



FAT PERCENTAGE ANALYSIS OF URBAN AND RURAL AREA STUDENTS

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	Body fat percentage	Endomorphic component	Mesomorphic component	Ectomorphic component	
GIRLS (N = 100)	Mean	26.93	4.53	3.65	2.81
	St.Dev.	7.14	1.58	1.34	1.44
	St. E. Mean	0.71	0.16	0.13	0.14
	Min	12.9	1.8	0.0	0.1
	Max	48.0	8.7	7.1	5.6
BOYS (N = 94)	Mean	14.31	3.07	4.02	3.49
	St.Dev.	6.74	1.71	1.45	1.56
	St. E. Mean	0.70	0.18	0.15	0.16
	Min	3.0	0.6	1.0	0.1
	Max	37.1	7.6	7.4	7.2

ABSTRACT:

The study was confined to the boy's students studying in different schools of Bhopal region situated in urban and rural areas. Total 100 boys were selected in this study for profile the fat percentage in both the areas. Obtained mean scores of Rural students is 10.38 whereas Urban students had mean scores 10.52. Mean difference between the group was 0.14. Calculated 't' ratio (0.30) was much lower than the required 't' value (1.99) to be significant at 0.05 level 78 degree of freedom.

KEYWORDS: Fat, Urban, Rural etc.

INTRODUCTION :

There has been an increasing focus on the nature of "physical fitness" in recent years, not just in terms of general health, but also in terms of the particular physical demands of competitive sports and some highly specialised and demanding vocations. It is becoming increasingly obvious, if underestimated, that achieving and sustaining high levels of physical fitness necessitates enormous exertion on the part of the working body.

Physical fitness comprises not only the absence of illnesses but also a state of excellent health for a person. Without growing weary, the person should be able to do rigorous physical activities with ease and comfort. All of the body's systems, including respiratory, cardio-vascular, skeletal, neurological, and endocrine, must work optimally to maintain optimum health. In order for the body to grow and develop properly, as well as for various systems to operate effectively, diet must be sufficient in terms of caloric and nutritional content.

Body composition changes are also influenced by training or conditioning. Typically, while lean body mass grows as a result of training or conditioning, body fat weight decreases, and total body weight may change as a result of these factors.

DELIMITATIONS

1. The study was confined to the boy's students studying in different schools of Bhopal region situated in urban and rural areas.
2. The study was further delimited to the age group of 12-17

LIMITATIONS

1. Non-availability of sophisticated instruments was considered as a limitation of the study.
2. Though all the subjects was resident students of the school and had some type of living conditions, diet, rest and working schedule in both theory and practical their participation in some kind of

physical education programme as a part of school curriculum could not be controlled and this was recognized as a limitation of the study.

HYPOTHESIS

- There will be significant difference in test scores of rural and urban school students

METHODOLOGY

Body Composition

A skin fold was used to determine body composition. Caliper The percentage of fat on the right side of the body was calculated. Between the thumb and index finger, the thickness of the skin and subcutaneous fat were grabbed and measured to the nearest millimetre. Readings were collected between three and four seconds to eliminate mistake; if this care was not taken, the skin fold may decrease due to tissue being squaxed out from the caliper's jaws.

The thickness was taken from the following four sites:-

(i) Biceps, (ii) Triceps, (iii) Subscapula and (iv) Supra iliac.

- **Biceps -**

Subject was asked to stand erect by hanging and loose arms closely by the sides. A fold was picked up on the anterior part of the arm at the middle of a biceps and skin fold thickness was taken. The position of the fold was taken to the nearest millimeter.

- **Triceps -**

The skin fold was taken at the posterior of the upper arm, at a point half way between the tip of the shoulder (acromial process) and tip of the elbow (alecranon process). The measurement was taken at the middle of the muscle when the arm was hanging freely.

- **Sub-scupularis -**

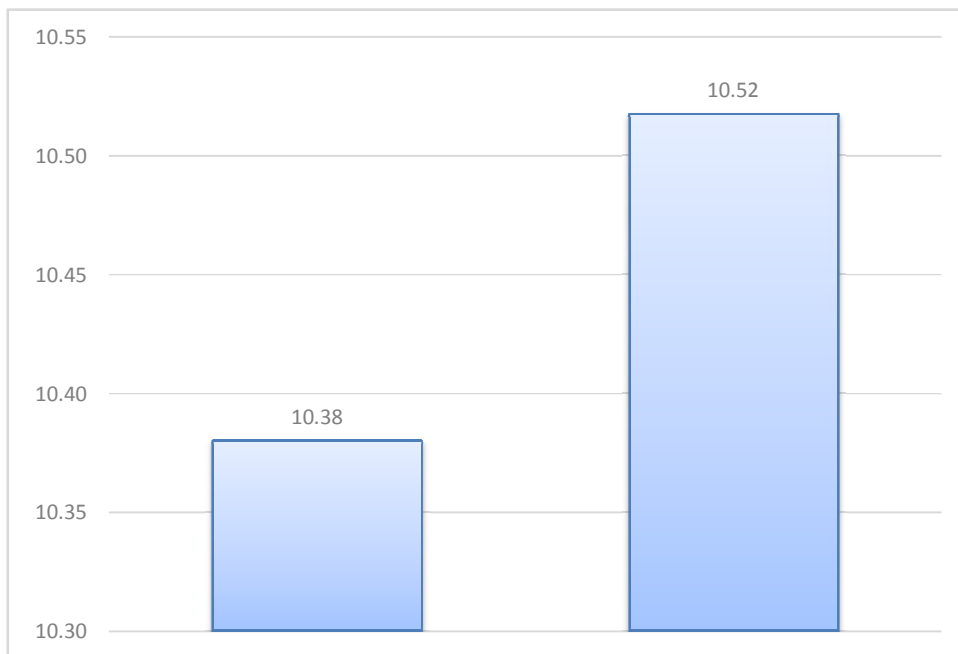
The skin fold thickness was taken at the inferior angle with the subject in a erected standing position. The fold was lifted at the diagonal plane at about 45°, from vertical and horizontal planes.

- **Suprailiac -**

The skin fold thickness was taken three to five centimeter above the anterior-superior iliac. Spine on diagonal line going downward and inward.

ANALYSIS OF RESULTS

Graphical representation of mean value of Urban and Rural area students



Descriptive Statistics and comparative analysis between Rural and Urban schools students on Fat %

Variable	Gender	N	Mean	SD	SEM	MD	't' ratio	'p'
Fat %	Rural	40	10.38	2.02	0.32	0.14	0.30	0.77
	Urban	40	10.52	2.09	0.33			

Data depicted on fat % between Rural and Urban students revealed insignificant difference on pre test scores. Obtained mean scores of Rural students is 10.38 whereas Urban students had mean scores 10.52 mean difference between the group was 0.14, Calculated 't' ratio (0.30) was much lower than the required 't' value (1.99) to be significant at 0.05 level 78 degree of freedom.

REFERENCE

- Schiffrin A, S Parikh. Accommodating planned exercise in type 1 diabetic patients on intensive treatment. *Diabetes Care* 1985;8:337-343
- Berger M, P Berchtold, HJ Cuppers, H Drost, HK Kley, WA Muller, et al. Metabolic and hormonal effects of muscular exercise in juvenile type diabetics. *Diabetologia* 1977;13:355-365
- Cryer PE. The prevention and correction of hypoglycemia. In: L.S. Jefferson and A.D. Cherrington (eds.) *Handbook of Physiology*, vol. 2. Oxford:Oxford University Press 2001, 1057-1093
- MacDonald MJ. Postexercise late-onset hypoglycemia in insulin-dependent diabetic patients. *Diabetes Care* 1987;10:584-588.
- Bjorntorp P, de Jounge K, Sjostrom L, et al. The effect of physical training on insulin production in obesity. *Metabolism* 1970;19:631-637.
- Huttunen JK, Lansimies E, Voutilainen E, et al. Effect of moderate physical exercise on serum lipoprotein. *Circulation* 1979;60:1220-1229.

7. Kemmer FW, Berchtold P, Berger M, et al. Exercise induced fall of blood glucose in insulin-treated diabetics, unrelated to alteration of insulin mobilization. *Diabetes* 1979;28:1131-1137. Laaksonen, DE, M Atalay, LK Niskanen, J Mustonen, CK Sen, TA Lakka, et al. Aerobic exercise and the lipid profile in type 1 diabetic men: a randomized controlled trial. *Med. Sci. Exerc. Sports* 2000;32:1541-1548.
8. Landt KW, BN Campaigne, FW James, MA Sperling. Effects of exercise training on insulin sensitivity in adolescents with type I diabetes. *Diabetes Care* 1985;8:461-465