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## A comparative study of body development index of rural and urban school boys of Fazilka District of Punjab

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### Abstract

The researcher was selected this study “a comparative study of body development index of rural and urban school boys of fazilka district of Punjab” A total number of 50 school boys (25 rural & 25 urban) of Fazilka district are examined for the study by having a standardized test of anthropometric tools. Their age group is in the 05 to 15 years. The data was collected through the B.D.I. = Middle Breadth x forearm circumference breadth/ body height x10. To observe the theory of the study illustrative statistics like mean and standard variation & t ratio were used. It concludes the significance difference was found in body development index of rural and urban school boys of fazilka district of Punjab. The level of significance set at 0.05 levels.

**Keywords:** Body development index, school boys, anthropometric tools

### Introduction

According to Malina (1980) Growth is a dynamic process, implying movements towards adulthood or maturity. It involves a series of changes from conception to adulthood during which time the individual increases in size as a whole and of its component parts and eventually matures.

There are three fundamental stages *viz.* Formation, growth and completion or perfection in the growing period of a human being, more or less all these three stages are of six to seven years each. The formation stage is early childhood, the growth stage is during school age and completion or perfection stage is during adolescence.

Overall, growth remains dominant biological activity mostly during the first two decades of life.

### Factors affecting the rate of growth

#### Effect of nutrition

Nutrition plays a very important role in the growth of a child. The nutrients like carbohydrates, proteins, fats, vitamins and minerals etc. in their adequate quantity and proportion are very important in the normal growth of a child. If the quantity of these nutrients changes either decreases or increases, it will affect the rate of growth or we can say deviation in growth occurs.

#### Effect of heredity

The fundamental control of growth is genetically. The genetic aspects of physical growth can be studied using twin and family data. Differences between monozygotic and dizygotic twins are assumed to be due to the environment.

#### Effect of illness

If the illness is minor, like cold, measles, pneumonia, bronchitis etc. rate of growth may not be affected provided the child is well nourished [5]. But when the illness is a major one, such as nephrosis, the effect on growth and maturation is quite significant. During major illness, there is retardation in growth, skeletal maturity and adult height of child.

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**Effect of hormones**

Hormones are chemicals produced by special cells in endocrine glands. These hormones are produced in very small amount and released to the blood stream to reach the target organ or tissue where they exert their effect.

**Effect of maturation**

Maturation is a process, whereas maturity is a state. Maturation implies progress toward maturity. In case of children and adolescents term, maturity refers to the extent to which individual has progressed to the mature state or adulthood.

**To access one’s developmental age, there are many methods. These are categorized as**

- Method of morphological age
- Method of dental age
- Method of secondary sex characteristic age
- Method of skeletal age.

**Method and technique**

The experimental type study was designed to find out the significance difference in body development status of rural and urban school boys of fazilka district of Punjab. The 50 school boys (25 rural & 25 urban) of Fazilka district were selected for this study with the age group of 05 to 15 years. The random sampling method was used for selection of subject. In this study the anthropometric tools was used for data collection and through the B.D.I. score was calculated of both groups. The difference of body development index was calculated through by t ratio. The level of significance was set on 0.05. After that the difference in body development index was presented in following table & graph.

**Statistical analysis & interpretation of data**

**Table 1:** ‘t’ ratio of Body Development Status of school Boys

S/N	Category	Mean	S.D	M.D	S.E.D	‘t’ Ratio
1	Rural Area	110	21.20	2.00	0.21	9.52
2	Urban Area	112	20.96			

\*Significant at 0.05 level.

The above table shows comparison of body development index of rural and urban school boys of fazilka district of Punjab. The table shows that the mean scores of the rural school boys are 110, which is less than urban school boys. The Difference between the two mean scores is tested by t-ratio. The obtained t- ratio is 9.52 which are more than table value which is significant at 0.05 level of significance. So there is significant difference between the mean score of rural and urban area school boys.

**Conclusion**

After the used of suitable statistical analysis (t ratio) it can be concluded that the body development status of rural school boys are better than the school boys of urban area of Fazilka district of Punjab.

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