

A Comparative Study of Growth Pattern and Motor Quality of Boys of Jawahar Navodaya Vidyalaya and Kendriya Vidyalaya in Chhattisgarh, India

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Abstract

A cross sectional study of the physical growth and physical fitness was carried out on 900 boys, aged 10+ to 18+ years in Jawahar Navodaya Vidyalaya (JNV) and Kendriya Vidyalaya (KV) of Chhattisgarh. The study was aimed to find out the growth pattern of the boys of JNV, which is a residential school of children from the rural area, and was compared with the boys of KV, a non-residential school of the children of Central government employees including defense personnel. Anthropometric measurements taken in to consideration are stature, body weight, sitting height, biacromial diameter, biiliocrystal diameter, upper arm circumference, calf circumference and triceps, biceps and sub scapular skin folds. Data was also collected for vertical jump and pull-ups to measure motor fitness components. All anthropometric measurements show increasing trend with age in both groups, but it is not uniform in all the ages. However, comparison revealed that, the JNV boys' show lower values for almost all the anthropometric measurements in most of the ages but the motor fitness variables exhibited better scores for JNV boys. When height and weight of the JNV and KV boys were compared with all India (ICMR) boys, the JNV and KV boys are observed to be taller and heavier than the all India boys at all ages.

Key Words: Physical growth, Physical fitness, Boys

Introduction

Human growth is a dynamic changing process and is being influenced by heredity and environment. Genetic component and environment both contribute to attain final body structure. Certain factors like disease, proper diet, time, cultural pursuits, geographical conditions etc. have tremendous influence in the growth of a child.

Concern for the welfare of the school children is the next impetus to the study of growth. It has been realized that only mental or academic activity can adversely effect the growth and development of a child as most of the blood circulation is towards brain depriving other organs from it.

Health and physical education programs aid students in achieving their

fullest potential through the acquisition of knowledge and skill necessary to attain healthy levels of well being and to maintain active life styles through out life span. Healthy and physically active life style of a person helps to increase capacity for effective work, positive behavioral choices and increased academic pursuits.

It has been observed that growth curves of various body dimensions vary from one population to another (*Tanner, 1960; Hiernaux, 1964, 1968*), while growth differences of this kind are primarily genetical in origin, they may be considerably influenced by environmental factors. *Mitra & Singrol (1982)* in a study reported growth pattern of Chhattisgarh girls to be superior to Manali Rajput girls but inferior to Orriya urban girls, whereas age, weight growth pattern of Chhattisgarh