



## Study Reveals Prevalence of Postural Defects in Elementary School Students of Chandrapur District

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### Abstract:

*Postural defects refer to abnormalities or deviations in the normal posture of the body, which can affect an individual's overall physical alignment, movement and overall health. The data gathered from the whole population of elementary section of different schools of Chandrapur district were analyzed. The data is related to the survey of common postural defects lordosis, scoliosis, kyphosis, flat foot and knock knees. Under the condition of this survey study it is reasonably concluded that students of elementary section various schools of Chandrapur districts having out of the total 800. The knock knee defects were 145. There were 70 students having the lordosis defects. 46 students having kyphosis defects. 26 students were having scoliosis and the number of students who had flat foot were 103. In this study it is also concluded that some students were having more than one defect in their body. 31 were having lordosis and kyphosis together. 18 students were having scoliosis and kyphosis defects simultaneously and 52 were having flat foot and knock-knees.*

**Keywords:** Posture, Lordosis, Kyphosis, Scoliosis and Knock Knees etc.

### Introduction:

We are creatures with asymmetrical brain and asymmetrical habits. We write, we answer the telephone, we drive our vehicles, we sleep one side more than the other. As children we have perhaps pulled by one arm, we paddled our 'push mobiles' with one leg more than the other. We carry our school books on one arm. We hang our school bag on one shoulder. Our athletic games splendid in developing our muscles our heart and lungs, our muscular resistance. Our builds were often asymmetrical in their specific effects. A pitcher, a tennis player, a quarterback, plays and throws intensively with one arm and further develops leg acquirancies, abdominal and back control best adopted to this one sided delivery. Many gainful occupations whether sedentary or those of the day laborer or factory worker, are one sided in their effect on the human frame. In our daily habits of eating, sitting launging, learning or standing in our clothing itself specially in shoes lie influences upon bodily posture, which are no less abusive today for all of the emphasis placed upon them by our schools, periodicals physicians and life insurance companies. So the point seems clear, we are forever engaging in activities which ends towards asymmetry and derangement of our architecture.

He investigations that have been done in this area have proved to be a real challenge for physicians and physical educators in their corrective work. Not only actual building up of weak and fallen arches, but also in

their prevention. The most challenging aspect of the situation has been that percentage of incidence of weak and flat-feet, knock-knees, lordosis, kyphosis and scoliosis increased rapidly. Since physical education is considered as one of the para medical health discipline also leaders in this field have been equally concerned with the techniques to promote the health and performance. In this endeavor, on of the approaches that has been the application of the principles developed in the physical medicine to promote physical fitness and to ensure faster recuperation from deformity injury or disease.

Bad body mechanics and faulty posture are the result of exaggerating the cervical curve in the neck and the lumber curve in the back. These exaggerations throw skeleton out of good alignment and consequently the organs are not properly supported. Good posture obeys certain basic laws of bio-mechanics in that efficiency involves the smallest possible expenditure of on energy to maintain it when standing erect the centre of gravity is low in the abdomen, and the movement of the body requires less energy, than, when the posture is faulty. When one part of body is off centre, it pulls another part, off centre to balance it, both of which require energy and produce quick fatigue.

### **Procedure:**

The whole population of the elementary section of different schools of Chandrapur district were taken as the subject for this study. Total number of subjects were eight hundred. The survey method used in spot testing and observations. For the detection of defects used padographaligrometer for lordosis, plumber line test for scoliosis, test used for detection knock-knee and kiputh method for detection of kyphosis. According to the school records the age of the selected subjects ranged from 6 to 10 years. All survey readings were obtained during the physical education periods and two months were utilized for this purpose. During all survey study, two qualified P.G. students of orthopedic surgery department helped in confirmation of the diagnosis of the detected defects.

### **Findings And Discussion:**

The data gathered from the whole population of elementary section of different schools of Chandrapur district were analyzed. The data is related to the survey of common postural defects lordosis, scoliosis, kyphosis, flat foot and knock knees.

The criterion for the detection of given postural defects are given in table 1 and 2. The details of postural defects discussed are as follows.

**Table –1: Percentage of different postural defect amongst the elementary section of different schools of Chandrapur district.**

Sr. No.	Name of the Defect	Number of students	Students having defect.	Percentage of defected students.
1	Knock knee	800	145	18.13
2.	Lordosis	800	070	8.8
3.	Kyphosis	800	046	5.7
4.	Scoliosis	800	026	3.2
5.	Fat foot	800	103	12.81

From table-1 it reveals that eight hundred students were surveyed in elementary section of different schools of the Chandrapur district. 145 students were found to have got knock knees defect. In other words the

percentage of knock-knee were 18.3% of the students elementary section of different schools of Chandrapur district.

To students were found to have the lordosis defects out of the 800 students with respect to lordosis 8.8% out of the total students have got the defect of lordosis.

The whole number of elementary section were 800 and out of them 46 students were having kyphosis defects. In other words 5.7% of the students were defected with kyphosis.

The defect of scoliosis was founded in 3.2% of the total elementary section. In other words 26 students have got scoliosis defect in their bodies.

103 students were found to have got flat foot defects. In other words flat foot defects were found in 12.81% of the elementary section students.

**TABLE-2 : Surveyed double postural defect among the student students of elementary section of different schools of Chandrapur District.**

Sr. No.	Name of the Defect	Numberof students	Students having defect.	Percentage of defected students.
1	Lordosis and Kyphosis	800	31	3.8
2.	Scoliosis and Kyphosis	800	18	2.5
3.	Flat foot and knock knees.	800	52	6.43

Few of surveyed students had double postural defects. Table –2 shows that out of the total 800 students of elementary section 31 students have got lordosis and kyphosis defects simultaneously. In other words 3.81% of the students more having both lordosis and kyphosis defects in their bodies.

18 students out of 800 more found with kyphosis and scoliosis defects simultaneously. In other words 2.5% of the students were found to have both the defects of scoliosis and kyphosis in their bodies.

The flat foot and knock-knees defects simultaneously were found in 52% students of the total students of 800. In other words out of 6.43% of the students having flat foot and knock defects in their bodies.

### **Conclusion:**

Under the condition of this survey study it is reasonably concluded that students of elementary section various schools of Chandrapur districts having out of the total 800. The knock knee defects were 145. There were 70 students having the lordosis defects. 46 students having kyphosis defects. 26 students were having scoliosis and the number of students who had flat foot were 103.

In this study it is also concluded that some students were having more than one defect in their body. 31 were having lordosis and kyphosis together. 18 students were having scoliosis and kyphosis defects simultaneously and 52 were having flat foot and knock-knees.

To conclude this, survey reveals that a careful check-up of the elementary schools students population by surveyors and qualified orthopedists find that a very large percentage of the students have two or more common postural deviations. The most common one existed in the feet, legs, shoulder girdles and lower back areas.

### **Common Causes Predicted:**

Bad posture develops due to

- 1) no compulsory accurate programme of physical education in schools.
- 2) No regular medical check-up.
- 3) Heavy school bags, faulty eating, sitting and standing positions clothing and shoes, influences upon bodily postures.
- 4) Unawareness among parents, teachers and students
- 5) No proper programmes of rehabilitation in schools.

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**Citation:** Sakure. Dr. G. M., (2026) “Study Reveals Prevalence of Postural Defects in Elementary School Students of Chandrapur District”, *Bharati International Journal of Multidisciplinary Research & Development (BIJMRD)*, Vol-4, Issue-02(1), February-2026.