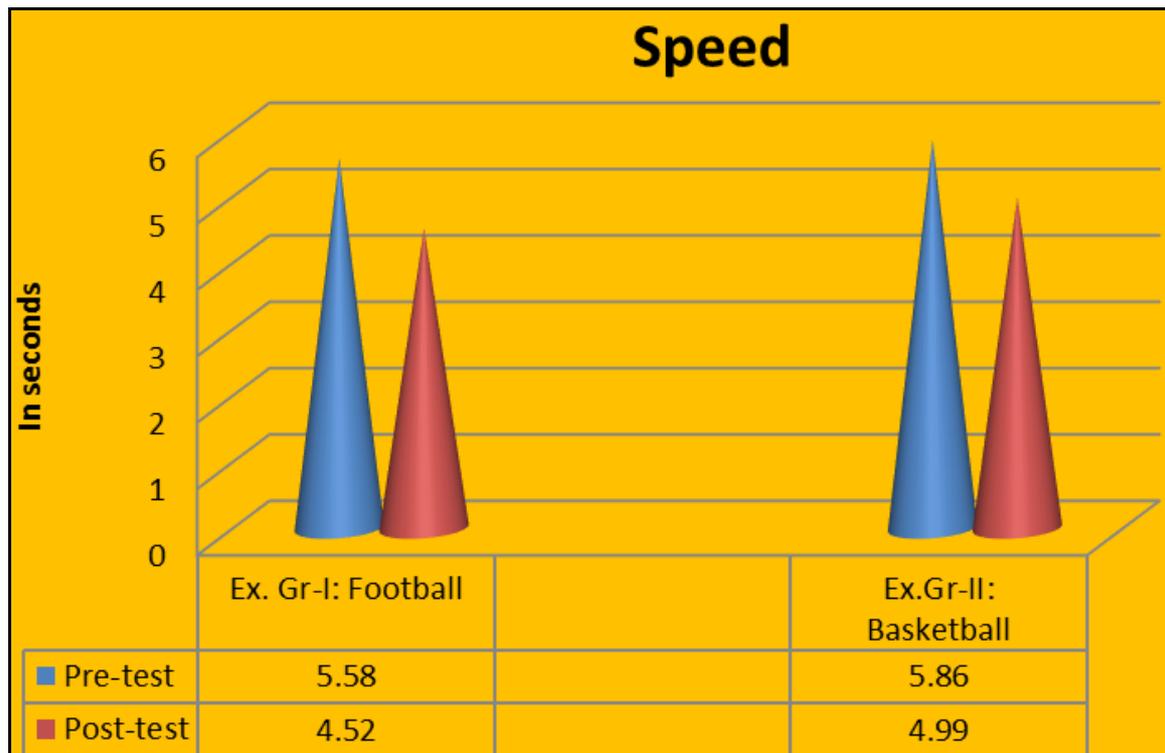
**Table 1:** Computation of 't' Ratio between the pre-test and post-test means on speed of experiment Group-I (Souf) And Experimental Group-II (SOUB)

Variable	Groups	Test	Mean	SD	DM	$\sigma$ DM	't' ratio	Table value
Speed	Experimental-I (SOUF)	Pre-test	5.58	1.46	1.05	0.15	6.91*	2.26
		Post-test	4.52	1.11				
	Experimental-II (SOUB)	Pre-test	5.86	1.06	0.87	0.22	3.88*	
		Post-test	4.99	0.76				

\*Significant at 0.05 level. Table value 2.26 with df (9).

An examination of table-2 indicates that the obtained 't' ratios for speed of experimental group-I was 6.91. The obtained 't' ratio on speed was found to be greater than the required table value of 2.26 at 0.05 level of significance for 9 degrees of freedom. So it was found to be significant. The obtained 't' ratio for experimental group-II was 3.88. The obtained 't' ratio

on speed was found to be greater than the required table value of 2.26 at 0.05 level of significance for 9 degrees of freedom. So it was found to be statistically significant. The mean scores of speed of experimental group-I and experimental group-II were shown graphically in figure-I



**Fig I:** Bar Diagram Showing the Pre and Post-Test Means of Speed of Experimental Group-I and Experimental Group-II

**Table 2:** Computation of 't' ratio between the pre-test and post-test Means on muscular endurance of experiment group-i (SOUF) and experimental group-ii (SOUB)

Variable	Groups	Test	Mean	SD	DM	$\sigma$ DM	't' ratio	Table value
Muscular endurance	Experimental-I (SOUF)	Pre-test	16.20	2.66	2.50	0.34	7.32*	2.26
		Post-test	18.70	2.67				
	Experimental-II (SOUB)	Pre-test	11.10	3.98	3.6	0.74	4.81*	
		Post-test	14.70	4.95				

\*Significant at 0.05 level. Table value 2.26 with df (9).

An examination of table-2 indicates that the obtained 't' ratio for muscular endurance of experimental group-I was 7.32. The obtained 't' ratio on muscular endurance was found to be greater than the required table value of 2.26 at 0.05 level of significance for 9 degrees of freedom. So it was found to be significant. The obtained 't' ratio for muscular endurance of experimental group-II was 4.81. The obtained 't' ratio on

muscular endurance was found to be greater than the required table value of 2.26 at 0.05 level of significance for 9 degrees of freedom. So it was found to be statistically significant. The mean scores of muscular endurance of experimental group-I and experimental group-II were shown graphically in figure-II.

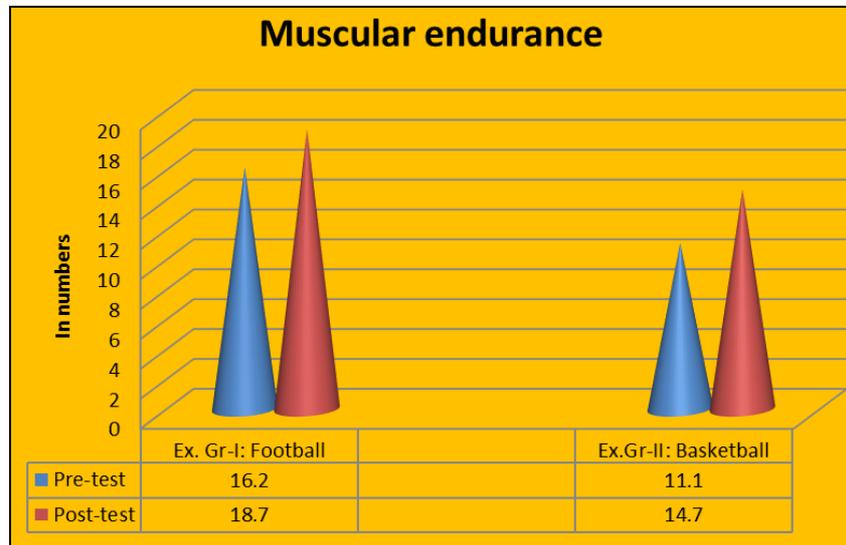


Fig 2: Bar Diagram Showing the Pre and Post-Test Means on Muscular Endurance of Experimental Group-I (Souf) and Experimental Group-II (SOUB)

Table 3: Analysis of Covariance for the Pre Test Post Test and Adjusted Post Test Means of Speed of Experimental Group-I (Souf) and Experimental Group-II (SOUB)

Test	EX. Gr-I (SOUF)	EX. Gr-II (SOUB)	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Means	5.58	5.86	BG	0.403	1	0.403	0.247
			WG	29.381	18	1.632	
Post-Test Means	4.52	4.99	BG	1.081	1	1.081	1.187
			WG	16.394	18	0.911	
Adjusted Post-Test Means	5.86	5.59	BG	0.345	1	0.345	0.979
			WG	5.997	17	0.353	

BG- Between Group Means; WG- Within Group Means; \*Significant; df- Degrees of Freedom. Table value at 0.05 level of significant of confidence for 1& 18 and 1 & 17 degree of freedom 4.41 & 4.45

The table-3 shows that the pre-test means value on speed of experimental-I (SOUF) and experimental-II (SOUB) groups are 5.58 and 5.86 respectively. The obtained ‘F’ ratio of pre-test mean is 0.247 which is lesser than the required table value of 4.41 for df 1 and18 at 0.05 level of confidence on speed. The post-test means value on speed of experimental-I (SOUF) and experimental-II (SOUB) groups are 4.52 and 4.99 respectively. The obtained ‘F’ ratio of post-test mean is 1.187 which is lesser than the required table value of 4.41 for df 1 and18 at 0.05 level of confidence on speed. The adjusted post-test mean value on speed of experimental-I

(SOUF) and experimental-II (SOUB) groups are 5.86 and 5.59 respectively. The obtained ‘F’ ratio of post-test mean is 0.979 which is lesser than the required table value of 4.45 for df 1 and17 at 0.05 level of confidence on speed. The result of the study indicates that there was no significant difference between the adjusted post-test means of experimental-I (SOUF) group and experimental-II (SOUB) group on speed. The mean values of experimental-I (SOUF) and experimental-II (SOUB) groups on speed was graphically represented in figure 3.

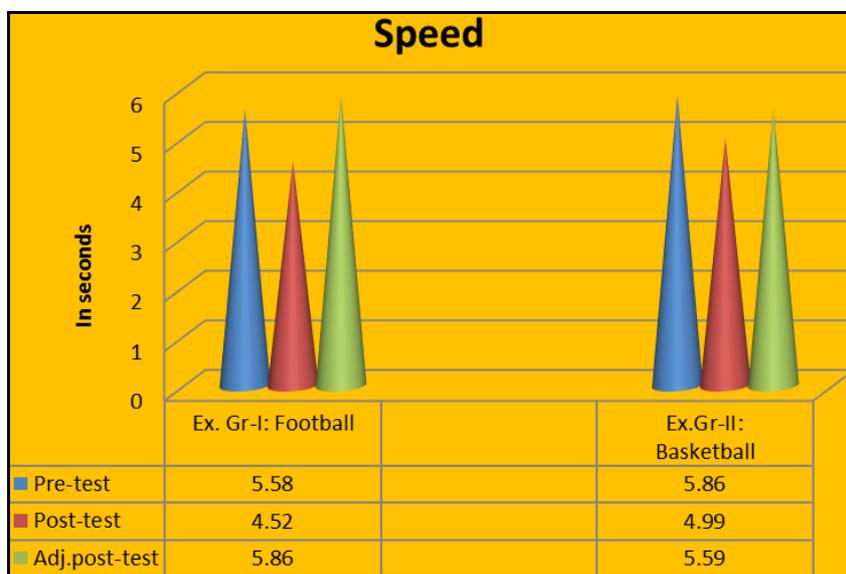


Fig 3: Bar diagram showing the mean values on speed of experimental group-i (souf) and experimental group-II (SOUB)

**Table 4:** Analysis of Covariance for the Pre Test Post Test and Adjusted Post Test Means on Muscular Endurance of Experimental Group –I (SOUF) and Experimental Group –II (SOUB)

	EX. Gr-I (SOUF)	EX. Gr-II (SOUB)	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-Test Means	16.20	11.10	BG	130.050	1	130.05	11.336*
			WG	206.500	18	11.472	
Post-Test Means	18.70	14.70	BG	80.000	1	80.000	5.067*
			WG	284.200	18	15.789	
Adjusted Post-Test Means	16.05	17.35	BG	16.805	1	16.805	6.493*
			WG	44.002	17	2.588	

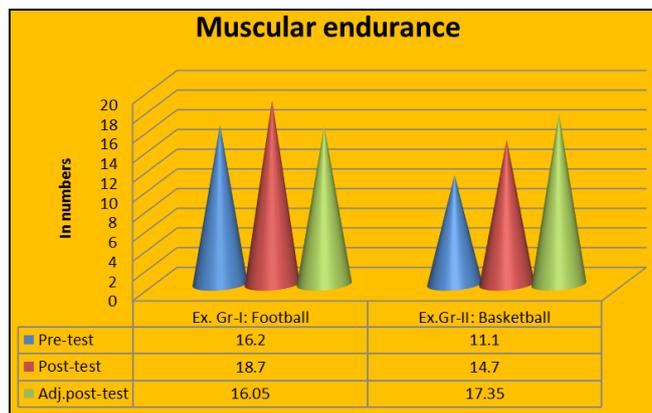
BG- Between Group Means; WG- Within Group Means; \*Significant; df- Degrees of Freedom. Table value at 0.05 level of significant of confidence for 1& 18 and 1 & 17 degree of freedom 4.41 & 4.45

The table-4 shows that the pre-test means value on muscular endurance of experimental-I (SOUF) and experimental-II (SOUB) groups are 16.20 and 11.10 respectively. The obtained 'F' ratio of pre-test mean is 11.336 which are greater than the required table value of 4.41 for df 1 and 18 at 0.05 level of confidence on muscular endurance. The post-test mean value on muscular endurance of experimental-I (SOUF) and experimental-II (SOUB) groups are 18.70 and 14.70 respectively. The obtained 'F' ratio of post-test mean is 5.067 which is greater than the required table value of 4.41 for df 1 and 18 at 0.05 level of confidence on muscular endurance.

The adjusted post-test means value on muscular endurance of experimental-I (SOUF) and experimental-II (SOUB) groups are 16.05 and 17.35 respectively. The obtained 'F' ratio of post-test mean is 6.493 which is greater than the required table value of 4.45 for df 1 and 17 at 0.05 level of confidence on muscular endurance.

The result of the study indicates that there was significant difference between the adjusted post-test means of experimental-I (SOUF) group and experimental-II (SOUB) group on muscular endurance.

The mean values of experimental-I (SOUF) and experimental-II (SOUB) groups on muscular endurance was graphically represented in figure IV.



**Fig 4:** Bar diagram showing the mean values on muscular endurance on experimental group-i (SOUF) and experimental group-II (SOUB)

### Discussion on Findings

Based on results it is statistically proved that significant improvement was proved in both the training groups {experimental-I (SOUF) and experimental-II (SOUB)}. The selected criterion variables were speed and muscular endurance of intellectually mild male athletes.

The results are in line with that of Sankar and Ramesh (2017) [8], Gokluk *et al.* (2015), Debnath and Alagesan (2015) [2] Golubovic *et al.* (2012) [5] and Popovic *et al.* (2003) [6] who had also proved in their studies that there was an improvement with regard to the speed, in the athletes

(players) included in their research study.

The results of the study have also been supported by the following authors Prasad and Srinivasan (2015) [7], Sukumaran and Sebastian (2014) [9], Elmahgoub *et al.* (2011) [4] and Kukientz (1972) whose studies brought about similar results.

### Conclusions

Based on the statistical analysis the result of the study within the limitations, the conclusions were presented here.

1. It was concluded that the Special Olympics Unified Football (SOUF) and Basketball (SOUB) practices program given for the individuals among mild male intellectually disabled athletes made a significant changes in the speed and muscular-endurance from base line to post test.
2. It was concluded that the Special Olympics Unified Football (SOUF) practices and Special Olympics Unified Basketball (SOUB) practices program supported for the individuals among mild male intellectually disabled athletes made a significant changes on adjusted post-test in the selected speed and muscular endurance. No significant difference was found between the adjusted post-test means of experimental-I (SOUF) group and experimental-II (SOUB) group on speed and significant difference was found on muscular-endurance. It is concluded that Special Olympics Unified Basketball Training group had proved to have better improvement than the Football Training group in muscular endurance.

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