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## Effectiveness of physical education academic programme on psychological and physiological characteristics among varsity students

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### Abstract

The purpose of the study was to determine the effectiveness of physical education academic program on psychological and physiological characteristics among varsity students of Swami Ramanand Teerth Marathwada University campus. In this study 20 students of P.G. level were selected as subjects and their age ranged from 18 to 28 years. The data pertaining to this study were collected and was statistically analyzed by employing Mean, Standard deviation and t-ratio to compare the pre-test and post-test of varsity students group and the level of significance to test the hypothesis was kept at 0.05. On the basis of the findings it was concluded that there was insignificant effect of six week training program on self-esteem and stress among varsity students, where-as heart rate and respiratory rate showed significant effect by six week training program among varsity students at 0.05 level of significance.

**Keywords:** Psychological, physiological, characteristics, eliminating programs, physical education

### Introduction

Daily physical education class may provide the opportunity for students to meet healthy people to guide for physical activity. Many schools however, are reducing physical education requirements and some are eliminating programs. The percentage of schools requiring physical education in each grade decreases from approx. 50% in grade. Physical education classes are being replaced by other classes in an effort to increase the student academic achievement as measured by tests. Despite this trend, no clear evidence indicates that academic achievement will improve if physical education classes are cut. But it is not fact; it is only misunderstanding and misconception among general line administrators.

### Statement of the problem

“Effectiveness of Physical Education Academic Programme on Psychological and Physiological Characteristics among Varsity Students”.

### Objectives of the study

1. To study and assess the effectiveness of physical education academic program on psychological characteristics among the varsity students with regard to self-esteem.
2. To study the effects of physical education academic program on psychological characteristics among the varsity students with regard to stress.
3. To study the effects of physical education academic program on physiological characteristics among the varsity students with regard to heart rate.
4. To study the effects of physical education academic program on physiological characteristics among the varsity students with regard to respiratory rate.

### Significance of the study

- 1) The findings of the study would be helpful in removing the misconceptions towards the physical education academic programmes.
- 2) The findings of the study would provide scope for further study.
- 3) In screening the players for different games and sports activities.

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**Hypotheses**

1. There would be significant effects of physical education academic program on self-esteem among the varsity students.
2. There would be significant effects of physical education academic program on stress among the varsity students.
3. There would be significant effects of physical education academic program on heart rate among the varsity students.
4. There would be significant effects of physical education academic program on respiratory rate among the varsity students.

**Delimitation(s)**

1. The study was delimited to only the varsity students of Swami Ramanand Teerth Marathwada University campus Nanded.
2. The study was delimited to know the effect on psychological characteristics of self-esteem and stress among the varsity students through physical education academic program.
3. The study was delimited to know the effect on physiological characteristics of heart rate and respiratory rate among the varsity students through physical education academic program.
4. The study was delimited to only the varsity students ranged from 18-28 years of age.

**Limitations**

The study was limited within the geographical limitation of Nanded city. Furthermore the central focus of the research is to centralized on the varsity students of Swami Ramanand Teerth Marathwada University campus P.G. level.

1. Nutrition of the students was not under the control of researcher.
2. Behavior of the students was not under the control of researcher.
3. Habits of the students were not under the control of researcher.
4. Economical condition of the student was not considered.
5. Their home practices were not measured.

**Design of the study**

For the purpose of the study 20 students were selected as subject. All the 20 subjects were given a training program for 06 weeks, five days a week and 60 minutes a day. The procedure for training session was as 10 minutes approx. for warm-up and up to 5-10 minutes for limbering down and the main training program was depend upon gym exercises by three repetitions in the health club. This study involves a cross sectional, comparative pre-test and post-tests of students in an experimental research. Since only experimental group was taken by the investigator and there was no control group, so this study was conducted in a quasi-square experimental design. This explores and measures the cardiovascular efficiency, body composition and health outcome within the environment and culture. The data pertaining to psychological variables were collected by employed questionnaires of

**Rosenberg and Sheldon**

The physiological variable heart rate was measured by observing the palpation at radial artery per minute and the total number of palpation per minute for each subject was recorded as score. And the respiratory rate of the subject was recorded after lying in supine position by counting the total number of

exhalation or inhalation per minute as score of the subject. Statistical analysis was made with the help of mean, standard deviation and t-ratio.

**Findings**

The data collected on 20 subjects were computed by using Mean, Standard deviation, and t-ratio statistical techniques to compare the pre-test and post-test of varsity students. The result pertaining to these data have been depicted in the following tables.

**Table 1:** shows statistical comparison of self-esteem between pre and post test of varsity students experimental group.

Stages	Mean Score	S.Ds	T-Value
Pre- test	14.13	2.87	1.45 @
Post-test	12.51	2.13	

@ = Not significant

The findings of table -1 reveal that there does not exist significant effect on self-esteem when Mean (14.13) and S.D (2.87) of varsity students in Pre-test and in post-test Mean (12.51) and S.D (2.13) and t-ratio was statistically analyzed as (t=1.45) at 0.05 level of significance. Thus the hypothesis was rejected.

**Table 2:** shows statistical comparison of stress between pre and post test of varsity students experimental group.

Stages	Mean Score	S.Ds	T-Value
Pre- test	12.16	2.26	0.5@
Post-test	12.65	2.18	

@ = Not significant

The findings of table -2 reveal that there does not exist significant effect on stress when Mean (12.16) and S.D (2.26) of varsity students in Pre-test and in post-test Mean (12.65) and S.D (2.18) and t-ratio was statistically analyzed as (t=0.5) at 0.05 level of significance. Thus the hypothesis was rejected.

**Table 3:** shows statistical comparison of heart rate between pre and post test of varsity students experimental group.

Stages	Mean Score	S.Ds	T-Value
Pre- test	76.5	2.14	7.37*
Post-test	69.5	1.92	

\*significant

The findings of table -3 reveal that there exists significant effect on heart rate when Mean (76.5) and S.D (2.14) of varsity students in Pre-test and in post-test Mean (69.5) and S.D (1.92) and t-ratio was statistically analyzed as (t=7.37) at 0.05 level of significance. Thus the hypothesis was accepted.

**Table 4:** shows statistical comparison of respiratory rate between pre and post test of varsity students experimental group.

Stages	Mean Score	S.Ds	T-Value
Pre- test	15.29	0.42	7.5*
Post-test	13.94	0.41	

\*significant

The findings of table -4 reveal that there exists significant effect on respiratory rate when Mean (15.29) and S.D (0.42) of varsity students in Pre-test and in post-test Mean (13.94) and S.D (0.41) and t-ratio was statistically analyzed as (t=7.5) at 0.05 level of significance. Thus the hypothesis was accepted.

### Discussion

The present study deals with the effectiveness of physical education academic program on psychological and physiological characteristics among varsity students of Swami Ramanand Teerth Marathwada University Nanded. Their age ranged from 18 to 28 years.

1. In the beginning of the study it was hypothesized that there would be significant effect of physical education academic program on self-esteem among varsity students. The result of the study related table-1 in which  $t=1.45$ , did not show significant effect at 0.05 level of significance. So the hypothesis stated earlier was rejected.
2. It was further hypothesized that there would be significant effect of physical education academic program on stress among varsity students. The result of the study related table-2 in which  $t=0.5$ , did not show significant effect at 0.05 level of significance. So the hypothesis pre-stated was rejected.
3. It was also hypothesized that there would be significant effect of physical education academic program on heart rate among varsity students. The result of the study related table-3 in which  $t=7.37$ , showed significant effect at 0.05 level of significance. So the hypothesis stated earlier was accepted.
4. It was also hypothesized that there would be significant effect of physical education academic program on respiratory rate among varsity students. The result of the study related table-4 in which  $t=7.5$ , showed significant effect at 0.05 level of significance. So the hypothesis pre-stated was accepted.

### Conclusion

Within the limitations of the present study and on the basis of findings the following conclusions are drawn:

1. There was not statistically significant effect of six week training program on self-esteem among varsity students.
2. There was not statistically significant effect of six week training program on stress among varsity students.
3. There was statistically significant effect of six week training program on heart rate among varsity students.
4. There was statistically significant effect of six week training program on respiratory rate among varsity students.

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