

## Effect of fitness programme on selected physical variables of school teachers

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### Abstract

The main purpose of this study was to see the effect of fitness programme on selected physical variables of school teachers. For this study 50 sedentary school teachers between the age group of 35-45 years from Infant Jesus School and Mary Nilayam School were selected as subjects, in whom 25 subjects were assigned to an experimental group and 25 subjects to a control group, 10 weeks of training programme was conducted. Data analysis reveals that selected physiological variables such as Resting Pulse Rate, Flexibility, Body Fat and Body Weight, significant changes were seen following 10 weeks of training programme. No changes were seen in the case of systolic and diastolic blood pressure.

**Keywords:** Physical Fitness, Resting Pulse Rate, Flexibility, Body Fat and Body Weight.

### 1. Introduction

The human organism was designed to be active. Anthropologists indicate that the need to be active is associated with the “fight or flight” response. In search of food, primitive people, sometimes had a fight with other predators or they had flee for safety. In their case, the response was often vigorous activity. Even our more recent ancestors were required to do vigorous activity as a relatively major part of their normal daily routine. However, automation and technology have freed modern civilization from the exhausting physical labour required of earlier generations. The heavy physical work of the farmer and manual labourer is less and less likely to be part of the normal daily routine of the average individual (Corbin 1994).

In the recent decades, the Indian population has undergone drastic changes in all walks of life. Living patterns, health habits and daily routine have changed dramatically. These changes are prompt to sedentary factors especially in schoolteachers. The teaching faculty forms a reasonable part of it. They are prone to hypokinetic diseases such as obesity, hyper tension, diabetes etc. They have more of academic burden and least physical activity. During the other hours they attend to the household chores which does not need much of physical strain. Thus it is felt there is a need to evolve a physical fitness programme for the teachers during school hours.

Therefore the investigator made an attempt to study the effect of fitness programme on selected physical variables of schoolteachers.

### 2. Methodology

#### 2.1 Selection of Subjects

The investigator randomly selected 50 sedentary school teachers between the age group of 35-45 years from Infant Jesus School and Mary Nilayam School. Twenty five subjects were assigned to an experimental group and 25 subjects to a control group. Prior to the administration of tests the investigator held a series of meeting with the subjects they were made clear about the objectives and purposes of the test. The testing procedure was explained to them in detail. They were requested to co-operate the participate actively for the same.

#### 2.2 Tools Used

The instruments used for this study were calibrated and standardized ones. They have Skinfold Caliper (Switzerland), Stethoscope (Life Line, India), Sphygmomanometer (Diamond, India), Flexible tape (Gullicks Tape).

### 3. Results and Findings of the Study

**Table-1**

**Differences in mean of experimental and control group on body weight (kg)**

Groups	No.s	Initial	± SD	Final	± SD	Mean	SE	't' ratio
		Mean		Mean		Diff.		
Exp.	25	49.76	± 6.59	49.36	± 6.57	.40	.13	3.16**
Cont.	25	49.28	± 7.21	49.4	± 7.13	-0.12	.13	-.92

\*Significant at 0.05 level of confidence

\*\*Significant at 0.01 level of confidence

**Table-2**

**Differences in mean of experimental and control group on flexibility (cms)**

Groups	No.s	Initial	± SD	Final	± SD	Mean	SE	't' ratio
		Mean		Mean		Diff.		
Exp.	25	18.16	± 2.22	8.84	± 2.82	-0.68	.20	-3.37**
Cont.	25	17.44	± 3.56	17.4	± 3.72	.04	.08	.45

**Table-3**

**Differences in mean of experimental and control group on percentage of body fat (in kg)**

Groups	No.s	Initial	± SD	Final	± SD	Mean	SE	't' ratio
		Mean		Mean		Diff.		
Exp.	25	30.80	± 1.97	30.34	± 2.09	.46	.06	-6.56**
Cont.	25	31.06	± 1.25	31.03	± 1.31	.03	.04	-.70

**Table-3**

**Differences in mean of experimental and control group on resting pulse rate (in beats/ minute)**

Groups	No.s	Initial	± SD	Final	± SD	Mean	SE	't' ratio
		Mean		Mean		Diff.		
Exp.	25	81.88	± 6.17	81.16	± 5.97	.72	.17	4.12**
Cont.	25	82.8	± 5.22	82.52	± 5.56	.28	.34	.83

**Table-4**

**Differences in mean of experimental and control group on blood pressure systolic (mm of hg)**

Groups	No.s	Initial	± SD	Final	± SD	Mean	SE	't' ratio
		Mean		Mean		Diff.		
Exp.	25	121.24	± 4.65	120.8	± 5.38	.44	.30	1.46
Cont.	25	121.8	± 7.63	121.72	± 7.60	.08	.83	.17

**Table-5**

**Differences in mean of experimental and control group on blood pressure diastolic (mm of hg)**

Groups	No.s	Initial	± SD	Final	± SD	Mean	SE	't' ratio
		Mean		Mean		Diff.		
Exp.	25	82.28	± 5.86	81.72	± 6.25	.56	.37	1.09
Cont.	25	82.32	± 6.45	82.24	± 6.10	.08	.25	.31

#### 4. Discussion

The subjects of the study were leading a sedentary life style. The nature of their job was such that they hardly involved in any physical activity. From the table it is evident that in the case of most of the selected physiological variables such as Resting Pulse Rate, Flexibility, Body Fat, Blood Pressure and Body Weight, significant changes were seen following 10 weeks of training programme.

The resting pulse of the experimental group decreased following the training programme. It might be due to the exercise which would have been strenuous enough to bring about an improvement in the efficiency of the heart, thus resulting in decreased pulse rate which is considered to be an indicator of better fitness. Another reason could be an increased parasympathetic drive or decreased sympathetic drive.

The Experimental group improved in flexibility following the training programme. Each of the fitness sessions consisted of stretching exercise. Thus these stretching exercises would have resulted in increased range of motion at the joints. Stretching gradually leads to minor distension in connective tissue and the summation of these small changes dramatically would have improved the range of motion, thus resulting in increased flexibility.

No changes were seen in the case of systolic and diastolic blood pressure following 10 weeks of training programme. The subjects of the study had normal systolic and diastolic blood pressure. This would have been the reason for no change.

Body Fat percentage decreased due to the prescribed training programme. The nature of the exercise and duration of training period might have brought about this change. The training programme would have resulted in increased caloric expenditure thus leading to increased fat utilization and reduction in blood lipids. Another reason would have been as the increased caloric expenditure above the resting level even after the cessation of exercise.

10 weeks of training programme decreased the body weight. Decrease in body fat percentage might have been the reason for decrease in Body Weight. The loss of body water would have been yet another reason.

Significant differences were seen in the experimental group following 10 weeks of fitness programme in body weight, flexibility, body fat and resting pulse rate.

#### 5. Conclusion

The results of the study seem to permit the following conclusions.

- Body weight was reduced as a result of participating in 10 weeks of Fitness Programme.
- Flexibility was improved as a result of 10 weeks of fitness programme.
- Participation in 10 weeks of fitness programme resulted in reduction of percentage of body fat.
- Participation in 10 weeks of fitness programme resulted in the improvement of Resting Pulse Rate.
- Participation in 10 weeks of training programme did not have any change in blood pressure.

#### 6. References

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