



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2018; 3(2): 783-785

© 2018 Yoga

www.theyogicjournal.com

Received: 07-05-2018

Accepted: 08-06-2018

Dr. Thingnam Nandalal Singh
Associate Professor, Department
of Physical Education, Panjab
University, Chandigarh, India

Bhagwat Singh
Assistant Professor, Department
of Physical Education, PGGCM,
Chandigarh, India

Comparative study on body fat percentage among school children of Uttrakhand

Dr. Thingnam Nandalal Singh and Bhagwat Singh

Abstract

In the present study it was planned to examine the difference between body fat percentage among school children of Uttrakhand. The subjects for this study were from the state of Uttrakhand. Random sampling technique was used in the study. A total number of Two Thousand (2000) subjects were selected from the Rural and Urban part of Uttrakhand. Further, subjects were also selected from different Private and Government schools of Uttrakhand. The all subjects were between age group of 13-17 years. To check the body fat percentage of subjects Skin fold caliper was used by the researcher. After the collection of relevant data; to scrutinize the significance difference between body fat percentage among school children of Uttrakhand, Analysis of variance (ANOVA) was applied. The level of significance was set at 0.05 percent ($p < 0.05$). After the analysis the result shows that the Government Rural School boys had less body fat percentage as compare to the Private Rural School boys. The result shows that the Government Rural School boys had less body fat percentage as compare to the Government Urban School boys. Further result shows that the Government Rural School boys had less body fat percentage as compare to the Private Urban School boys.

Keywords: School children, percentage of body fat, urban school, rural school

Introduction

In the present time of science and innovation individuals are getting to be caution about their health and physical fitness. Every country is urging amusements and sports to get zenith execution at worldwide level. The standard of amusements and sports has increased new statures in each nation. Our nation is additionally attempting to get the great outcome that is the reason physical training has been presented as a piece of school educational programs, which will assist the understudies with keeping them solid and physically fit. Physical wellness is a term, which has distinctive implications for various individuals. For a straightforward man, to have a decent constitution is an image of physical wellness. For a specialist, legitimate working of different imperative frameworks of our body is physical wellness. All things considered physical wellness of an individual might be disclosed as the ability to do the normal exercises without getting undue weariness, to meet crises, to confront pressure circumstances and still have more vitality to improve recuperation process (Deol and Kang, 2010) ^[1].

The body fat percentage (BFP) of a human or other living being is the total mass of fat divided by total body mass, multiplied by 100; body fat includes essential body fat and storage body fat. Essential body fat is necessary to maintain life and reproductive functions. After studying the relevant literature for the proposed research, no study was found revealing the difference between body fat percentage among school children of Uttrakhand. The scholar, being ardent lover of physical fitness and experienced the great benefits of body fat percentage. Hence, in the present study it was planned to scrutinize the difference between body fat percentage among school children of Uttrakhand.

Materials and Methods

To achieve the objective of present research random sampling technique was used by the investigator. A total number of Two Thousand (2000) subjects were selected from the Rural and Urban part of Uttrakhand.

Correspondence

Dr. Thingnam Nandalal Singh
Associate Professor, Department
of Physical Education, Panjab
University, Chandigarh, India

Further, subjects were also selected from different private and Government schools of Uttarakhand. The all subjects were between age group of 13-17 years. To check the body fat percentage of subjects Skin fold caliper was used by the researcher. After the collection of relevant data; to scrutinize the significance difference between body fat percentage among school children of Uttarakhand, Analysis of variance

(ANOVA) was applied. The level of significance was set at 0.05 percent ($p < 0.5$).

Results and Discussion

Descriptive Analysis of percentage of body fat among four different types of School boys has been presented in table-1.

Table 1: Mean and Standard Deviation Results With Regard To Body Fat Percentage among Four Different Types of School Boys

Group	N	Mean	Std. Deviation
Government Rural School boys	500	16.61	4.50
Private Rural School boys	500	18.41	3.82
Government Urban School boys	500	18.15	3.20
Private Urban School boys	500	19.22	3.89
Total	2000	18.10	3.99

Table- 1 depicts the Mean and SD values of Government Rural School boys for their body fat percentage of different types of school (Government Rural, Private Rural, Government Urban and Private Urban School) boys were

16.61±4.50, 18.41±3.82, 18.15±3.20 and 19.22±3.89 respectively. The graphical representation of responses has been exhibited in figure 1.

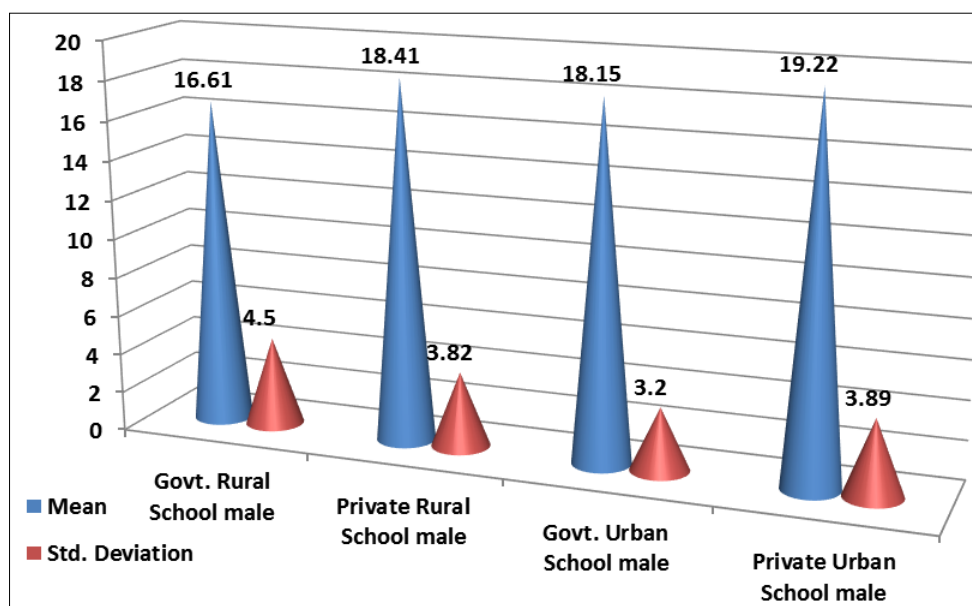


Fig 1: Shows the Mean and Standard Deviation With Regards To Body Fat Percentage among Four Different Types of School Boys

The Analysis of Variance (ANOVA) for four different types of School boys on percentage of body fat among is presented in Table-2.

Table 2: Analysis of Variance (Anova) Results With Regard To Body Fat Percentage among Four Different Types of School Boys

	Sum of Squares	Df	Mean Squares	F	Sig.
Between groups	1787.815	3	595.938	39.421*	.000
Within groups	30159.059	1996	15.117		
Total	31946.874	1999			

*Significant at .05 level
F._{.05} (3, 1996) = 2.61

It is evident from table-2 that the results of Analysis of Variance (ANOVA) among four different types of School boys with regard to the body fat percentage were found to be statistically significant ($P < 0.05$). Since the obtained “F” ratio 39.421 (.000) was found statistically significant. Further, LSD Post Hoc test of significant was applied to find out the actual significant difference on body fat percentage among different types school boys. The results of Post Hoc test of significance have been presented in table-3.

Table 3: Analysis of Least Significant Difference (Lsd) Post Hoc Test With Regard to Body Fat Percentage among Four Different Types of School Boys

(I) VAR00002	(J) VAR00002	Mean Difference (I-J)	Sig.
Government Rural School boys Mean=16.61	Private Rural School boys	1.79920*	.000
	Government Urban School boys	1.53620*	.000
	Private Urban School boys	2.61266*	.000
Private Rural School boys Mean=18.41	Government Rural School boys	1.79920*	.000
	Government Urban School boys	.26300	.285
	Private Urban School boys	.81346*	.001
Government Urban School boys Mean=18.15	Government Rural School boys	1.53620*	.000
	Private Rural School boys	.26300	.285
	Private Urban School boys	1.07646*	.000
Private Urban School boys Mean=19.22	Government Rural School boys	2.61266*	.000
	Private Rural School boys	.81346*	.001
	Government Urban School boys	1.07646*	.000

A glance at Table-3 showed that the mean value of Government Rural School boys were 16.61 whereas Private Rural School boys had mean value as 18.41 and the mean difference between both the groups was found 1.79920*. The

p-value sig.000 shows that the Government Rural School boys subjects had demonstrated better on body fat percentage as compare the Private Rural School boys significantly. The mean value of Government Rural School boys were 16.61 whereas Government Urban School boys had mean value as 18.15 and the mean difference between both the groups was found 1.53620*. The p-value sig.000 shows that the Government Rural School boys subjects had demonstrated better on body fat percentage as compare the Government Urban School boys significantly.

The mean value of Government Rural School boys were 16.61 whereas Private Urban School boys had mean value as 19.22 and the mean difference between both the groups was found 2.61266*. The p-value sig.000 shows that the Government Rural School boys subjects had demonstrated better on body fat percentage as compare the Private Urban School boys significantly. The mean difference body fat percentage between Private Rural School boys and Government Urban School boys was found.26300. The p-value sig.285 is insignificant difference. The mean difference body fat percentage between Private Rural School boys and Private Urban School boys was found.81346*. The p-value sig.001 is significant difference. The mean difference of body fat percentage between Government Urban School boys and Private Urban School boys was found 1.07646*. The p-value sig.000 is significant difference.

Conclusion

- After the investigation the findings conclude that the Government Rural School boys had less body fat percentage as compare to the Private Rural School boys.
- The finding further proves that the Government Rural School boys had less body fat percentage as compare to the Government Urban School boys.
- Further it was concluded that the Government Rural School boys had less body fat percentage as compare to the Private Urban School boys.

References

1. Deol NS, Kang GS. Health and Physical Education. Twenty first century, Patiala, 2010.
2. Goran MI. Intra-abdominal adipose tissue in young children. Journal of obesity and related metabolic disorders. 1995; 19:279-283.
3. Goyal RK, Shah VN, Saboo BD, Phatak SR, Shah NN, Gohel MC, *et al.* Prevalence of overweight and obesity in Indian adolescent school going children: It's relationship with socioeconomic status and associated lifestyle factors. Journal of Association of Physician India. 2010; 58:151-158.
4. Gupta AK, Ahamad AJ. Childhood obesity and hypertension. India paediatrics. 2011; 27:333-337.
5. Hager A, Sjostrom AB, Bjorntorp P, Smith U. Adipose tissue cellularity in obese school girls before and after dietary treatment. The American journal of clinical nutrition. 1978; 31:68-75.
6. Hajian-Tilaki KO, Sajjadi P, Razavi A. Prevalence of overweight and obesity and associated risk factors in urban primary-school children in Babol, Islamic Republic of Iran. East mediterr health journal. 2011; 17(2):109-114.
7. Hamed T, Sayyed M, Hosseiny F, Kompani A, Saki I, Maliheh SF, *et al.* Prevalence and trend of overweight and obesity among school children in Ahvaz, Southwest of Iran. Global Journal of health science, 2014, 6(2).

8. Hampl SE, Carroll CA, Simon SD, Sharma V. Resource utilization and expenditures for overweight and obese children. Archives of paediatrics & adolescent medicine. 2007; 161:11-14.