A Survey on Physical Fitness of Under 14 School Boys

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Abstract

Background-The purpose of study was assessing the physical variables of fewer than 14 school boys. Procedure and Methodology-The subjects were 430 boys who given trail for physical fitness in school of Bulanshahar for the purpose of the study. The physical variables of boys also tested. The physical variables were-1) Weight (weighing machine) 2) Height (by Steadiometer) 3) Abdominal muscular strength (by no. of sit-ups) 4) Flexibility (sit and rich test) 5) speed (30 m dash) and 6) explosive strength (standing broad jump). The test was conducted in morning time. Statistical Technique-Percentiles were computed to analyse physical variables of school boys. Result-Percentile values at 90th, 50th and 10th percentile of height are 161.90, 147 and 134.10 respectively and abdominal muscular endurance 44.90, 32 and 16 respectively, flexibility 36, 28 and 19.05 respectively, weight 45, 35 and 27 respectively. Speed 6.51, 5.89, 5.02 respectively, Percentile value of explosive strength at 90th, 50th and 10th are 1.97, 1.60 and 1.29.Conclusions: Most of the school boys (61 %) are having average height range from 140-160cm. Majority of the school boys (62%) are having good weight according to his height. They are having good abdominal muscular endurance, speed, flexibility and explosive strength.

KEYWORDS- height, weight, abdominal strength, speed, explosive strength, flexibility

INTRODUCTION

Sports are a highly specialized activity, the participation in sports warrants a fundamental desire to compete and surpass others in performance, and since any sports activity involves competition. However, winning in a competition surely depends on performance. Better the performance, greater the chance of winning. Nevertheless, the quality of performance displayed by the athletes in competitive events is determined by the several aspects.

Physical fitness refers to the organic capacity of the individual to perform the normal task of daily living without undue tiredness or fatigue having reserve of strength and energy available to meet satisfactorily any emergency demands suddenly placed upon him. Physical fitness is a state of well-being that comprises skill related and health-related components. Skill related physical fitness refers to an individual’s athletic ability in sports such as tennis and encompasses skill-related attributes like dynamic balance, power, speed and agility; the health-related aspect is a measure of cardiovascular endurance, muscle strength, endurance, Flexibility and body composition (Hopkins & Walker, 1988).

Concept of Physical Fitness is as old as mankind, keeping in mind the survival of the fittest, down through the ages, only strong and agile people could defend invaders, protects themselves and their property. It is a hard fact that physically fit people are in a better position to bear the rigorous and abnormal stress and strain, than those. Who are less physically fit? The basic moments like running, jumping,
climbing, throwing, lifting etc, require specific physical attributes such as muscular strength, muscular endurance, speed, agility and flexibility.

**OBJECTIVE OF THE STUDY**

The objective of the study was to find out status of Physical Fitness of fewer than 14 years school boys

**PROCEDURE AND METHODOLOGY**

**Selection of the subject**

Four hundred thirty school boys from Bulandshahar district between the age group of 10 to 14 years were selected as subjects for the study. They were given trail for physical fitness. The data was taken in morning time.

**Selection of variables**

Physical variables selected for the purpose of this study were:-

**Physical variable**-

- Weight (weighing machine)
- Height (Stadiometer)
- Abdominal Muscular endurance (No.of sit-ups in 1 min.)
- Flexibility (sit and reach test)
- Explosive strength (standing broad jump)
- Speed (30 m. dash)

**ANALYSIS AND INTERPRETATION OF DATA**

Percentile for the physical variables is given in table-1 and Mean and S.D. of selected physical variables are given in table-2

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Height</th>
<th>Weight</th>
<th>Abdominal strength</th>
<th>Flexibility</th>
<th>speed</th>
<th>Explosive strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>134.10</td>
<td>27.00</td>
<td>16.00</td>
<td>19.05</td>
<td>5.02</td>
<td>1.29</td>
</tr>
<tr>
<td>20</td>
<td>138.00</td>
<td>30.00</td>
<td>22.00</td>
<td>22.20</td>
<td>5.34</td>
<td>1.38</td>
</tr>
<tr>
<td>30</td>
<td>141.00</td>
<td>31.00</td>
<td>27.00</td>
<td>25.00</td>
<td>5.56</td>
<td>1.47</td>
</tr>
<tr>
<td>40</td>
<td>144.00</td>
<td>33.00</td>
<td>30.00</td>
<td>26.00</td>
<td>5.69</td>
<td>1.54</td>
</tr>
<tr>
<td>50</td>
<td>147.00</td>
<td>35.00</td>
<td>32.00</td>
<td>28.00</td>
<td>5.89</td>
<td>1.60</td>
</tr>
<tr>
<td>60</td>
<td>149.00</td>
<td>37.00</td>
<td>34.00</td>
<td>30.00</td>
<td>6.00</td>
<td>1.67</td>
</tr>
<tr>
<td>70</td>
<td>153.00</td>
<td>39.00</td>
<td>36.00</td>
<td>31.00</td>
<td>6.14</td>
<td>1.73</td>
</tr>
<tr>
<td>80</td>
<td>157.00</td>
<td>42.00</td>
<td>39.00</td>
<td>33.00</td>
<td>6.31</td>
<td>1.84</td>
</tr>
<tr>
<td>90</td>
<td>161.90</td>
<td>45.00</td>
<td>44.90</td>
<td>36.00</td>
<td>6.51</td>
<td>1.97</td>
</tr>
</tbody>
</table>
Table-2
Mean and Standard Deviation of selected Physical Variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>147.41</td>
<td>10.21</td>
</tr>
<tr>
<td>Weight</td>
<td>35.82</td>
<td>7.35</td>
</tr>
<tr>
<td>Abdominal strength</td>
<td>30.83</td>
<td>11.12</td>
</tr>
<tr>
<td>Flexibility</td>
<td>27.74</td>
<td>6.91</td>
</tr>
<tr>
<td>Speed</td>
<td>5.69</td>
<td>1.14</td>
</tr>
<tr>
<td>Explosive strength</td>
<td>1.61</td>
<td>.26</td>
</tr>
</tbody>
</table>

Table -1 reveals that the percentile values of selected physical variables of boys student. In case of height, percentile value at the 90th percentile was 161.90 cm, 50th percentile was 147.00, and 10th percentile was 134.10 cm.

In case of weight, the value at the 90th percentile was 45 kg, at the 50th percentile was 35 kg and the 10th percentile was 27 kg.

Abdominal strength percentile at the 90th percentile was 44.90, 50th percentile was 32.00, 10th percentile was 16.00.

Flexibility value at the 90th percentile was 36, 50th percentile was 28, 10th percentile was19.05.

Speed value at the 90th percentile was 6.51 sec., 50th percentile was 5.89 sec, and 10th percentile was 5.02 sec.

Explosive strength value at the 90th percentile was 1.97 cm, 50th percentile was 1.60 cm, 10th percentile was 1.29 cm.

Figure-1 represents the body height of boys, 27% of boys scored 140 cm or less; 61% had a score ranging from 141-160 cm and 12% of them scored 161 cm and above.
Fig. 2
Percentage of Boys on Body Weight (Kg.)

Fig. 2 represents the body weight of boys, 28% of boys scored 30 kg or less, 62% of them had scored ranging from 31-50 kg and 10% of them scored above 51 kg.

Fig. 3
Percentage of Boys on Abdominal muscular endurance (scores in no.)

Fig. 3 represents the abdominal muscular endurance of boys, 25% of them scored 25 or less; 73% of them scored between 26-50 and 7% of them scored above 51.

Fig. 4
Percentage of Boys on Flexibility (score in cm)

Fig. 4 represents the flexibility of boys, 12% of them scored 20 cm or less, 75% of them score between 20.50 to 35 cm and 13% of them scored 35.50 cm or above.
Fig-5

**Percentage of Boys on Speed (score in sec.)**

- 16% had a score 5.30 sec or less
- 73% had a score between 5.31 sec to 6.50 sec
- 11% had a score of 6.51 sec or above

Fig-5 represents the speed of boys, 16% had a score 5.30 sec or less; 73% of them had a score between 5.31 sec to 6.50 sec; 11% of them scored 6.51 sec or above.

Fig-6

**Percentage of Boys on Explosive Strength (score in meter)**

- 22% had a score 1.30 m or less
- 71% had a score between 1.31 m to 2 m
- 7% had a score of 2.01 m or above

Fig-6 represents the explosive strength of boys, 22% had a score 1.30 m or less; 71% of them had a score between 1.31 m to 2 m; 7% of them had a score 2.01 m or above.

**Discussion of findings**

In case of muscular endurance 7% of the boys did 50 or above the 54 sit-ups while 73% had done between 26-50. The rectus abdominal muscles is a weak muscle which can develop only through specific exercise. Lack of such specific exercise would have resulted in poor muscles endurance.

In case of flexibility 75% of them had a score of between 20.5 cm-30 cm. 13% of them had a score of 35.5 or above. Because Boys have good Flexibility in less than 14 year.

In case of speed 73% of them had run between 5.3 sec-6.5 sec. 16% of them had run in 5.3 sec or less time. In less than 14 year boys have higher flexibility that’s why their speed ability is good.
In case of height 12% of them had get height 161 cm or above and 61% had get between 141 - 160. This refers to good height of boys. 62% boys had get 31kg -50 kg Weight. It is also good according to height.

In case of explosive strength 71% had get 1.31m-2 m. and 7% had get 2.01 m or above. in case of boys they have more ability to jump because they have more explosive strength than men.

Conclusions

• Most of the boys have good weight, speed, flexibility, explosive strength and abdominal muscular strength according to their height

References


