FUNCTIONAL DIFFERENCES AMONG ADOLESCENCE IN RELATION TO POSTURAL DEFORMITIES OF DIVERSIFIED REGIONS OF KARNATAKA STATE

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ABSTRACT: *The main Purpose of the study was to find out the Functional differences among adolescence in relation to postural deformities of diversified regions of Karnataka state.*

Methodology - *In order to achieve the purpose of study Eight hundred (800) high school boys were selected from four divisions of Karnataka state. The simple random technique was used for selection of subjects. The age of the subjects chosen for this study wear ranging from 14-17 years. The data pertaining to the motor fitness such as speed assessed with the help of Fifty meter run test, explosive power assessed with the help of standing broad jump test and kyphosis deformity assessed with the help of plumb line test.*

Statistical analysis - *The collected data was analyzed by using the one way analysis of covariance (ANOVA) was used as a Statistical tool to find out the result of the study significant level was fixed at 0.05.*

Findings - *There was significant difference in explosive power, speed and postural deformity of kyphosis-neck and kyphosis-back of high school boys among four divisions of Karnataka state.*

Key Words: *Posture, Kyphosis, Plumb Line, Speed, Explosive Power.*

1. INTRODUCTION

Physical activity also provides an opportunity to get membership of society, as a member of the group, as spectator, as a fan and part of the team. It is important thing to get a best leisure time partner through physical activity and sports. It is pleasure to participate in physical activities because it gives happiness and health, many stages of life individual participate in physical activities like child playing for recreation, youths or adolescents were participating in activities for health, fitness, and develop the skill related activities and old age people were join the same group for doing physical activities to maintain the health and wellness. Main values of sports and physical activities are to get good opportunities in one's life, a man find his strength and weakness of his own abilities, and most important is sports and physical activities are never ends, because if they win they keep continuous contact with activity for carry the success as long as possible, if people were lose the game they were further plan to do special activities to reach victory and feel satisfaction through movement.

Postural deformities:-Posture is a health indicator of an individual. Generally school going children are not conscious about their health and due to their practices unknowingly develop certain deformities as regard to their posture. 'Walk tall' is a generally used terminology to keep up one's good posture. Postural deformities may be developed due to physical inactivity, wrong sitting or walking, sometimes due to work pressure, social environment, peer mischief and obesity.

Posture is a signature for individual in physical freedom; the posture represents exclusive style and personality. Posture is also upholding physical expressions in different kind of situations. Individual emotions fixed in the body it recognizes by people. All babies' emotions were conveying through their body, gradually they learn how to utilize the modalities such as speech to express their emotions. However, emotions are stored in the body.

The main Purpose of the study was to find out the Functional differences among adolescence in relation to postural deformities of diversified regions of Karnataka state.

2. METHODOLOGY

2.1 Selection of Subjects

In the order to achieve the purpose of the study total Eight Hundred (800) High School Boys were selected from Karnataka State. The simple random technique was used for selection of subjects. The age of the subjects chosen for this study wear ranging from 14-17 years.

2.2 Administration of Tests

Speed assessed with the help of Fifty meter run test the score was measured in seconds, explosive power assessed with the help of standing broad jump the score was measured in meters and centimeter and kyphosis deformity assessed with the help of plumb line test score was measured in percentage.

2.3 Statistical Analysis

The collected data was analyzed by using the analysis of covariance (ANOVA) was used as a Statistical tool to find out the result of the study significant level was fixed at 0.05.

3. RESULTS

After analyzing the data within the limitation of the study results are presented in the following tables

TABLE- 3.1

ONE WAY ANOVA OF EXPLOSIVE POWER AMONG HIGH SCHOOL BOYS

Subjects	Sum of Squares	Df	Mean Square	F
Between Groups	1.52	3	.50	7.15*
Within Groups	56.50	796	.07	
Total	58.03	799		

*Significant at 0.05 level table Value= 2.62

Above the table 3.1 shows that there is significant difference among four divisions of Karnataka state high school boys' explosive power performance to predict one's explosive power. Obtained 'f' value is 7.15 which is greater than the table value.

TABLE- 3.2

POST HOC RESULTS OF EXPLOSIVE POWER AMONG HIGH SCHOOL BOYS

Gulbarga	Mysore	Bangalore	Belagavi	Mean difference
1.66	1.73			0.07*
1.66		1.78		0.12
1.66			1.71	0.05
	1.73	1.78		0.05
	1.73		1.71	0.02
		1.78	1.71	0.07*

*Significant at 0.05 level.

Above the table 3.2 depicts that Gulbarga division boys had significant mean difference with Mysore division (0.07mtr), Bangalore division (0.12mtr) and insignificant mean difference with Belagavi division (0.05mtr) in explosive power as seen through standing broad jump performance. Mysore division boys had insignificance mean difference with Bangalore division (0.05mtr) and Belagavi division (0.02mtr) in explosive power. Bangalore division boys had significance mean difference with Belagavi division (0.07mtr) and Gulbarga division (0.07mtr). The explosive power variable among boys clearly indicates that Gulbarga division boys had lesser explosive power when compared to other three divisions; Bangalore division high boys were superior in explosive power compare to Mysore division and Belagavi division. Busy and speedy life style of Bangalore division boys may be the reason for better explosive strength performance. Graphical representation of post-hoc test result is depicted in chart 1.

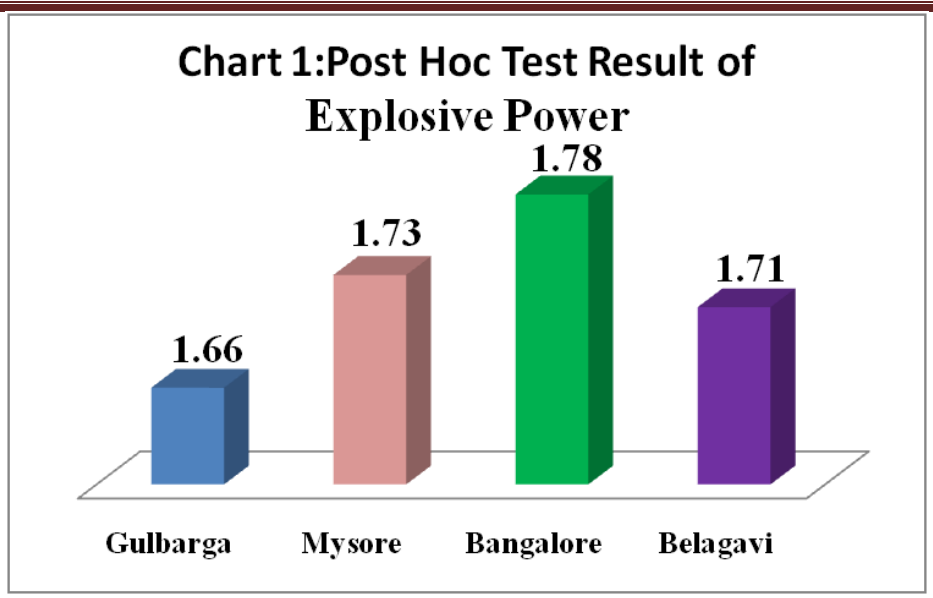


TABLE- 3.3
ONE WAY ANOVA OF SPEED AMONG HIGH SCHOOL BOYS

Subjects	Sum of Squares	Df	Mean Square	F
Between Groups	15.91	3	5.30	17.65*
Within Groups	239.07	796	0.30	
Total	254.9	799		

*Significant at 0.05 level Table Value= 2.62

Examination of table-3.3 shows that there is significant difference among four divisions of Karnataka state high school boys' fifty meter run performance to predict speed aspect. Obtained 'f' value is 17.65 which is greater than the table value.

TABLE - 3. 4
POST HOC RESULTS SPEED AMONG HIGH SCHOOL BOYS

Gulbarga	Mysore	Bangalore	Belagavi	Mean difference
5.59	5.23			0.35*
5.59		5.27		0.32*
5.59			5.31	0.27*
	5.23	5.27		0.04
	5.23		5.31	0.08
		5.27	5.31	0.04

*Significant at 0.05 level.

Above the Table 3.4 shows that Gulbarga division boys had significant mean difference with Mysore division (0.35sec), Bangalore division (0.32 sec) and Belagavi division (0.27 sec) in speed as seen through fifty meter run performance. Mysore division boys had insignificance mean difference with Bangalore division (0.04

sec) and Belagavi division (0.08 sec) in speed. Bangalore division boys had insignificant mean different with Belagavi division (0.04 sec) and Gulbarga division (0.35 sec). Speed variable among boys clearly identifies that Gulbarga division boys had lesser Speed when compared to other three divisions, followed by Mysore division, Bangalore division and Belagavi division. Physiological characteristics may be the factor related to speed differences among high school boys. The graphical representation of post-hoc test result is depicted in chart 2.

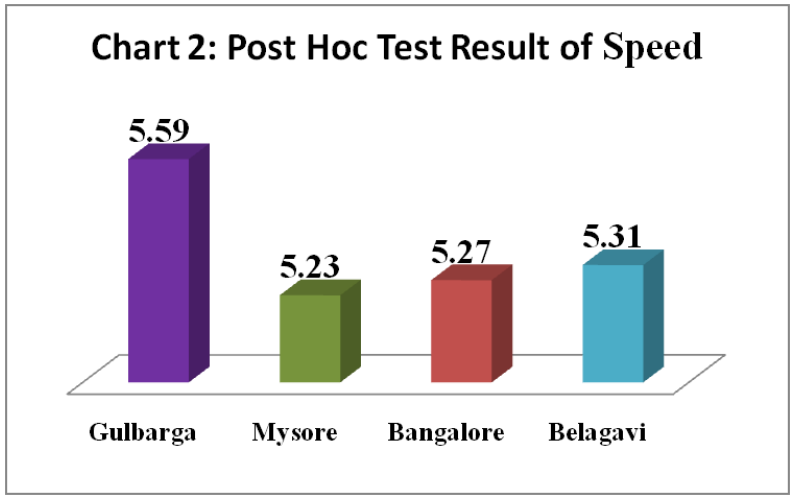


TABLE - 3.5
ONE WAY ANOVA OF KYPOSIS-NECK AMONG HIGH SCHOOL BOYS

Subjects	Sum of Squares	Df	Mean Square	F
Between Groups	148.49	3	49.49	6.01*
Within Groups	6550.53	796	8.22	
Total	6699.02	799		

*Significant at 0.05 level Table Value= 2.6

Analysis of table- 3.5 shows that there is significant difference among four divisions of Karnataka state high school boys' kyphosis–neck which is one of the postural deformities. Obtained 'f' value is 6.01 which are greater than the table value.

TABLE -3.6
POST HOC RESULTS OF KYPOSIS-NECK AMONG HIGH SCHOOL BOYS

Gulbarga	Mysore	Bangalore	Belagavi	Mean difference
7.73	8.49			0.76*
7.73		7.55		0.18
7.73			7.36	0.37
	8.49	7.55		0.94*
	8.49		7.36	1.13*
		7.55	7.36	0.19

*Significant at 0.05 level.

Above the Table 3.6 shows that Gulbarga division boys had significant mean difference with Mysore (0.76) and Bangalore division (0.37%) in kyphosis-neck. Insignificant mean difference with Belagavi division (0.37%) in kyphosis-neck. Mysore division boys had significant mean difference with Bangalore division (0.94%) and Belagavi division (1.13%) in kyphosis-neck. Bangalore division boys had insignificant mean difference with Belagavi division (0.19%). The kyphosis-neck variable among boys clearly identifies that Belagavi division boys had high kyphosis-neck deformities when compared to other three divisions, followed by Mysore division, Bangalore division and Gulbarga division. Skeletal and muscular strength of the body and behavior style may be the factor related to postural differences among high school boys. The graphical representation of post-hoc test result is depicted in chart 3

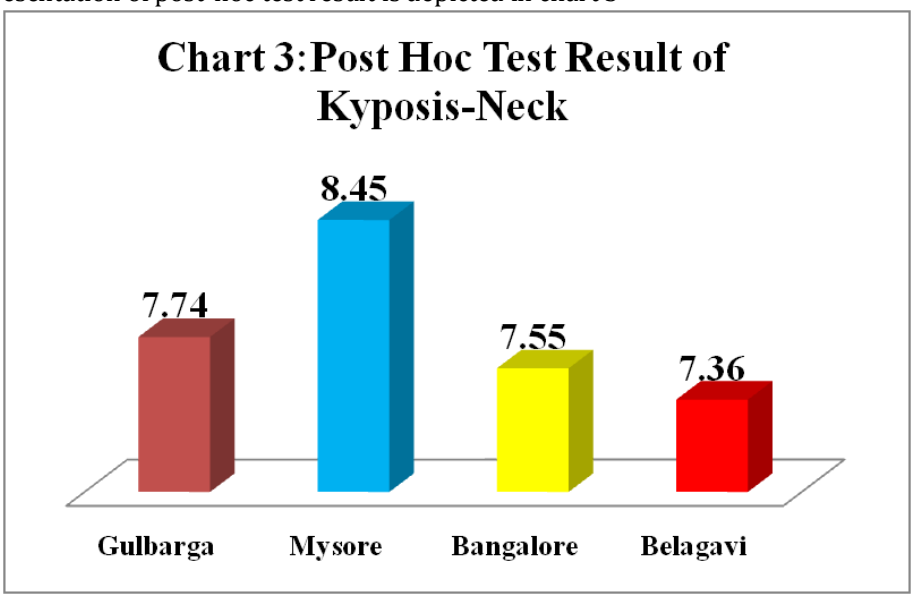


Table 3.7

ONE WAY ANOVA OF KYPOSIS-BACK AMONG HIGH SCHOOL BOYS

Subjects	Sum of Squares	Df	Mean Square	F
Between Groups	178.42	3	59.47	6.83*
Within Groups	6926.11	796	8.70	
Total	7104.53	799		

*Significant at 0.05 level Table Value= 2.62

Analysis of table-3.7 shows that there is significant difference among four divisions of Karnataka state high school boys' kyphosis-back is one of the postural deviations. Obtained 'f' value is 6.83 which are greater than the table value.

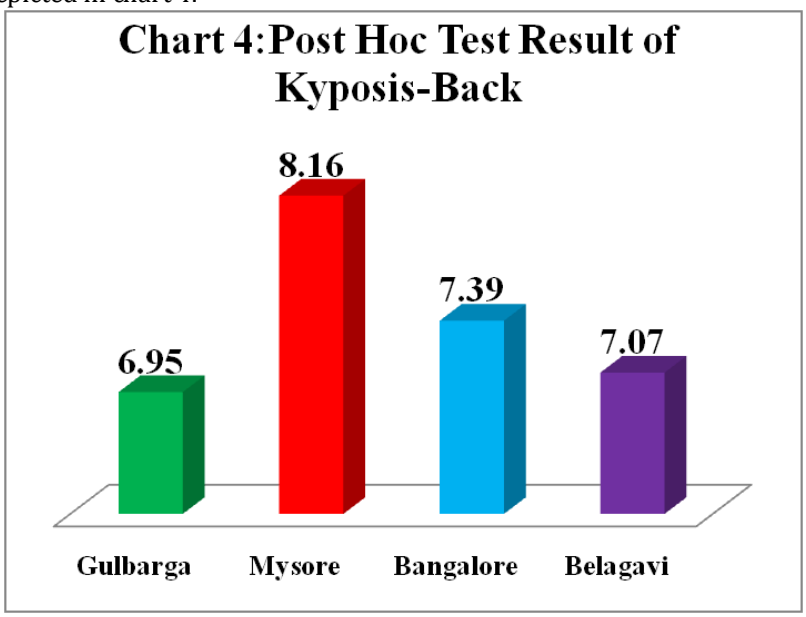
TABLE -3.8.

POST HOC RESULTS OF KYPOSIS-BACK AMONG HIGH SCHOOL BOYS

Gulbarga	Mysore	Bangalore	Belagavi	Mean difference
6.95	8.16			1.21*
6.95		7.39		0.44
6.95			7.06	.11
	8.16	7.39		.77*
	8.16		7.06	1.09*
		7.39	7.0	0.32

*Significant at 0.05 level

The above Table-3.8 shows that Gulbarga division boys had significant mean difference with Mysore (1.21%). Insignificant mean difference with Bangalore division (0.44%) and Belagavi division (0.11%) in kyphosis-back. Mysore division boys had significant mean difference with Bangalore division (0.77%) and Belagavi (1.09%) in kyphosis-back. Bangalore division boys had insignificant mean difference with Belagavi division (0.32%). The kyphosis-back variable among boys clearly identifies that Gulbarga division boys had more kyphosis-back deformities when compared to other three divisions, followed by Mysore division, Bangalore division and Gulbarga division. Skeletal and muscular strength of the body may be the factor related to postural differences among high school boy. The graphical representation of post-hoc test result is depicted in chart 4.



4. DISCUSSION ON FINDINGS

1. The present study concluded that there was significant difference in explosive power of high school boys among four divisions of Karnataka state. High school boys from Bangalore division boys were highest in explosive power (1.78mtr), Gulbarga division boys had lowest explosive power (1.66mtr) compared to other two divisions. Busy and speedy life style of Bangalore division boys may be the reason for better explosive strength performance (Kumar 2018).
2. The present study concluded that there was significant difference in fifty meter run of high school boys among four divisions of Karnataka state. High school boys from Mysore division boys were greater in fifty meter run (5.23sec), Gulbarga division boys had lowest explosive power (5.59sec) compared to other two divisions. Physiological characteristics may be the factor related to speed differences among high school boys (Dhull-2018), (kumar-2018) and (Bhadu and Singh-2016).
3. The present study concluded that there was significant difference in kyphosis-neck of high school boys among four divisions of Karnataka state. High school boys from Mysore division boys were good in kyphosis-neck (8.49%), Belagavi division boys were poor in kyphosis-neck (7.36%) compared to other divisions, Skeletal and muscular strength of the body and behavior styles may be the factor related to postural differences among high school boys (Durai-2017) supported the results, there was a significant difference exists in kyphosis-neck between sports and non-sports participants (Malepe, et. al. 2015).
4. The present study concluded that there was significant difference in kyphosis-back of high school boys among four divisions of Karnataka state. High school boys from Mysore division boys were good in kyphosis-back (8.16%), Gulbarga division boys were poor in kyphosis-back (6.95%) compared to other divisions. Skeletal and muscular strength of the body, load bearing on back at earlier age and behavior style may be the factor related to postural differences among high school boys (Kratenova-2007).

5. CONCLUSIONS

On the basis of findings of the present study, the fallowing conclusions wear drawn

1. There was significant difference in explosive power of high school boys among four divisions of Karnataka state. High school boys from Bangalore division boys (1.78mtr) were better in explosive power, compared

to other divisions, Mysore (1.73mtr) and Belagavi division boys (1.71mtr) had least difference in power and Gulbarga division boys (1.66mtr) had lowest explosive power than three divisions.

2. There was significant difference in speed of high school boys among four divisions of Karnataka state. High school boys from Mysore division boys (5.23mtr) were superior in speed, Bangalore (5.27mtr) and Belagavi division boys (5.31mtr) were had similar values in speed and Gulbarga division boys (5.59mtr) had lowest in speed compared to other divisions.

3. There was significant difference in postural deformities of kyphosis-neck**,** Belagavi (7.36 %) division boys had high kyphosis-neck deformities when compared to other three divisions, followed by Mysore division(8.49%), Bangalore division(7.55%) and Gulbarga division (7.73%).The kyphosis-back variable among boys clearly identifies that Gulbarga division boys (6.95%) had more kyphosis-back deformities when compared to other three divisions, followed by Mysore division (8.16%), Bangalore division(7.39%) and Gulbarga division (6.95%).

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