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Comparison Of Flexibility And Agility Of Football Players And Handball Players In College Students

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ABSTRACT

The study was under taken with the purpose of comparing selected physical fitness variables in football Players and handball Players. The variables selected were Agility and Flexibility. 60 male college students were selected as subjects aging 18 year to 20 year (15.17 ± 0.51) who were actively involved in their respective games. Among these 30 belonged to football game and rest 30 belonged to handball game. Descriptive Statistics and Independent't' test were employed. Findings suggest that the players belonging to football game were superior in both Agility and Flexibility in comparison to the players belonging to handball game.

Keywords: Agility, Flexibility, college Students, football Players, handball players.

INTRODUCTION

The study of growth and development of childhood andadolescence are one of the important areas in education as well as physical education. So, physical educationteachers and professionals must be acquainted with the nature of development of different motor skills in childhood and adolescent due to participating in different type of activities (Mondal et al., 2014). Evidence suggests that increasing physical activity and physical fitness may improve academic performance and that time in the school day dedicated to recess, physical education class, and physical activity in the classroom may also facilitate academic performance.

Available evidence suggests that mathematics and reading are the academic topics that are most influenced by physical activity. These topics depend on efficient and effective executive function, which has been linked to physical activity and physical fitness.

Executive function and brain health underlie academic performance. Basic cognitive functions related to attention and memory facilitate learning, and these functions are enhanced by physical activity and higher aerobic fitness.

Single sessions of and long-term participation in physical activity improve cognitive performance and brain health. Children who participate in vigorous- or moderate-intensity physical activity benefit the most.

Human body is a gift by nature. Life in the presenttime is not less than the blessing of God. Scientific discoveries have changed the entire face of our world. It has changed the thorny life into the bed of roses. Good health provides sound and solid foundation on which fitness rests and at the same time fitness provides oneof the most important key to health, and living one's life to fullest. The negative effects of degraded physical fitness on both the individual and society are serious and multi-dimensional. It can cause many risk factors to heath including coronary heart disease, certain forms of cancer, hypertension, respiratory problems, and each associated with increases in all cause mortality (Cataldo, 1999). Low levels of physical activity and cardio-respiratory fitness are both associated with higher risk of all cause and disease specific mortality (Thune et al., 1998).

The complex nature of physical fitness can be best under stood in terms of its components such as cardiovascular endurance, strength, flexibility, speed, agility and muscular endurance. In addition to these components of physical

fitness there are many other factor which contribute to physical fitness including heredity, living standard, nutrition, hygienicconditions, environmental and climate factors etc. (Sallis. et al., 1992).

The purpose of this study was to compare the college going active male students involved in handball game and college going active male students involved in football game, so as to find out which ofthese two categories is more physically fit in responseto tests administered. This may help the coaches and parents to promote their children in the respective games according to the required fitness characteristics.

METHODOLOGY

Subjects: For this study total of 60 male college students were purposively selected as subjects aging 18 year to 20

Table 2: Comparative Analysis of Agility and Flexibility of football Players and Handball Players in college Going Students

	Levene's Test for Equality of Variances		T-test for Equality of Means			
Test Items	F-Value	P-Value	T-value	P-Value	Percentage Mean Difference	Std. Error Difference
Agility	0.32	.576	3.14*	0.003	4.81	0.17
Flexibility	1.63	.207	3.49*	0.001	12.73	1.04

*Significant, 't'.05 (58) =2.000

year (15.17 ± 0.51) who were actively involved in their respective games. Among these 30 belonged to football game and rest 30 belonged to handballgame from Agartala, Tripura.

Variables selected and criterion measures:

- Shuttle runs 10 yard (9.14 mts.) X 6 for agility(measured in seconds).
- Straight Knee Sit & Reach test for flexibility(measured in centimeters).

Statistical Technique: The data set was checked for its normality in respect to outliers, skewness, kurtosis, equality of variances etc. Descriptive statistics and Independent 't' test was employed to each variables for comparing them. The level of significance chosen was
0.05. IBM SPSS 17 was used to execute the statistical functions.

RESULTS

The data set was checked for its normality in respect tooutliers, skewness, kurtosis, equality of variances etc. Itwas found to be perfect in all sense to be treated with parametric statistics. After converting the raw data intogroup data, statistical test were employed to find out necessary information. The results and findings of the descriptive and independent t test are presented in thetables and illustrations bellow.

Table 1: Descriptive Test Scores of Agility and Flexibility of football Players and handball Players in college Going Students

	Groups	No. of Subjects	Mean	Std. Deviation	Std. Error Mean
Agility	Football	30	10.58	0.67	0.12
	handball	30	11.10	0.61	0.11
Flexibility	football	30	30.37	3.80	0.69
	handball	30	26.73	4.25	0.78

Table 1 shows the nature and characteristics of fitness scores of Flexibility and Agility of football players and handball players in college going students (i.e. number of subjects in each group, mean,standard deviation and standard error of mean).

Levene's test for equality of variances results shows that the variance of two groups were equal in both the fitness variables as p-Value of both the variables were
more than.05 thus two sample t-ratio's assumption isfulfilled.

The scrutiny of Table 2 reveals that there lies astatistically significant difference between Agility of football players and handball players in college going students (t-value = 3.14, p= 0.003). Further statistically significant difference also lies between Flexibility of football players and handball playersin college going students (t-value = 3.49, p= 0.001).

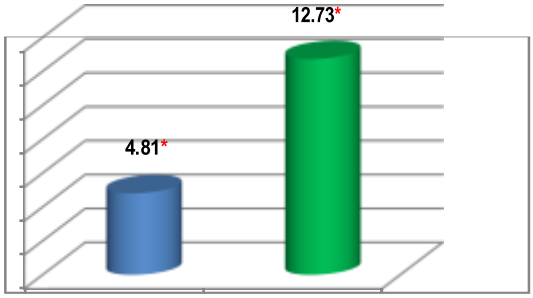

Fig. 1: Percentage Difference of Agility and Flexibility of Football Players and Handball Players in college Going Students

* Significant at 0.05 level

The above figure is the graphical representation of the percentage difference of both the fitness variables in two different groups.

DISCUSSION

The findings that the students involved in football game were found to be in the higher side in Agility compared to the students involved in handball game may be due to the fact that the game of football is played in a relatively larger area than the game of handball and thus requires and develops more Agility for quick movements as well as to return to the initial position while covering the court during game. Again similar results in case of Flexibility was found, this may be due to the fact that while attacking the shuttlers contracts and relaxes their back as well as abdomen very often developing flexibility of those regions, whereas the movements involved during table tennis shots are more precise and controlled rather than stretch involved.

CONCLUSION

The conclusion which can be drawn on the basis of thepresent study is the players belonging to Football game were in higher side of Agility as well as in Flexibility than the players belonging to Handball game. This may be due to the varied specific movements involved in the two different games.

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