



INNOVATIVE RESEARCH ORGANISATION

International Journal of Advance Research in Education, Technology & Management

(Scholarly Peer Review Publishing System)

COMPARISON OF HEIGHT BETWEEN SLUM AND NON SLUM SCHOOL CHILDREN

Amandeep Singh Gill

Director of Physical Education, Guru Gobind Singh Khalsa College, Sarhali, Tarn Taran (Punjab)-India

ABSTRACT

The purpose of the study was to assess the height of the slum and non-slum children. In this study 603 children studying in classes 6th to 10th were selected as subjects. These subjects were belonging to two schools located in slum areas (N= 206) and two schools located in non slum areas (N= 397) of Chandigarh, which was selected using random sampling technique. All the children of classes 6th to 10th of these slum and non slum schools were included in this study.

INTRODUCTION

Cardiovascular and respiratory functions of the body are considered very vital in the field of physical education. The purpose of respiration is to provide oxygen for metabolizing of the body cells and to eliminate the carbon dioxide resulting from oxidation. Therefore the respiratory mechanism is so adjusted that its function corresponds directly to change in metabolism. The circulatory system exists for the sake of its capillaries, through the walls of which the exchanges of O₂, Co₂, acid and other materials take place between the blood and the tissues. The heart, in large part, supplies the necessary force to propel the blood. The arteries by their elastic and muscular tissues, maintain and adequate pressure for the period between the heart beats and thus provide a steady flow through the capillaries and the veins contact the blood away from the capillaries

During physical activity there is an increase in blood circulation which increases the rate of transportation of oxygen, Co₂ and metabolites formed during muscular contraction. The increase in the rate of blood flow is met through a combination of two factors-increases in pulse rate and an increase in blood volume output from the heart per beat.

Activities such as running, bicycling, swimming, cross-country skiing, rowing, stair climbing, and jumping rope place an extra demand on the cardiovascular and respiratory systems. During exercise, these systems attempt to supply oxygen to the working muscles. Most of this oxygen is used to produce energy for muscular contraction. Any activity that continuously uses large muscle groups for 20 minutes or longer taxes these systems. Because of this, a wide variety of training methods are used to improve cardio respiratory endurance

Human growth and development is influenced by a several factors, many of which are beyond our control. While heredity and genes certainly play a large role in terms of determining size and health, there are also environmental factors at play. An understanding of these environmental factors can help individuals and communities to play a part in ensuring that human growth and development are not adversely affected.

According to Keepkidshealthy.org, people who go hungry or who do not eat properly are more likely to be underweight and much shorter than average. In a 2006 article authored by the Agriculture and Rural Development Department titled "Agriculture and Rural Development: Hunger and Malnutrition," under-nutrition is cited as a large-scale problem in low-income countries.

According to the U.K.-based website Warrington Borough Council, there is a correlation between housing conditions and ill health that can negatively impact human growth and development. Perhaps of even greater concern is the potential for lead exposure from deteriorated lead-based paint in older housing. Lead is most harmful to children because it is easily absorbed into their growing bodies and interferes with the developing brain and other organs and systems. According to Samiya Bashir's May 2002 article "Home is Where the Harm is: Inadequate Housing as a Public Health Crisis," which appeared in the "American Journal



INNOVATIVE RESEARCH ORGANISATION

International Journal of Advance Research in Education, Technology & Management

(Scholarly Peer Review Publishing System)

of Public Health," children between the ages of 18 and 36 months who live in poor and inner-city communities are at greatest risk of lead poisoning. Lead poisoning can result in neurological damage, reduced IQ, hyperactivity, increased aggression, learning disabilities and behavioral problem, Bashir writes.

Studies have found that some air pollutants have detrimental effects on human growth, according to the 2006 article titled "Effects of Pollution on Human Growth and Development: An Introduction," published in the "Journal of Physiological Anthropology." The article points to lower birth weights as a result of particulate air pollutants. In a European Commission study, it was calculated that air pollution also reduces life expectancy by an average of almost 9 months across the European Union.

METHODOLOGY

603 children studying in classes 6th to 10th were selected as subjects for this study. These subjects were belonging to two schools located in slum areas (N= 206) and two schools located in non slum areas (N= 397) of Chandigarh, which was selected using random sampling technique. All the children of classes 6th to 10th of these slum and non slum schools were included in this study.

TOOL

The standard instrument was used for collection of data such as vertical scale for Height.

STATISTICAL ANALYSIS

The obtained data were put to statistical analysis to determine the significance of mean differences between slum and non-slum school children on variable of height. Mean, Standard Deviation and 't' values were computed to compare the scores of both the groups on each item. Level of confidence was set at .05 levels. SPSS software version 10.0 was used for statistical analysis of the data.

RESULTS

Table 1 Significance of mean difference of Height variable between slum and non slum school children

Class	Mean $\pm$ S.D		M. D	S.E.D	T
	Slum	Non Slum			
6th	145.16 $\pm$ 0.11	144.28 $\pm$ 0.08	0.09	0.02	0.53
7th	144.4 $\pm$ 0.09	150.38 $\pm$ 0.08	0.06	0.01	3.87*
8th	158.24 $\pm$ 0.08	157.87 $\pm$ 0.09	0.004	0.02	0.19
9th	167.34 $\pm$ 8.83	164.39 $\pm$ 8.55	2.94	1.77	1.65*
10th	167.95 $\pm$ 7.22	167.68 $\pm$ 6.08	0.26	1.37	0.19

*Significant at .05 level



INNOVATIVE RESEARCH ORGANISATION

International Journal of Advance Research in Education, Technology & Management

(Scholarly Peer Review Publishing System)

Table 4.1 indicated that class 7th and 9th boys of slum and non-slum schools were differed significantly on the variable of height as their respective calculated 't' ratios of 3.87 and 1.65 were found to be statistically significant at 0.5 level. Whereas class 6th, 8th and 10th students did not show any significant mean differences on the variable of height as their 't' ratios of 0.53, 0.19 and 0.19 were found to be insignificant.

DISCUSSION

The results of this study indicated that school boys of 6th, 8th and 10th classes of slum and non slum schools were having almost equal height. However, class 9th and 10th students of these schools shown variations in their height. The similarity in height may be attributed to the heredity factor and some differences may be because of the sampling error. It is heredity factors which matter in one's height and it seems that the location of the school or school environment was not a factor to affect the height of the students.

CONCLUSION

This study indicated that boys of Class 7th and 9th of slum and non slum schools of Chandigarh U.T. Showed significant Mean differences in Height ($t = 3.87$ and $t = 1.65$) respectively. Whereas the students of class 6th, 8th and 10th did not differ in their heights.

REFERENCES

- T, Patricia, "North York Fall Norms for Boys and Girls Age 12-14 for: CAHPER Tests; Measures of Aerobic Fitness; Perak Flow; Muscle Strength; Percent Body Fat, Accession Number, ED127326,
- Scott M. Gladys and French Esther. Measurement and evaluation in physical education, PP: 276, 277, 1959.
- Physical Education in the State of Michigan, American Physical Education Review, XXV (April, 1920).
- Michigan, "Michigan Council on Physical Fitness and Health Annual Report to the Michigan", Department of Public Health, Accession Number ED167510 (Eric) 1978.
- Hockey, Robert V. "Physical Fitness: The Pathway to Healthful Living", 1983.
- Home is where the harm is; inadequate Housing as a Health Crisis , article, The American Journal of Public Health Vol 92 Nov 5--2002
- Lawrance M Schell-- 2006 Article "Effect of Pollution on Human Growth and Development"
- Kannel WB, Blood Pressure as a Cardiovascular Risk Factor, Preventing And Treatment ,
- Journals of the American Medical Association, 1996 275; 1571-1576
- Diet ,Physical activity and Health, Geneva, World Health Organization 2002 (documents A 55/16 and A 55/core.1)