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## An analytical study of postural deformities in school children of Urban area in Punjab

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### Abstract

The good posture & bad posture are developed postural deformities in human body. If the person has been done his routine work in good posture then he has not faced any type of postural deformities. But he can't then he suffered from many type of deformities e.g Kyphosis, lordosis, scoliosis knock knee, bow legs, etc. Due to this the researcher was selected this type of study. The subject entitles An Analytical Study of Postural Deformities in school Children of Urban Area in Punjab, For this study 200 school children (100 boys & 100 girls) of urban area in Punjab have been observed. The age group of school children is 10-18years. The main objective this study is find out the ratio of the school children who have suffered from postural deformities. The posture grid chart has been used for data collection on the subject and data have been analyze through the percentage method. After that the researcher has found that scoliosis postural deformities are very high and lordosis posture deformities are very low in school children of urban area in Punjab.

**Keywords:** Kyphosis, lordosis, scoliosis, knock knee, bow leg, deformities, urban

### Human Bone

The human skeleton is made up of 206 bones. The functions of the skeleton are to provide support, give our bodies shape, and provide protection to other systems and organs of the body, to provide attachments for muscles, to produce movement and to produce red blood cells.

The skeleton can be divided into two parts known as axial and the appendicular. The axial skeleton consists of the central core of the skull, spine and ribs whilst the appendicular is composed of the arms and legs.

### Human Muscles

The muscular system is responsible for the movement of the human body. Attached to the bones of the skeletal system are about 700 named muscles that make up roughly half of a person's body weight. Each of these muscles is a discrete organ constructed of skeletal muscle tissue, blood vessels, tendons, and nerves. Muscle tissue is also found inside of the heart, digestive organs, and blood vessels. In these organs, muscles serve to move substances throughout the body.

The muscles that move the human skeleton vary greatly in shape and size and extend to every part of our bodies. The muscular system contains over 600 skeletal muscles alone, which make up about 40% of our mass. Blood vessels and nerves run to every muscle, helping control and regulate each muscle the muscular system, skeletal muscles are connected to the skeleton, either to bone or to connective tissues such as ligaments. Muscles are always attached at two or more places. When the muscle contracts, the attachment points are pulled closer together; when it relaxes, the attachment points move apart.

### Posture

There is no single best posture for all individual. Each person must take the body he has, and make the best of it. For each person,

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the best posture is that in which the body segments are balanced in the position of least strain and maximum support.

**Type of posture**

Posture is something that plays an important role in our everyday lives. Your posture can actually affect how you feel. Good posture can provide you with higher energy levels, more confidence, relief of neck tension, migraine relief, prevent back and shoulder issues, and support for already existing chronic back pains. There are many different types of posture problems including lordosis, kyphosis, flatback, swayback, and forward neck or head. If you are experiencing any of these posture problems, read on to determine what condition you have and what is actually causing it.

The postures are basically divided in to two types:

- Inactive
- Active : Static & Dynamic

**Inactive postures-** These are postures or attitudes adopted for resting or sleeping. They require theoretically minimal muscle activity, and are usually assumed in need of relaxation.

**Active posture -** The integrated action of many muscles is required to maintain active postures, they are basically divided in two types

1. **Static postures-** Body segments are aligned and maintained in a fixed position. This is usually achieved by co-ordination and interaction of various muscle groups which are working statically to counteract gravity and other forces. Examples of static postures are standing, sitting, lying, and kneeling.
2. **Dynamic postures-** In this type of posture body segments are moving. It is usually required to form an efficient basis for movement. Muscles and non-contractile

structures have to work to adapt for changing circumstances. Examples are walking, running, jumping, throwing, and lifting.

**Common postural deformities**

- Spinal curvature: Kyphosis, Lordosis & Scoliosis
- Flat foot
- Knock knees
- Bow legs

**Postural Position:** Standing position, sitting position, lying position & walking posture.

**Methodology**

The study is entitled “An analytical study of postural deformities in school children of urban area in Punjab” For the study the researcher used 200 school children (100 boys & 100 girls) as a sample for this study. The age group of subject was 10-18 years. The samples were collected from different schools in Malwa, Maza & Doaba region in Punjab through the random sampling method. In this study researcher find out the ratio of different postural deformities. There was no control on diet, habit & daily routine on sample related. The data was collected through the following standardized Posture test:

S/N	Particular	Test/Equipment
1.	Kyphosis	Grid chart
2.	Lordosis	Grid chart
3.	Scoliosis	Grid chart
4.	Knock Knees	Grid chart
5.	Bow Legs	Grid chart
6.	Flat Foot	Foot print

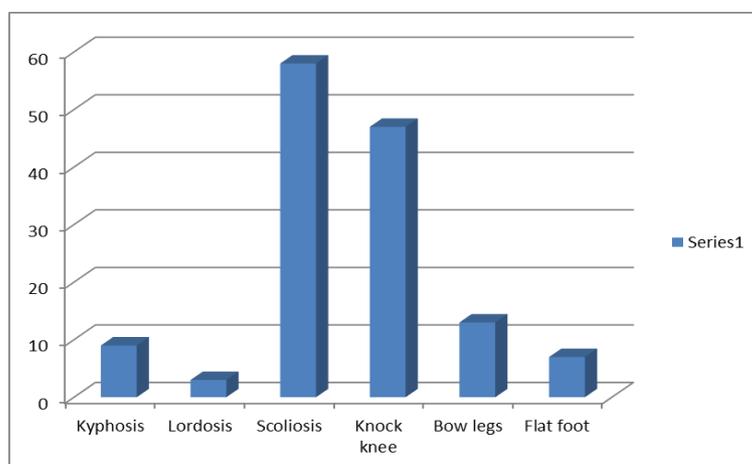
**Table 1:** Showing the percentage of postural deformities in school boys of urban area

S. No	Total	Kyphosis	Lordosis	Scoliosis	Knock knee	Bow legs	Flat foot
1	100	09	03	58	47	13	07
2	Percentage	9%	3%	58%	47%	13%	7%

**Data Analysis**

According to above table showing percentage wise data of urban boys, as per table 9% boys were found suffering from kyphosis, 3% suffering from lordosis and 58% suffering from scoliosis. 47% boys were found suffering from knock knee, 13% suffered from Bow legs and 07% suffering from

flat foot. It is concluded that the scoliosis deformities are very high and lordosis deformities are very low in school boys of urban area.



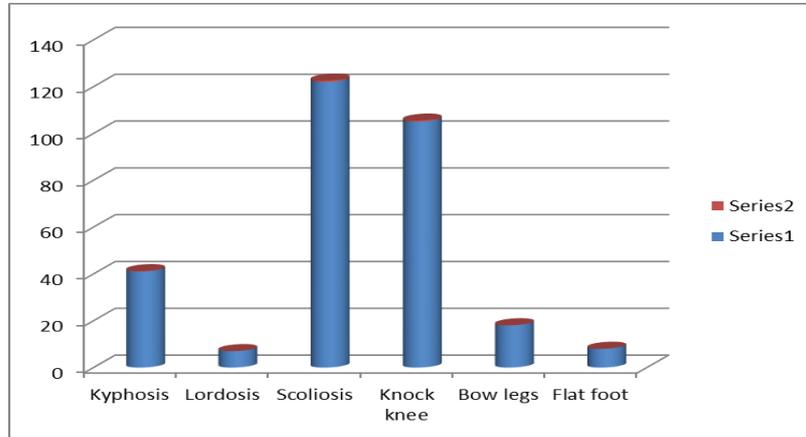
**Fig I:** Showing the percentage of Postural deformities in boys of urban area

**Table 2:** Showing the percentage of postural deformities in school girls of urban area

S. N	Total	Kyphosis	Lordosis	Scoliosis	Knock knee	Bow legs	Flat foot
1	100	32	04	64	58	05	01
2	Percentage	32%	04%	64%	58%	05%	1%

According to above table showing percentage wise data of urban girls as per table 32% were found suffering from kyphosis, 04% suffered from lordosis and 64% suffered from scoliosis. 58% boys were found suffering from knock knee,

05% suffered from Bow legs and 01% suffered from flat foot. It is concluded that the flat foot scoliosis are very high and flat foot deformities are very low in school girls of urban area.



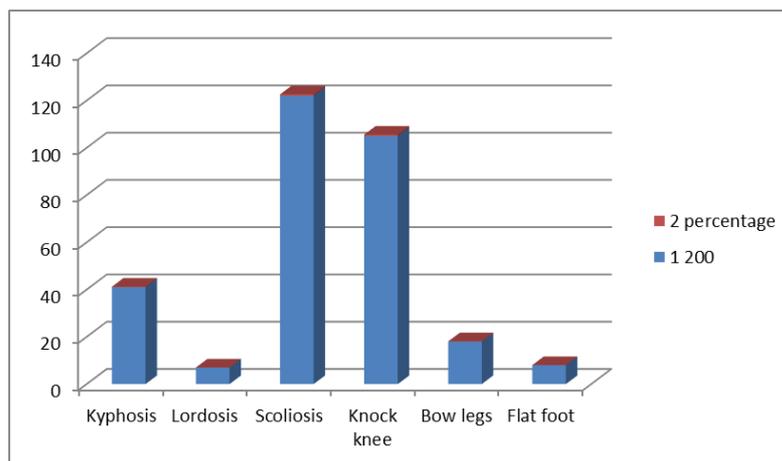
**Fig II:** Showing the percentage of posture deformities in girls of urban area

**Table 3:** Showing the percentage of postural deformities in school children (Boys & Girls) of urban area

S. No	Total	Kyphosis	Lordosis	Scoliosis	Knock knee	Bow legs	Flat foot
1	200	41	07	122	105	18	08
2	percentage	20.5%	3.5%	61%	52.5%	9%	4%

According to above table showing percentage wise data of urban children as per table 20.5% children were found suffering from Kyhposis, 3.5% suffered from Lordosis and 61% suffered from Scoliosis. 52.5% children were found suffering from knock knee, 9% suffered from Bow legs and

4% suffered from flat foot. It is concluded that the scoliosis deformities are very high and lordosis deformities are very low in school children of urban area.



**Fig III:** Showing the percentage of posture deformities in school children of urban area

**Summary**

After the analysis of data there are more postural deformities in school children of urban area in Punjab. The scoliosis deformities are very high, knock knee deformities are less than from scoliosis, kyphosis deformities are less than from knock knees, bow legs is less than from kyphosis, and flat foot is less than from bow legs. But a lordosis postural deformity is very low in school children of urban area in Punjab.

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