

## Evaluation of Postural Deformities of School Going Children

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### Abstract

“The person with poor posture is ungainly awkward and unaesthetic” erect posture enhances the feeling of well-being” No one can deny the validity of the above statement yet how many of us had the privilege of good postural training in our formative years? Before postural training the evaluation is most important aspect. There are various subjective and objective outcome measures to evaluate the posture and postural deformities. The purpose of this study was to evaluated the posture and its deformities of school going children. The study subjects were 100 school going children of school affiliated to CBSE board. Two ways evaluation was conducted A-Postural weakness-Tested by Kraus weber test. B-Structural measurement-After evaluation they were classified, this classification further used for postural training.

**KEYWORDS** Kraus webertest, Postural deformities

### INTRODUCTION

The study of posture involves the position of the various body segments at any given movement.

It considers the mechanics of movement especially the more fundamental movements of ...walking Running and sitting, as well as those related to daily task such as bending, stopping, pushing and lifting. There is even an optimum sleeping posture. Individual body build and its influence on behavior, together with anthropometric measurements in general and related to posture.

The maintenance of posture and the corrective movements that restore balance involve the activities of a large portion of the skeletal musculature and many parts of the central nervous system. Every movement starts from posture and ends in a posture, but during the execution of the movement the postural contractions are altered or abolished.

Good posture cannot be forced upon a child. Any factors either of health or environment which has weaken muscular strength or encourage exaggerations of spinal curve will produce poor posture children with habitual poor posture had more disease, fatigue under weight, self-consciousness, hearing defects, restlessness. Functional postural defects are commutant symptoms of illness and poor health. Malnourished child for example who does not have the caloric intake to supply needed energy simply does not have strength to hold himself up. Poor posture is inevitable results.

## NEED FOR STUDY

Evaluation of postural deformities is necessary to find out and classify school going children for awareness regarding postural deformities and for development of Specific corrective exercise programme .This will help to prepare a specially guided corrective exercise programme .This will also help to minimize postural deformities.

## AIMS

To Evaluate the Postural Deformities among school going children.

## OBJECTIVES

- To find out the best tool for postural measurement.
- To Classify various postural deformities.
- To use and classified school going children.

## MATERIALS AND METHODOLOGY

- Study type - Survey design
- Sample method-Simple random method
- Sample size- 300
- Place of the study school affiliated to CBSE at Nagpur.
- Duration of study –one month.
  
- Criteria of the study- (A) Postural weakness tested and evaluated by kraus-Weber test  
(B) Structural measurement to identify area and type of postural defects.

## PROCEDURE OF THE STUDY.

Three hundred Students were Selected as sample of this study from school affiliated to CBSC Board from Nagpur.

They were willing to participate in the study .These samples were thoroughly screened and evaluated with the help of Kraus weber test and structural measurements .

Kraus-weber tests included the following items

(A) Test for weak abdominal and hip flexor muscles

(B)Tests for hip flexor muscles and lower abdominal muscles.

(C)Test for weak upper back muscles.

(D) Test for weak lower back muscles.

and(E)Test for less flexibility in hamstrings and lower back muscles.

Structural measurement included

- A. Measurements of Chest expansion
- B. Measurements of scapulae-spine distance
- C. Measurement of level of scapulae
- D. Measurement of level of the anterior – superior spine of the Illum.
- E. Measurement of leg length.
- F. Measurement of the pelvic tilt.

## COLLECTION OF DATA

Following consideration were made for collecting the data.

For Kraus weber test

A-Twenty Subjects who scored five and less than five were taken for the study for test 1 and test 2.

B-20 subjects who scored 8 and less than 8 were taken for study for test 3,4 and 5.

**FOR STRUCTURAL MEASUREMENT**

- a) Chest expansion-Twenty subjects whose difference was found 4 and less than 4 centimeters were taken up for study.
- b) Scapulae-Spine Distance – Ten subjects with maximum distance for right scapulae and ten subjects for left scapulae were taken for the study.
- c) Level of scapulae – Ten Subjects with maximum Difference were taken up for study.
- d) Level Anterior Superior spine of the Illum-Ten subjects with maximum difference were taken for the study.
- e) Length of legs: Ten subjects with more than 75 mm difference in length were taken up for study.
- f) Angle of Pelvic- Ten subjects with the angle less than 160 degree were taken up for the study.

For functional measurement

- a-Muscle test of elasticity and strength- fifteen subjects with angle less than 170 degree were taken for the Study.
- b-Total elasticity of hamstring muscles – ten Subjects with angle less than 30 degree were taken for the Study.
- c- Total elasticity of Erector spine and hamstring Muscles-ten Subjects with morethan 2 Centimeters difference were taken for the Study.

**DATA ANALYSIS AND INTERPRETATION**

All the Samples were evaluated on the basis of the tests already given and as per the criteria given subjects were Classified since the evaluation was made on the basis of norms decided by Research Scholars with consultation of expert. List of students was prepared as per criteria explained .

The mean value was calculated for all the given criteria which is presented in the table given below.

Table Means values of Kraus weber test items

Item1	Weak Abdominal and hip flexor muscles	M=3
Item 2	Hip flexor and lower abdominal Muscles	M=7.3
Item 3	Weak Upper back Muscles	P1=L.35
Item 4	Weak lower back Muscles	M=6.4

Table 2 Means values of Structural measurement

Item 1	Measurement of chest expansion	M=3.01.040
Item 2	Measurement of Scapular-Spine Distance	M=3.2 &CPM=3.57(L)
Item 3	Measurement of level of	M=1.67

	scapulae	
Item 4	Measurement of leg length	M=89.7
Items 5	Measurement of pelvic tilt	M=153.4

Table 3 Mean values of Functional measurement.

Item1	Muscle test of elasticity and strength	M=163.86(R) M=163(L)
Item 2	Total elasticity of hamstring muscles	M=26.5
Item3	Total elasticity of erector spine	M=3.1

## DISCUSSION

Present Study was Conducted only to evaluate the present state of posture and to find out postural deformities among the school going children with the help of this survey we could find out a group having postural deformities. This identified group can be given corrective exercise programme.

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