



ANALYZE THE EFFECT OF PHYSICAL EDUCATION PROGRAMME AMONG MALE AND FEMALE STUDENTS ON SELECTED HEALTH RELATED FITNESS VARIABLES

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ABSTRACT

The current study examined the effect of six-week physical education program on selected health-related physical fitness in both male and female students. A total 30 students (15 men and 15 females) of 1st year were selected as subjects from of Bachelor of Physical Education course from Lakshmbai National Institute of Physical Education (LNIPE), Gwalior with age ranged from 17 to 21 years. Cardiovascular endurance, muscular endurance, muscular strength, flexibility, and body composition were evaluated using the ICHPER SD-ASIA Health-Related Physical Fitness Test. For six weeks, the participants participated in a systematic physical education program that included regular theory and practice lessons. The paired t-test was used to analyze pre-test and post-test data at the 0.05 level of significance. The results showed that both male and female students had significantly improved in all of the chosen fitness characteristics. While female students showed better improvements in flexibility, male students showed larger gains in cardiovascular and muscular endurance. There were no discernible gender variations in body composition or muscular strength. The study comes to the conclusion that college students' health-related physical fitness is effectively improved by a comprehensive physical education program.

KEYWORDS

Physical Education Programme, Health Related Fitness

INTRODUCTION

The Greek philosopher Plato having stated as follows about physical education. "They are not intended to train the body, rather mind except incidentally, but to insure a proper harmony between energy and initiative on the one hand and reason on the other hand by tuning to the right pitch". Training in game and sports is no longer a myth and it has no casual approach, but it provides opportunities for scientific process and verification. Training has been accepted as a highly specialized science involving the use of scientific methods and physical investigations (Bucher, 1974).

The organized physical education program aim at the maximal development of the individual's potentialities in all phases of life, by placing him in an environment which will promote the movement and related responses or activities that will best contribute to the purpose. In modern times physical education is considered as the process of "human engineering" and it is having much to do with the human body other than the mental and sociological aspects of life. Therefore physical educators must have a strong grasp over the physical functioning of the body to understand its optimum utilization. At the present time, in the field of athletic training and high performance games and sports, the physical educator or coach will not be able to do much without the application of up to date scientific knowledge of the related disciplines (Nixon & Jeett, 1974).

The effort has been made in this study to find out the beneficial effect of 6 weeks physical education programme on different category of students and hence, present study was conceptualized to analyze the physical education programme among male and female students on selected health related fitness variables, further It was hypothesized that there would be significant difference in the selected health related fitness variables of male and female students following the 6 weeks physical education programme.

Methodology

For the present study 30 subjects (15 male and 15 female) were selected as s subject of first year bachelor degree course in physical education from LNIPE, Gwalior and the age of the subjects were ranging between 17-21 years and following the 6 weeks physical education programme. All the subjects were voluntarily agreed to co-operate in the testing procedure and according to the testing protocol, the testing procedure of each test was well explained to them so that there was no ambiguity in their minds regarding the efforts required on their part. No special technique was used to motivate the subjects to put in their best efforts, but the subjects were quite mature and participated whole heartedly in testing. Keeping in mind the feasibility criteria and the purpose of the present investigation ICHPER. SD-ASIA Health Related Physical Fitness Test Comprising following test items was

adopted and the criterion measures for the present study were presented in table 1.

Table 1 Criterion Measure

S. No.	Test	Criterion Measures
1	Endurance Run	1 mile run.
2	Mascular Endurance	Flexed Knee sit ups in sixty seconds.
3	Mascular Strength	Pull ups/Modified pull ups
4	Flexibility	Sit and reach test (From sitting position)
5	Body composition	(sum of triceps and calf skinfolds)

The programme consisted of practical classes in various sports disciplines in the morning and evening sessions, and theory classes in the day hours. The morning and evening sessions of practical classes consists of three periods (45 minutes each) of instructional and practice in the various disciplines, and special practice for an activity of individual's choice. In order to find out the difference between the pre-test and the post-test means of each group in selected variables, the 't' ratio was employed. The level of significance was set at .05. All statistical techniques were calculated by using SPSS version 20.

Findings

The statistical analysis pertaining to the t-ratio for the health related fitness variables were presented in Tables 2 to 6.

Table 2 T- Ratio Of Male And Female Subjects In Cardiovascular Endurance Performance

Groups	Pre test Means	Post test Means	Dm	σDm	t-ratio
Male	433.27	401.70	31.57	6.86	4.60*
Female	593.30	549.13	44.17	6.40	6.90*

* Significant at 0.05, t0 05 (28) = 1.701

Table 2 of significance of difference between the pre test and post test means of male and female subjects in cardiovascular endurance performance indicates t-ratios of 4.60 and 6.90 respectively. The obtained t-ratios are significant since they are greater than the t- value of 2.04 required for significance at 0.05 level. The above findings indicate significant improvement in cardiovascular endurance performance from pre to post test for both male and female subjects.

Table 3 T- Ratio Of Male And Female Subjects In Muscular Endurance Performance

Groups	Pre test Means	Post test Means	Dm	σDm	t-ratio
Male	34.33	48.43	14.10	1.543	9.16*
Female	28.63	37.03	8.40	0.906	9.27*

* Significant at 0.05 level, $t_{0.05}(28) = 1.701$

The above table of significance of difference between the pre test and post test means of male and female subjects in muscular endurance performance indicates t-ratios of 9.16 and 9.27 respectively, both of which are significant at 0.05 level. The above findings indicate significant improvement in muscular endurance performance from pre to post test for both male and female subjects.

Table 4 T- Ratio Of Male And Female Subjects In Muscular Strength Performance

Groups	Pre test Means	Post test Means	Dm	σDm	t-ratio
Male	4.67	8.97	4.30	0.36	11.94*
Female	5.97	9.83	3.86	0.40	9.65*

* Significant at 0.05 level, $t_{0.05}(28) = 1.701$

Table 4 of significance of difference between the pre test and post test means of male and female subjects in muscular strength performance indicates t-ratios of 11.94 and 9.65 respectively. The obtained t-ratios are significant since they are greater than the t- value of 2.04 required for significance at 0.05 level. The above findings indicate significant improvement in muscular strength performance from pre to post test for both male and female subjects.

Table 5 T- Ratio Of Male And Female Subjects In Flexibility Performance

Groups	Pre test Means	Post test Means	Dm	σDm	t-ratio
Male	6.67	10.53	3.86	0.730	5.29*
Female	9.53	15.43	5.90	0.595	9.92*

* Significant at 0.05 level, $t_{0.05}(28) = 1.701$

The above table of significance of difference between the pre test and post test means of male and female subjects in flexibility performance indicates t-ratios of 5.29 and 9.92 respectively, both of which are significant at 0.05 level. The above findings indicate significant improvement in flexibility performance from pre to post test for both male and female subjects.

Table 6 T- Ratio Of Male And Female Subjects In Body Composition (Sum Of Triceps & Calf Skinfolts)

Groups	Pre-test Means	Post-test Means	Dm	σDm	t-ratio
Male	23.06	19.91	3.15	0.57	5.53*
Female	41.93	36.37	5.56	0.57	9.75*

* Significant at 0.05 level, $t_{0.05}(28) = 1.701$

Table 6 of significance of difference between the pre test and post test means of male and female subjects in body composition (sum of triceps and calf skinfolts) indicates t-ratios of 5.53 and 9.75 respectively. The obtained t-ratios are significant since they are greater than the t- value of 2.04 required for significance at 0.05 level. The above findings indicate significant decrease in the sum of triceps and calf skinfolts from pre to post test for both male and female subjects.

CONCLUSION

The findings of the study reveal the following changes in the selected health related physical fitness variables for the male and female subjects following the 6 weeks physical education programme. The findings indicate that both the male and female subjects improved significantly from pre to post test on the ICHPER Health Related Fitness Test variables namely, cardiovascular endurance, muscular endurance, muscular strength, flexibility and body composition. In the case of comparison for the pre to post test scores among male and female subjects on the above variables, it was found that males improved significantly than females in cardiovascular endurance and muscular endurance. However in the case of flexibility females showed a significantly better improvement than males. In case of muscular strength and body composition, no significant difference was observed between male and female subjects.

A well planned systematic programme of physical education induces physiological changes in almost every system of the body. The beneficial effects of long term training programme are profoundly observed in the improvement of motor abilities. Therefore, it was quite

obvious for the subjects of the present study to have shown significant improvement in the physical fitness variables following the 6 weeks participation in a regular, planned programme of physical education.

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