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Functional differences among adolescence in relation to postural deformities 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 Karnataka state. For this study 800 high school boys were selected from four divisions of Karnataka state. Fifty meter dash to assess the Speed, standing broad jump to assess an explosive power and plumb line test to assess the kyphosis deformity. The collected data was analyzed by using the analysis of covariance (ANOVA) was used at 0.05 level of significance. There was significant difference in explosive power, fifty meter run and postural deformity of kyphosis-neck and kyphosis-back of high school boys among four divisions of Karnataka state.

Keywords: Posture, kyphosis and plumb line

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.

Methodology

The purpose of the study was to find the influence of regional diversity on functional differences among adolescence in relation with postural deformities of Karnataka state. Total eight hundred high school boys from Karnataka state selected for this study. The present study was confined to motor fitness variable such as speed, power and postural deformity kyphosis (Neck and back). Descriptive statistical solutions were obtained for all the variables of study. ANOVA statistical analysis was computed for investigation.

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Selection of variables

Motor fitness variables

1. Explosive power
2. Speed

Postural deformities variables

1. Kyphosis neck
2. Kyphosis back

Results and Discussion

The statistical analysis of data collected on motor fitness variables and postural deformities variables of eight hundred high school boys’ four divisions of Karnataka state.

Table 1: One Way Anova of Standing Broad Jump among High School Boys

| | 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

Examination of table1 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 2: Post Hoc Results of Standing Broad Jump 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

Perusal of table 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.

Table 4: Post hoc results fifty meter run 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 |

*signil. at 0.05 level.

Table 4 shows that Gulbarga division boys had significant mean difference with Mysore division (0.35sec), Bangalore division (0.32sec) and Belagavi division (0.27sec) in speed as seen through fifty meter run performance. Mysore division boys had insignificance mean difference with Bangalore division (0.04sec) and Belagavi division (0.08sec) in speed. Bangalore division boys had insignificant mean different with Belagavi division (0.04sec) and Gulbarga division (0.35sec).

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.

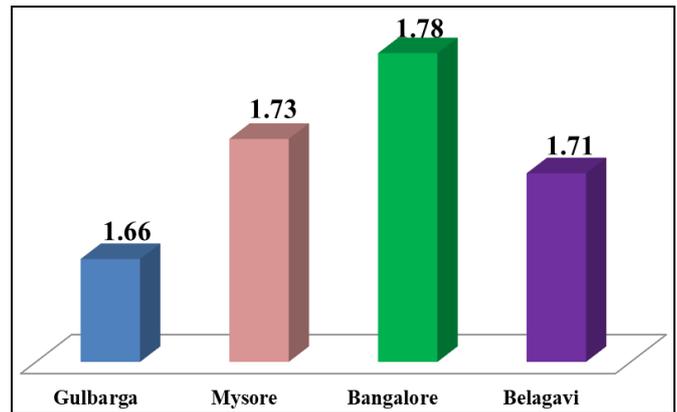


Chart 1: Post Hoc Test Result of Standing Broad Jump

Table 3: One Way Anova of Fifty Meter Run among High School Boys

| | 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 2 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.

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.

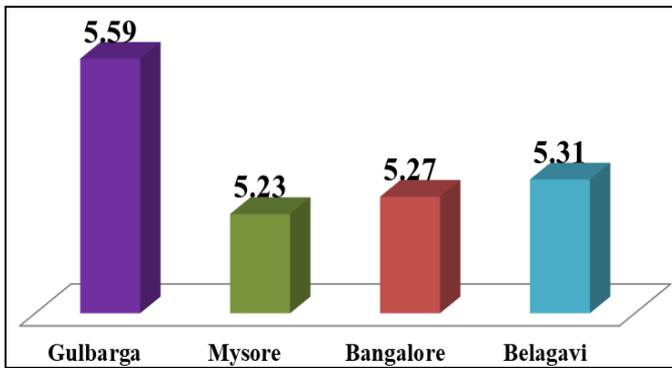


Chart 2: Post Hoc Test Result of Fifty Meter Run

Table 5: One Way Anova of Kyphosis-Neck among High School Boys

| | 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 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 6: Post Hoc Results of Kyphosis-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.

Table 6 shows that Gulbarga division boys had significant mean difference with Mysore (0.76) and Bangalore division

Table 8: Post Hoc Results of Kyphosis-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

Table 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

(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.

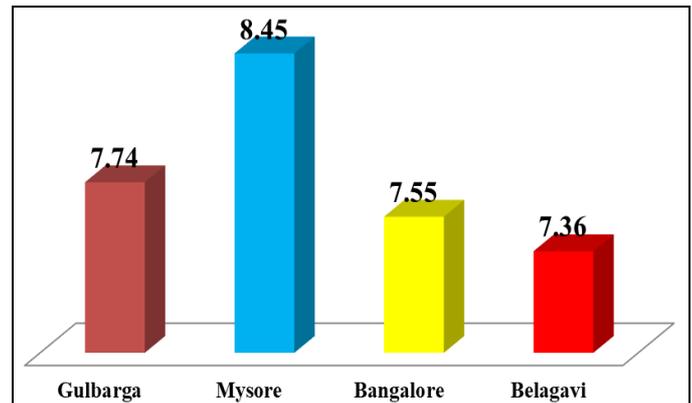


Chart 3: Post Hoc Test Result of Kyphosis-Neck

Table 7: One Way Anova of Kyphosis-Back among High School Boys

| | 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 7 shows that there is significant difference among four divisions of Karnataka state high school boys' kyphosis-back is one of the postural deviation. Obtained 'f' value is 6.83 which are greater than the table value.

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 boys. The graphical representation of post-hoc test result is depicted in chart 4.

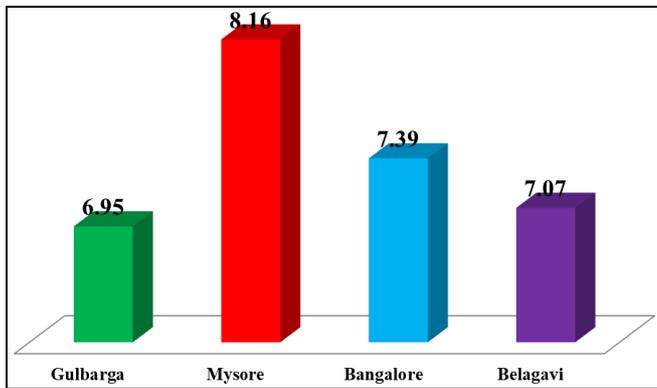


Chart 4: Post Hoc Test Result of Kyphosis-Back

Conclusions

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.

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 (5.23mtr) were superior in fifty meter run, Bangalore (5.27mtr) and Belagavi division boys (5.31mtr) were had similar values in speed and Gulbarga division boys (5.59mtr) had lowest in fifty meter run compared to other divisions.

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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