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A study of body composition belonging to the different economic status of senior secondary school students

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Abstract
The main objective of the study was to know the body composition belonging to the different economic status of senior secondary school students of Jalandhar district of Punjab State. For the present study, 240 students were selected purposively from the 03 secondary schools of Jalandhar District, in which 120 were male and other 120 were female students. All subjects were selected with the help of purposive sampling technique. The collected data was analyzed by using 2x4 ANOVA, to test the significance of the results. The level of significance was kept at 0.05 to test the hypothesis. After analysis of data it was found that there all dimension of body dimensions of students of deferent socio-economic status school is not similar. High socio economic status school students were better in weight and height. While low socio economic status school students were better in fat percentage and BMI.

Keywords: Body Composition, Different Economic Status & Senior Secondary Schools.

Introduction
Previous studies have examined the relationship between childhood weight or body composition and physical activity. Higher levels of physical activity were associated with lower levels of weight or body fat in several studies. Physical activity estimated by a questionnaire, but not activity energy expenditure (derived by doubly labeled water), was inversely related to body fat in children. The findings across studies likely differ because of differences in measurement techniques for body composition, physical activity and energy expenditure, and whether the focus is on an estimate of total physical activity or the energy cost of activity. Overweight/obesity can be determined by simple anthropometric measures (body mass and height) or by body composition techniques (e.g., skinfolds, bioelectric impedance, or dual-energy x-ray absorptiometry). Physical activity can be measured through self-reports (diaries and questionnaires) or more objectively, by accelerometry or doubly-labeled water. Accelerometers can quantify total activity over several days, and intensity can be characterized by utilizing previously established accelerometer thresholds for sedentary, light, moderate, and vigorous activity.

Modern day schools have accepted the challenge of contemporary society to develop the total capacity of each child, so that in adulthood, the child will be equipped with the knowledge, sound thinking processes, physical stamina and emotional maturity to live effectively in an ever changing and highly complex society. Recreational Physical Activities (RPA) in primary schools enhances the cardiorespiratory, neuromuscular, skeletal and metabolic systems of children.

RPA is however declining in these institutions, portending a threat to community and public health, and the "catch-them-young" campaign against cardiovascular and metabolic disorders. Physical activity during childhood is positively related to physical fitness and health, both in adulthood and later in life. Physical Activity is any body movement produced by skeletal muscles resulting in a substantial increase in energy expenditure.

Few studies have examined socioeconomic inequalities in physical activity and cardio respiratory fitness longitudinally. The European Youth Heart Study found no differences in tracking of low cardio respiratory fitness across different SEP strata but that the prevalence of low cardio respiratory fitness was higher in lower-SEP groups, highlighting the socioeconomic

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gradient in physical activity. Although some studies have examined social mobility (i.e., changes in SEP over time) in relation to obesity risk, no published reports are known to have examined whether social mobility is associated with the tracking of physical activity and fitness from childhood into adulthood. Very little is known about the lasting contribution of childhood SEP to adult physical activity and fitness and about whether improvements in socioeconomic circumstances over time may lead to increases in physical activity and fitness.

Objective of the Study
The main objective of the study was to know the body composition belonging to the different economic status of senior secondary school students of Jalandhar District of Punjab State.

Method of the study
On the basis of the results of the previous studies the researcher was confident that the method adopted to collect the information was a survey study under Descriptive research.

Sample
For the present study, 240 students were selected purposively from the 3 secondary schools of jalandhar District of Punjab State, in which 120 were male and other 120 were female students. All subjects were selected with the help of purposive sampling technique.

Criterion Measures
The criterion measures adopted for this study the following variables of body composition,
1. BMI
2. Fat Percentage,
3. Height
4. Weight

Analysis of the Data
In order to test the school boys & girls from different socio-economic status schools. Descriptive statistics were used; further ANNOVA and POST HOC TEST were used to draw the conclusion.

Table 1: Analysis of weight dimension for different socio-economic status schools Body composition component

School type weight	N	Mean	Std. Deviation	Std. Error
lseboy	40	42.075	8.69538	1.37486
mseboys	40	46.125	12.13215	1.91826
hseboys	40	53.925	13.68583	2.16392
lsegirl	40	38.575	6.72495	1.06331
msegirl	40	40.25	6.70151	1.0596
hsegirl	40	48.00	8.70308	1.37608
Total	240	44.825	11.00564	0.71041

Descriptive statistics different socio-economic status schools body composition component

The table no I represent the descriptive statistics of weight of different socio-economic status schools body composition component there were total 240 subjects belonged to the low socio-economic status school boys & girls, middle socio-economic status school boys & girls ,& high socio-economic status school boys & girls with mean. In weight dimension mean was 42.07 (+8.69), 38.57 (+6.72), 46.12 (+12.13), 40.25

(+6.70), 53.92 (+13.68), 48 (+8.70) respectively.

Table 2: ANOVA comparing weight dimension in different socio-economic status schools body

ANOVA comparing different socio-economic status schools body composition component					
Weight	Sum of Squares	df	F	F	Sig.
Between Groups	6485.45	5	1297.09	13.512	.000
Within Groups	22463.2	234	95.997		
Total	28948.65	239			

Table no II represent that comparison weight dimension between the different socio-economic statues school for weight calculated F value is 13.512 with degree of freedom 5. Which shows statistically significant different at 0.05 significant level .this indicate that different economic status school wise significant different in weight dimension of body composition component.

Table 3: Analysis of height dimension for different socio-economic status schools Body composition component

School type	N	Mean	Std. Deviation	Std. Error
Height				
lseboy	40	158.6	9.12815	1.44329
mseboys	40	161.2	7.61645	1.20427
hseboys	40	162.75	10.26757	1.62345
lsegirl	40	149.55	6.68312	1.05669
msegirl	40	152.45	5.57904	0.88212
hsegirl	40	154.125	6.04338	0.95554
Total	240	156.4458	9.01865	0.58215

Descriptives statistics different socio-economic status schools body composition component

The table no III represent the descriptive statistics of height of different socio-economic status schools body composition component there were total 240 subjects belonged to the low socio-economic status school boys & girls, middle socio-economic status school boys & girls ,& high socio-economic status school boys & girls with mean. In height dimension mean was 158.6(+9.12), 149.55(+6.68), 161.20(+7.61), 152.45(+5.57), 162.75(+10.26), 154.12(+6.04) respectively,

Conclusion
The observations of the survey data, within limitation of the present study, the following conclusions were drawn:-
- It was found that there was significant difference in weight dimension of body composition among the students of deferent economic status school.
- It was found that there was significant deference in height dimension of body composition among the students of deferent economic status school.
- It was found that there was significant difference in fat percentage dimension of body composition among the students of deferent economic status school.

References
1. Biddle S, Sallis JF, abd cavil N. (eds). Young and active? Young people and health enhancing physical activity. Evidence and implications. London, health education authority, 1998.
2. Earle r, Baechle T. Essential of personal traning. Canada.human kinetics, 2003, 232-233.
3. Heward VH. advansed fitness assessment and exercise prescriptions, 4th ed. Champaign, IL; human kinetics,

1998.
4. Heywood. Normative data for vo2max. Retrieved 16/11/2011 from http//www. myfitways.com/tools/52vo2 max.
5. Kline GM, *et al*. Estimation of vo2 max from a none-mile track walk, gender, age & body ut. Med sci-sports Exerc. 1987; 19(3):253-259.
6. De Ferranti S, Mozaffarian D. The perfect storm: obesity, adipocyte dysfunction, and metabolic consequences. Clin Chem. 2008; 54:945-55.
7. Lottenberg SA, Glezer A, Turatti LA. Metabolic syndrome: identifying the risk factors. J Pediatr (Rio J.). 2007; 83:S204-8.
8. Doak CM, Visscher TLS, Renders CM, Seidell JC. The prevention of overweight and obesity in children and adolescents: a review of interventions and programmes. Obes Rev. 2006; 7:111-36.
9. Edson S Farias, Flaviano Paula, Wellington RG Carvalho, Ezequiel M Gonçalves, Alexandre D. *et al*. Influence of programmed physical activity on body composition among adolescent students. J. Pediatr, 2009.