



ORIGINAL RESEARCH PAPER

Physical Education & Sports

EFFECT OF DIFFERENT TRAINING VARIANTS ON SELECTED ANTHROPOMETRIC VARIABLES OF ADOLESCENT SCHOOL GOING BOYS

KEY WORDS: Yogic Exercise, Interval Training, Fartlek Training, Anthropometrical Variables

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ABSTRACT

Present study was conducted with 120 adolescent school going boys as subjects, randomly divided into four groups namely Group A (Yogic exercise), Group B (Interval Training), Group C (Fartlek Training) and Group D (Control) having 30 subjects in each group. With administration of trainings allotted to the concerned groups for a period of 12 weeks, it was observed that, the anthropometric parameters like upper arm circumference was increased significantly differently in interval training group, compared with control and yogic exercise group. Fartlek training group was not different from all other groups. No difference among groups was obtained in chest and waist circumference. Yogic exercise group proved to be different from other groups in hip and thigh circumference. However in calf circumference, both fartlek and interval training groups were found to be significantly different from control and yogic exercise groups. Yogic exercise and fartlek training showed significant decrease in biceps and sub scapular skinfold measurement, compared with other two groups, without any significant difference between the two. Triceps skinfold measurement was significantly lowered in yogic exercise group. None of the experimental groups including control differed with regard to suprailiac skinfold measurement under present study.

INTRODUCTION:

The process of empowering adolescents begins with the practice of treating them with respect and facilitating their growth in such a way that they are able to realize their hidden potential. Adolescence was once believed to be a time of rebellion and turmoil. But we know now that this developmental stage is not so. The "rebellion" often seen in teens is likely due to physical, cognitive and social changes that occur in their growth and development. The effect of training of yogic activities and weight training on anthropometric, physiological and health related fitness variables of school going boys within the age group of 13-15 years was studied by Karak (2015). A significant increase in performance was observed in all the physiological and health related fitness variables under study, compared to those of control group. Except thigh girth and wrist, no other variables under anthropometric traits were influenced with the administration of weight training and yoga in the study undertaken.

Keeping the past literature in back drop, the present study was aimed at finding out the comparative effect of three variants of training programmes i.e., Yogic exercises, Fartlek training and Interval training on selected anthropometric variables of adolescent school going boys.

Selection Of Dependant Variables:

Keeping the feasibility criterion in mind, especially in the case of availability of instruments, the following anthropometric variables were chosen:

- Upper Arm Circumference,
- Waist Circumference,
- Chest Circumference
- Thigh Circumference,
- Calf Circumference
- Hip Circumference,
- Skin folds Measurements.
- Biceps skinfold,
- Triceps skinfold,

- Sub scapula skinfold,
- Suprailiac skinfold.

Experimental Design:

Random group design was adopted for the study as all the subjects (120 nos.) were randomly selected and divided into four groups. Further the experimental treatments also were assigned at random to all three experimental groups and the fourth group served as the control group. The experimental groups participated in three training programmes i.e. Group A (Yogic exercises), Group B (Interval training) and Group C (Fartlek training). The study was conducted for a period of 12 weeks.

Findings:

For each of the chosen variables, the results pertaining to significant difference, if any, between the pre test and post test means for the four groups after twelve weeks of training, which were submitted to analysis of variance, are given in following Table.

Pre and post test Mean \pm SE of anthropometrical parameters of subjects among all groups

Parameters		Control Group	Yogic Ex. Group	Fartlek Group	Interval Group	F' ratio
upper arm circumference (cm)	Pre-Test	19.59 \pm 0.49	20.36 \pm 0.51	20.51 \pm 0.41	20.06 \pm 0.44	0.756
	Post-Test	20.17 \pm 0.46	20.77 \pm 0.52	20.13 \pm 0.45	19.39 \pm 0.43	2.817*
Waist Circumference	Pre-Test	66.67 \pm 2.67	66.20 \pm 2.63	67.14 \pm 0.82	67.85 \pm 1.56	0.115
	Post-Test	63.18 \pm 2.47	62.63 \pm 0.59	65.57 \pm 0.70	66.43 \pm 1.34	1.544
Chest Circumference.	Pre-Test	63.10 \pm 2.26	62.35 \pm 2.22	67.78 \pm 0.97	66.30 \pm 1.50	2.019
	Post-Test	61.00 \pm 2.38	59.93 \pm 0.64	63.43 \pm 0.71	64.55 \pm 1.37	2.147

Thigh Circumference	Pre-Test	39.21±0.78	37.60±0.92	38.36±0.75	37.24±1.29	0.823
	Post-Test	33.27a±1.53	33.25a±0.72	37.33b±0.66	36.32a±1.12	3.862*
Calf Circumference	Pre-Test	26.63±0.61	27.18±0.50	27.74±0.53	26.63±0.61	0.892
	Post-Test	24.15a±0.83	26.16a±0.30	28.27b±0.53	27.38b±0.56	9.179**
Hip Circumference	Pre-Test	73.74±1.17	68.75±2.33	73.48±1.16	72.87±1.60	2.035
	Post-Test	66.90a±2.40	62.61a±1.74	68.00a±0.70	69.67b±1.49	3.166*
Biceps skinfold	Pre-Test	6.50±0.13	6.54±0.13	6.39±0.10	6.50±0.13	0.302
	Post-Test	6.46a±0.14	6.10b±0.08	6.03b±0.05	6.27ab±0.06	4.741**
Triceps skinfold	Pre-Test	11.38±0.23	11.76±0.15	11.57±0.12	11.38±0.23	0.906
	Post-Test	11.28a±0.28	11.83b±0.13	11.24a±0.13	11.81b±0.17	3.005*
Subscapula skinfold	Pre-Test	12.62±0.15	12.56±0.16	12.53±0.15	12.62±0.15	0.964
	Post-Test	12.60a±0.13	11.73b±0.36	12.15a±0.12	12.42a±0.11	3.110*
Suprailiac skinfold	Pre-Test	13.17±0.18	13.48±0.15	13.54±0.14	13.17±0.18	1.382
	Post-Test	12.78±0.15	12.89±0.12	13.18±0.11	13.06±0.11	2.088

* Significant (p<0.05), ** Significant (p<0.01), df= 3, 116

Means with different superscripts (a,b) differ significantly (P<0.05) within a row for a particular parameter.

DISCUSSION OF FINDINGS:

The analysis of data revealed that there was no significant difference among pretest scores of all four groups under study denoting randomization of subjects assigned to different groups. With reference to pre and post test mean values revealed that, after administration of yogic exercise schedule for twelve weeks, the anthropometric components like hip, thigh and calf circumference along with biceps and suprailiac skinfold measurement were affected positively. Anthropometric parameters like upper arm, chest, waist, hip, thigh and calf circumference along with biceps, triceps, sub scapular and suprailiac skinfold measurements were influenced positively by fartlek training for a period of twelve weeks.

None of the anthropometric parameters was affected with scheduled interval training under the study. None of the parameters under the study showed significant difference before and after the test period of 12 weeks in control group.

CONCLUSION:

On the basis of the analysis of data, within the limitations of the present study, the following conclusions were drawn:

- The results pertaining to partitioning of variances among four experimental groups revealed that, the anthropometric parameters like upper arm circumference was influenced significantly in interval training group, compared with control and yogic exercise group.
- Fartlek training group was not found to be different from all other groups. No difference among groups was obtained in chest and waist circumference.
- Yogic exercise group proved to be different from other groups in hip and thigh circumference. However in calf circumference, both fartlek and interval training groups were found to be significantly different from both control and yogic exercise groups.
- Yogic exercise and fartlek training groups showed significant decrease in biceps and sub scapular skinfold measurement, compared with other two groups having no

significant difference between the two.

- Triceps skinfold measurement was significantly lowered in yogic exercise group.
- None of the experimental groups including control group differed with regard to suprailiac skinfold measurement under present study.

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