

ASSESSMENT OF IMPROVEMENT IN HEALTH STATUS (HEIGHT AND WEIGHT) OF COLLEGE STUDENTS, ACTIVELY PARTICIPATED IN THE SPORTS, FOR DIFFERENT AGE GROUPS IN AKOT : A CASE STUDY

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ABSTRACT : In modern culture of developing globalization and physical body status of the individual plays an important role in various prime areas. The required man power in the corporate world primarily asked for the physical capabilities and creative power of the employee. However, in the present days, the physical fitness of the individuals may determine quality and status of the nation. Present study deals with the physical fitness of collegiate students actively engaged in the sport activities, and throws light on the importance and necessities of active participation of the college students in sport activities. Each groups of 100 students, for different age group, are tested for the studied parameters. The male and female degree students showed the instant annual changes in their height and weight and their general physical appearance. The increasing age of the student by two and three years, showed considerable changes in their physical status. Individuals actively participate in the regular sports showed the change in their weight and increase of vertical body length at the end of three years while the completion of their degree course. Male students actively engaged in the college sports showed the average increase of height 1.1 inches, while the non sport students indicates the average increase of 0.64 inch. The weight of female students actively participated in the college sports have showed the average decrease of weight by 2.84 kilograms at the end of three years.

Key words : College students, vertical body length, weight, male, female

INTRODUCTION:

Types of growth data Growth is in general a regular process. Contrary to what is said in some of the older textbooks, growth in height does not proceed by fits and starts, nor does growth in upward dimensions alternate with growth in transverse ones. The more carefully measurements are taken, with precautions, for example, to minimize the decrease in height that occurs during the day for postural reasons, the more regular does the succession of points in a graph of growth become. Many attempts have been made at finding mathematical curves that fit, and thus summarize, human growth data. What is needed is a curve or curves with relatively few constants, each capable of being interpreted in a biologically meaningful way. Yet the fit to empirical data must be adequate within the limits of measuring error. The problem is difficult, partly because the measurements usually taken are themselves biologically complex. Stature, for example, consists of leg length and trunk length and head height, all of which have rather different growth curves. Even with relatively homogeneous dimensions such as the length of the radius bone in the forearm, or width of an arm muscle, it is not clear what purely biological assumptions should be made as the basis for the form of the curve. The assumption that cells are continuously dividing leads to a different formulation from the assumption that cells are adding constant amounts of non dividing material or

amounts of non dividing material at rates varying from one age period to another. Fitting a curve to the individual values, however, is the only way of extracting the maximum information from an individual's measurement data. Encarta encyclopedia, (2005). Lawrence Handerson has stated the Darwinian fitness is compounded of a mutual relationship between the organism and the environment of this fitness of environment is quite essential a component of the fitness which arises in the process of organic evolution and in fundamental characteristics. The actual environment in the fitness possible abode for life.

In ancient literatures the importance of exercise through sport is primarily mentioned with its benefits. Sport is originated from the simple play form and has undergone transformations through the organized structure of game. Play serves useful biological and social functions. Physical culture and sports has become the object of universal attention and interest. It plays important role in character formation. Today's modern culture only permits the regular and well guided sport activities, to the students during their college life, that offers the optimum and perfect exercise for the body muscles to grow, Campbell (1963). Regular practice of indoor and outdoor games provides the development of strength of body and mind.

The enhancement of maturity of the mind

OBSERVATION :

Table: 1.1 Comparative difference in Height and Weight of the male and female students during 2005 – 2008.

Age Groups (Years)	Average increase of height in 3 years, (Inch)				Average difference of weight in 3 years, (Inch)			
	Male		Female		Male		Female	
	Non sport	Sport	Non sport	Sport	Non sport	Sport	Non sport	Sport
18to 20	0.64±0.5	1.1±0.2	0.23±0.7	0.81±0.6	1.66±0.8	1.43±0.4	1.02±0.5	2.84±0.2
19to 21	0.39±0.7	0.50±0.4	0.37±0.3	0.76±0.3	1.11±0.7	1.55±0.7	0.83±0.3	1.71±0.3
21to 23	0.21±0.8	0.38±0.8	0.31±0.6	0.59±0.7	1.91±0.7	1.21±0.6	0.86±0.7	1.89±0.7

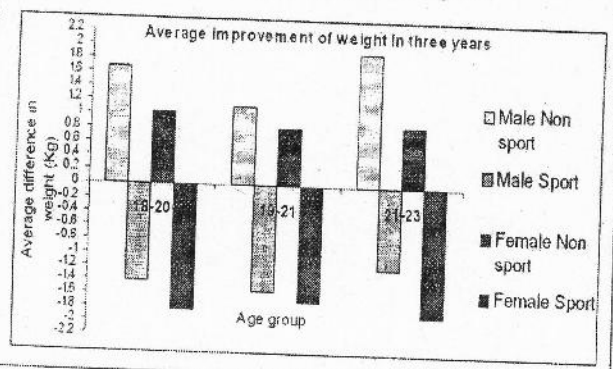
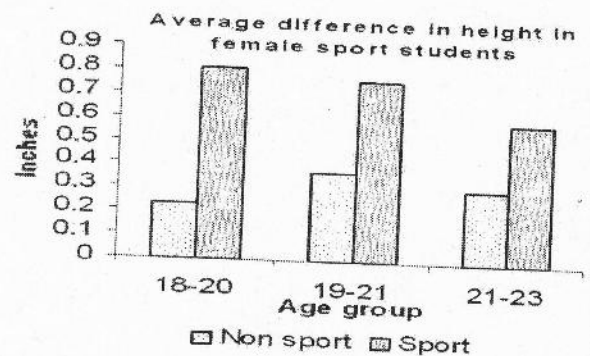
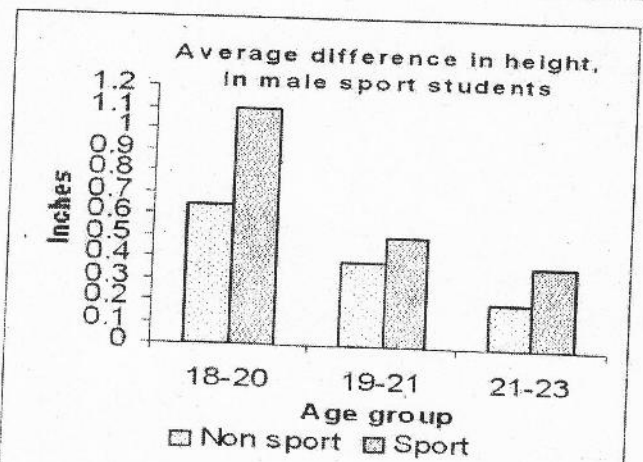
Samples of each groups of 100 students

during the degree level also enhances the extent of social activities in the students. In fact the social behaviour is included in the genetic characteristics of the human population. Such characteristic might now have a secondary function. The fact is that we can now suggest and find evidence for a variety of functions of living in groups. The active participation all male and female students in the college sports have a great national importance to make a healthy, creative and social manpower, which may be prove the basic units for development of the nation. So present study is performed to assess the extent of improvement in physical status of the male and female college students during the three years of degree course by the active participation in college sport activities.

SAMPLING METHODS:

Shivaji College Akot, Dist. Akola belongs to Shri Shivaji Education Society, Amravati (M.S.), located in central India. For the present study, each group of 100 male and female degree students of different age groups was assessed. The groups of students were separated in two categories – 1) Those actively participated in the college sport activities such as volley ball, weight lifting, power lifting, table tennis, badminton, athletics etc. 2) Secondly the students those are not participated in any of the college sports and other activities.

The yearly data is collected and interpreted for showing the improvement in their morphometric body condition in three years. To measure the vertical length standard calibrated panel is prepared. However the weight measurement is done by Krups make weighing machine.



DISCUSSION :

The data harvested from the present study of the college students in accordance of their height and weight with respect to sport and non sport students, clearly indicates the influence of physical exercise in the development of body and its size (Clarke Harrison, 1976). In all male students with age groups 18 to 20, 19 to 21 and 21 to 23 engaged actively in college sports have gain the average range of height from 0.64, 0.11 and 0.17 inches and female students about 0.58, 0.39 and 0.28 respectively. Wyse (1964), has been used a height and weight ratio for the measurement of physical fitness.

The group of the students between 18 to 20 years, showed maximum development in their height and weight at the end of third year. This may be attributed to normal rates of their metabolic and physicochemical activities of the body cells due enhancement of rate of proper utilization and consumption of nutrients. According to medical physiologists, proper exercise to body muscles tends to accelerate the rate of biochemical reactions in the muscle cells and other body tissues, which ultimately enhance the synthesis and secretions of optimum quantity of growth hormones. Even though the height factor of human being is inherited from the last generations, but, in the present age of unbalance and pesticide contaminated diet, and pollution of environment with various genetically toxic materials, the body defects such as height, obesity, less or more body weight are quiet common, Campbel. (1963) has recorded Iowa students were heavier, taller, and more motor performance, that they have more chances for activity through physical education.

As observed in the present study, female college students, having age between 18 to 20 engaged in wrestling and volley ball like games showed the average depletion of weight. Perusal of data indicates that, comparatively less changes in weight and height in the students of age group 21 to 23 years. Terral (1968), has been used the anthropometric measurement for the physical fitness. The male and female students of age group 18 to 20 and 19 to 21 have showed the enhancement in anthropometric data of height and weight. (Natroyan,

1982) have been setup a statistical relation between weight and physical activities of the textile mill workers.

From present study, it also shows the female students, those having active participation in the college sports, losses the body weight in the range of 1.82 Kg, 0.88 Kg and 1.03 Kg in the age groups of 18 to 20, 19 to 21 and 21 to 23 respectively. While continued seating of the students in the class rooms for theory periods practical and in canteen, gardens , in their homes for the study, may accelerates the deposition of fat matter in their body tissues, it may enhance the weight and retard the development of body on certain extent. (Brandon and Proctor, (1008), have studied body mass index and deposition of fats in male and female individuals. However the sport students have reduce their weight, gain normal vertical length, avoid the obesity, which are the main factors directly or indirectly leave impact on their education and intelligence.

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