

Effectiveness of Organised Training on Stress of Under Graduate Physical Education Male College Students

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Abstract- It was being observed that physical education professionals prepare their students by focusing mainly acquisition of physical skills and activities rather than concentrating on the area of psychological adjustment that sometimes lagging back their performance. Only an appropriate combination of psychological balance and physiological soundness may play a vital role in the development of a student. The purpose of the present study was an endeavor to the best method of handling stress which is one of the psychological attributes. Out of 96 selected participants from fluvio coastal zone of west Bengal, India on the basis of BMI, 80 under graduate physical education male students (average age:20) were consider for the study. The subjects were divided into four groups (20 for each group) randomly namely Weight Training Group (WTG), Aerobic Training Group (ATG), Graded Circuit Training Group (GCTG) and Control Group (CG). Separately designed 12 weeks training programme for WTG, ATG and GCTG was applied on the subjects at morning between 8.00 am to 9.15am for three alternative days per week. After every four weeks, total load was increased. Pre and post test on the groups were conducted to measure the training effect on stress. The collected data were statistically analyzed by using the analysis of Co-variance ($p<0.05$) to determine differences, the LSD test was applied as a post hoc test to find out the paired mean differences. From the obtaining result, it was concluded that weight training, aerobics and graded circuit training are found to be effective for reducing stress of under graduate physical education male students.

Keywords: Physical education students, weight training, aerobics, graded circuit training, stress.

INTRODUCTION

It was being observed that physical education professionals prepare their students by focusing mainly acquisition of physical skills and activities rather than concentrating on the area of psychological adjustment that sometimes lagging back their performance in practical examination as well as in their performance in respective sports field. It is well known that mainly an appropriate combination of psychological balance and physiological soundness may play a vital role in the development of a physical education student. Stress is one of the psychological factors that greatly influences the performance of a player or a physical education student who represent his or her college in sports field. Stress comprises feeling tensed or pressure. Stress is defined as a psychological condition that occurs when a subject observes a substantial imbalance between the demands that he or she endures and his or her ability to meet them (**Kent M**). Though there have some positive stress that add more colour, pleasure and vibration in our life, the negative stress about which we should have to be more alert and this negative stress can result in mental and physical strain. Stress is a regular phenomenon in the life of sports persons as well as the physical education students. Much of our stress which is both physical and mental may come in our life from daily strains and everyday responsibilities. Stress has not been identified as crucial in sports which helps to increase or decrease sports performance but also affects social functioning (**Jones & hardy**). Inability to manage sports stress effects on performances. Now a days, stress is common words which were being discussed a lot reasonable scientific sports studies have to be developed more. Here the author has tried find out some path for decreasing the stress level of the college students who are directly associated with the department of physical education.

STATEMENT OF THE PROBLEM

The intention of the research work was to find out the effects of 12 weeks separately designed three different types of training-i.e., i) Weight Training ii) Aerobics Training and iii) Graded Circuit Training on Stress and compare the results to identify the impacts of those training on under graduate physical education male college students.

MATERIALS AND METHODS

Ninety-six male physical education students who opted the subject as a general subject, of “Fluvio-Coastal morphological zone” at Purba Medinipur district of West Bengal, India, were chosen randomly from Bajkul Milani Mahavidyalaya. Eighty students were finalised as “selected subject” and their average age was 20 years. 4 equal groups namely – WTG, ATG, GCTG and CG were formed at random. Students underwent Weight Training (WT), Aerobics (AT) and Graded Circuit Training (GCT). All the tests of **Stress** were conducted in the gymnasium of Bajkul Milani Mahavidyalaya before the beginning of the training (Pre-Training) and at the end of training (Post Training). The training programmed was scheduled at 8.00 A.M to 9.15 A.M including warm up and cool down in order to minimize the effect of diurnal variation. Separately designed 12 weeks training programmes for all the independent variables were applied on subjects for three alternative days per week. **Stress was measured by using stress scale SS-LVNS questionnaire (English version by Dr. Vijaya Lakshmi and Dr. Shruti Narain, 2014) and converting the response into number of using answer key.** The scale is designed for adolescents whose age range is from 12 to 24 years. There is no fixed time as such. However, it generally takes about 10 to 15 minutes in its completion. Scoring was done as according to the Guidelines and instruction regarding administration of stress scale. The researcher translates the question paper to the local language so that the students can get the proper meaning of the question. After every 4 weeks of the experimental period, further load was increased by considering individual ability through test-retest method for all the experimental groups. After end of 12 weeks’ training programme, **Stress** data through the questionnaire was collected. Co-variance (ANCOVA) was used to analyse the collected data to determine the differences (if any) among the groups of dependent variables. LSD test is applied for post hoc test to identify difference between paired mean. 0.05 level of confidence was set as the level of significance.

RESULT OF THE STUDY

Table:1- Analysis of co-variance on Stress of under Graduate Physical Education college male students

TEST		W T G	A T G	G C T G	C G	Source of Variance	Sum of Square	Degree of Freedom	Mean Square	F
PRE TEST	Ms	19.85	20.35	19.1	21.05	AMG	40.5375	(K-1)=3	13.5125	0.6027
	S D	± 4.48	±4.62	±4.76	±5.04	WI	1703.85		22.4190	
POST TEST	Ms	17.95	18.50	17.8	21.75	AMG	207.1	(N-K) =76	69.03	4.2144
	S D	± 4.18	±3.81	±3.60	±4.51	WI	1244.9		16.38	
ADJUS TED POST TEST Ms		18.1147	18.3178	18.4850	21.0682	AMG	115.517	(K-1)=3	38.5055	6.7963
						WI	424.919	(N-K-1) =75	5.6655	

* Significant table value: $F_{0.05}(3, 76) = 2.72$; $N = 80$ (N= subjects’ number); $F = 'F'$ ratio; $Ms = Means$; $S D = Standard Deviation$; $AMG = Among$; $WI = Within$.

Above table presented the Pre-Test “F” ratio ‘**0.6027**’ was found lower than table value [**0.6027** < $tab_{0.05}(3,76)=2.72$]. The Post Test “F” ratio ‘**4.2144**’ was higher than table value [**4.2144** > $tab_{0.05}(3,76)=2.72$]. The calculated Adjusted Post Test Mean “F” value ‘**6.7963**’ was found statistically significant [$F_{0.05}(3, 75) < \mathbf{6.7963}$]. To identify the critical difference of Adjusted Post Test Means, LSD test has been used and it has been analysed in Table no. 2.

Figure No.

Graphical presentation of result on stress of under Graduate Physical Education male students

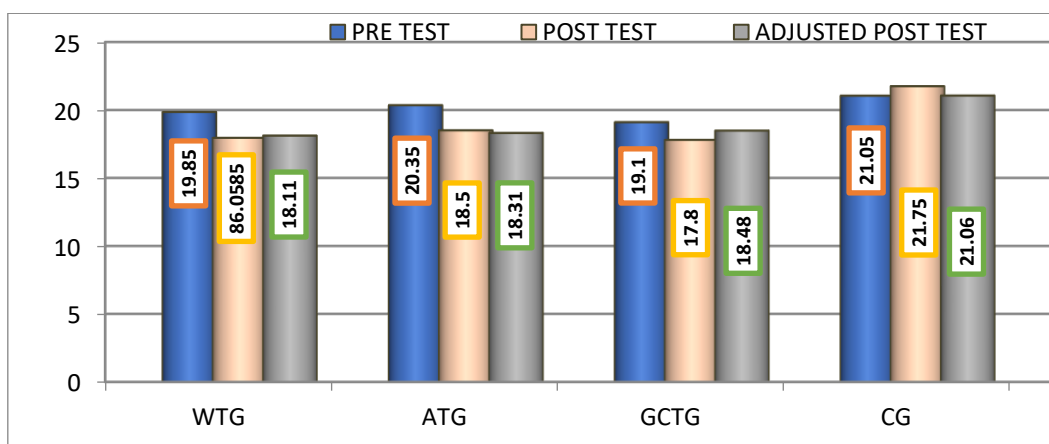


Figure- 1: Mean of Stress on different training groups of under graduate physical education male students.

Table:2- Analysis of critical difference of adjusted post-test means on Stress of under Graduate Physical Education male students

WTG	ATG	GCTG	CG	MD	CD (5%)
18.1148	18.3179			0.2031NS	1.4903
18.1148		18.4850		0.3702NS	
18.1148			21.0823	2.9675*	
	18.3179	18.4850		0.1671NS	
	18.3179		21.0823	2.7643*	
		18.4850	21.0823	2.5972*	

Significant level: 0.05; NS=Not Significant; MD= Mean Difference; CD=Critical Difference

The Adjusted Post Test Mean analysis of **Stress** presented at above table has confirmed that the differences between WTG and CG, ATG and CG, GCTG and CG were significant. The results of this table have also provided evidence that Adjusted Post Test Mean Difference between WTG and CG was higher significant than other pair groups.

DISCUSSION OF THE FINDINGS

Finding of this research work has revealed that (Table no. 1) the significant differences between WTG and CG, ATG and CG, GCTG and CG were found. This finding on Stress has also reflected that (Table no. 2) the difference between WTG and CG has confirmed highest significant result. Besides, the results were assisted by some related findings of different researchers (**Gordon B.R. et al-2017**). It was possible to demonstrate that physical exercise, through strength training independent of its modality, produces decreases in the levels of anxiety (ES = -1.75) and depression (ES = -1.61) and stress (**Carneiro L et al-2020**). Circuit training group had significantly decrease average performance score as a result of 21 days of circuit training programme than the control group subjects who were not engaged in any training programme. So, the result shows that the circuit training has a positive influence on Perceived Stress. (**Neha Kumari and Dr. Sandeep Tiwari- 2017**). The results of the present study were close to the study conducted by **Valarmathi** it revealed that the effectiveness of aerobic dance movement therapy on academic stress and the physical parameter was found to be statistically significant with t = 6.14 and 4.261 at p< 0.0001. (**Chauhan Neema and Godiyal Poja-2023**). Here, in case of stress management, WTG has shown better result than other two experimental groups may be due to the fun and free amusing active session. In contrary, no significant difference in stress has been identified between the experimental training groups may be due to the trainings applied for all the different groups of this study were suitable and statistically the improvement of all the groups were almost identical. Therefore, different types of specific training plans may be enough to decrease the stress of the of under Graduate Physical Education male college students.

CONCLUSION

From the obtaining result, it was concluded that weight training, aerobics and graded circuit training are found to be effective for reducing stress of under Graduate Physical Education male students.

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