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## Assessment of postural status among students of primary and secondary level

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### Abstract

The purpose of this study was to evaluate the posture of boy in the primary and secondary wings of ST. Thomas Schools of Ghaziabad District. Under the circumstances and within the limitation of this study the following conclusion were drawn, Almost 6.36 percent of boys had unsatisfactory posture at St. Thomas Schools Ghaziabad, Very few had unsatisfactory posture in foot mechanics sitting, standing, walking, ascending and descending stairs, 471 boys (59.92%) had unsatisfactory posture in stooping to pick-up a light object.

**Keywords:** Posture, Foot Mechanics, Standing Position, Walking

### 1. Introduction

It has been said that without man's posture no man, without man no culture and without culture a world not worth living in.

Physical activity programme that includes exercises to strengthen and stretch postural muscles 'helps prevent problem in later life. We use formal exercise for remedial and therapeutic During the elementary school years of growth and development many postural pattern of adult life are formed. Therefore a great concern has been contoured upon the postural of elementary school children. Our athlete splendid in developing muscles of heart and lungs, our muscular resistance were often asymmetrical in their effect. A pitcher of a tennis player, a quarter back, plays and throws intensively with one arm and further develop leg accuracy, abdominal and back control best adapted to this one sided delivery.

Variation of normal posture may be functional or organic either congenital or acquired. The second objective of this study is to determine the prevalence of abnormal posture among Indian school children, so that this may provide a basis for formulating corrective strategies that may be organized at school level at an early stage. When presumable, posture defects are easily corrected.

The purpose of study was to "Evaluation of posture among boys of primary and secondary wings of St. Thomas Schools of Ghaziabad district."

### Selection of Subjects

The whole population of primary and secondary wings of St. Thomas School (one and two) of Ghaziabad district was taken as the subject for this study.

Total numbers of subjects were seven hundred eighty six students. The method of evaluation was done on the basis of subjective judgment.

### Selection of the Test

The Iowa Posture Test was selected because through this test one can measure static as well as dynamic posture of the students.

The other reason was this test was inexpensive, take less time for administration and it does not require any expensive equipment.

### Collection of Data

The data for the test was obtained during the physical education periods in month of Nov and December 2003.

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**2. Administration of the Test**

**Iowa Posture Test**

The subjects dressed in swimming suits were divided in groups of three and each group sits on the chair in a row about two feet apart. The names of the subjects were entered in order on a chart and this order is maintained throughout the test. The subjects were not explained about each item before testing. This was done to see what the subjects do habitually. The Iowa posture test as administered with its scoring is as follows.

**Foot Mechanics Test**

The examiner takes position in front of the subjects. Each subject walks about ten steps forward bare-footed and then returns back to his chair while he was checked on toeing straight ahead and the presence or absence of pronation. The test is scored as follows.

**a. Weight Distribution**

- 3 Points - No bony bulge in front of and below medial malleolus; no marked inward protrusion of navicular bone; no inward bowing of heel cord
- 2 Points - Some pronation
- 1 Point - Marked pronation

**b. Direction of Feet. (Fig.-2)**

- 3 Points - Feet parallel; a very slight angle of toeing out was allowed.
- 2 Points - Moderate toeing out.
- 1 Point - Marked toeing out.

**c. Standing Position Test**

Each student stands with his left side towards their chairs while he was checked for correct alignment of body segment from the side (Fig.-3). The test was scored as follows.

- 3 Points - Axis through head, neck, trunk and legs approximately in a straight line.
- 2 Points - Slight general deviator or moderate deviation of one part.
- 1 Point - Marked general deviation.

**Findings**

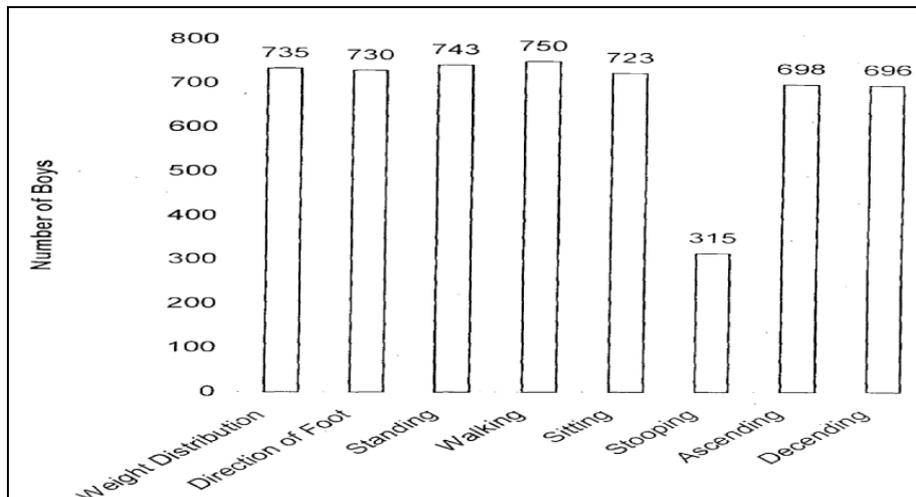
The criterion for the evaluation of posture of boys in the primary and secondary wings is presented in Table No. 1 and 2. The details of the evaluation of posture are discussed as follows.

**Table 1: Performance of Boys in Lows Posture Test**

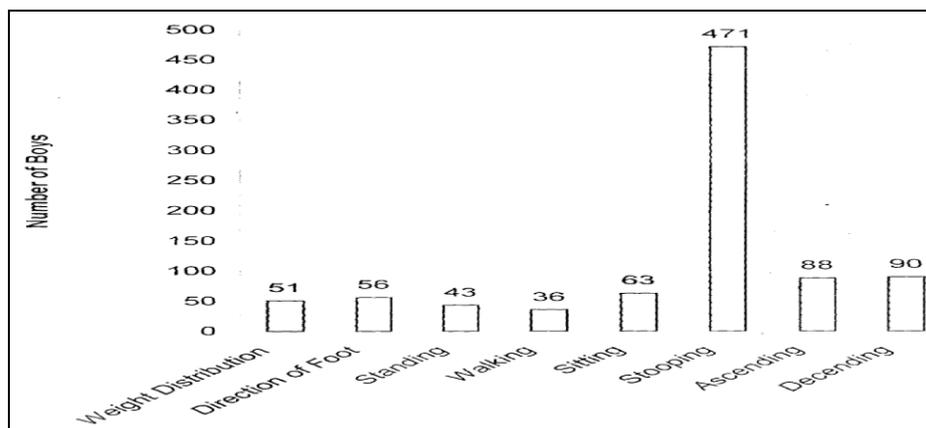
S. No.	Postural Standards	Number	%
	Boys with posture satisfactory	736	93.64
	Boys with poor posture	50	6.36

From Table — 1 it is evident that out of 786 boys students, 50 students (6.36%) have poor posture while the boys with satisfactory posture are 736 (93.64%) of St. Thomas School (1 and 2) of Ghaziabad District.

The boys having satisfactory and unsatisfactory posture in difference items of Iowa posture test have been depicted in Fig. 9 & Fig.



**Fig 1:** (Items of Iowa Posture Test) Distribution of Boys having Satisfactory Posture in Different Items of IOWA Posture Test



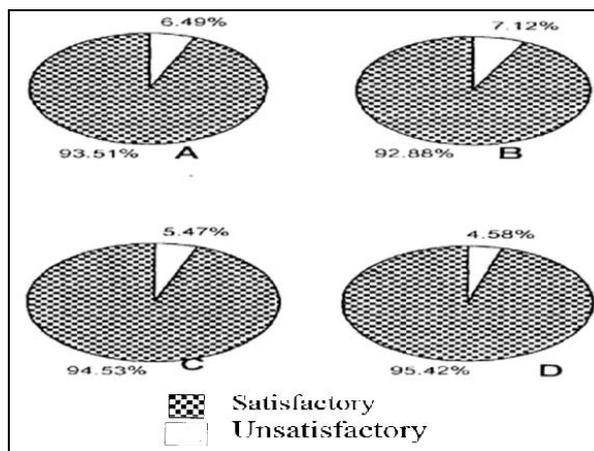
**Fig 2:** (Items of Iowa Posture Test) Distribution of Boys having Unsatisfactory Posture in Different Items of IOWA Posture Test

**Table 2:** Performance of Boys in Specific Item of Iowa Posture Test

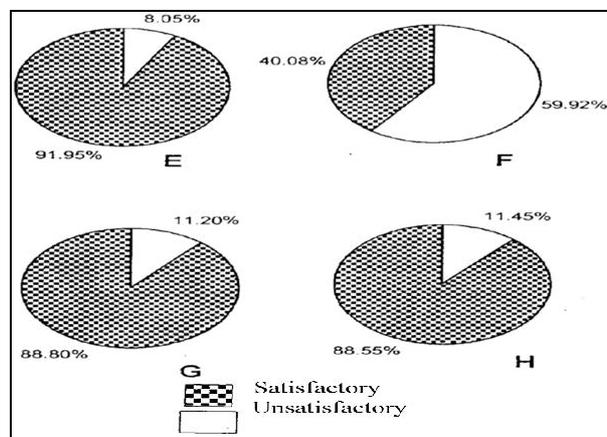
S. No.	Specific posture item	No. of boys with satisfactory posture	%	No. of boys with poor posture	%
<b>Foot Mechanic</b>					
	i) Distribution Weight	735	93.51	51	6.490
	ii) Direction of feet	730	92.88	56	7.12
	Standing	743	94.53	43	5.47
	Walking	750	95.42	36	4.58
	Sitting	723	91.95	63	8.05
	Stoop in g	315	40.08	471	59.92
<b>Ascending &amp; Descending of Stairs</b>					
	i. Ascending	698	88.8	88	11.20
	ii. Descending	696	88.55	90	11.45

Table — 2 reveals that a total of 735 (93.51%) of boys had satisfactory weight distribution pattern whereas 51 (6.490%) of boys had unsatisfactory weight distribution pattern.

- A total of 730 (92.88%) of boys had satisfactory direction of the feet whereas 56 (7.12%) of boys had unsatisfactory direction of the feet in foot Mechanics Test.
- 743 (94.53%) of boys had satisfactory standing posture while 43 (5.47%) of boys had unsatisfactory standing posture.
- Total of 750 (95.42%) of boys has satisfactory walking habit whereas 36 (4.58%) of boys has unsatisfactory walking habit.
- 723 (91.95%) of boys has satisfactory sitting habits at the same time 63 (8.05%) of boys has unsatisfactory sitting habit.
- 315 (40.08%) of boys adopts satisfactory ways in stooping to pick up light object while 471 (59.92%) of boys and adopt unsatisfactory ways in stopping to pick up light object.
- 698 (88.8%) of boys adopt satisfactory posture while ascending stairs while 88 (11.20%) adopts unsatisfactory posture to ascend stairs.
- 696 (88.55%) of the boys adopts satisfactory means of posture in descending while 90 (11.45%) adopt poor posture while descending.
- The percentage of boys having satisfactory and poor posture in different item Iowa posture test is shown in Fig. 11 (A to D) & Fig. 11 (E to H).



**Fig 3:** A- Weight Distribution B- Direction of the Foot C- Weight Distribution D- Direction of the Foot



**Fig 4:** A to D Percentage of Boys Performance in Specific Items of IOWA Posture Test G - Ascending Stairs Test H- Descending stair tes E- Sitting Test F- Stooping to Pick up Light Object Test  
E to H Percentage of Boys Performance in Specific Items of IOWA Posture Test

### **Conclusion**

Under the circumstances and within the limitation of this study the following conclusion were drawn

- Almost 6.36 percent of boys had unsatisfactory posture at St. Thomas Schools Ghaziabad.
- Very few had unsatisfactory posture in foot mechanics sitting, standing, walking, ascending and descending stairs.
- 471 boys (59.92%) had unsatisfactory posture in stooping to pick-up a light object.

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