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EFFECTS OF INTERVAL AND CONTINUOUS TRAINING ON CARDIO RESPIRATORY ENDURANCE AMONG UNDER GRADUATE STUDENTS

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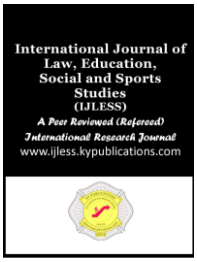

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ABSTRACT

Physical fitness is an important prognostic factor in heart failure. To improve fitness, different types of exercise have been explored, with recent focus on high-intensity interval training. Participation in aerobic exercise generates increased cardiorespiratory fitness, which results in a protective factor for cardiovascular disease and all-cause mortality. High-intensity interval training might cause higher increases in cardiorespiratory fitness in comparison with moderate-intensity continuous training; nevertheless, current evidence is not conclusive. The aim of the study was to examine the effects of effects of interval and continuous training on cardio respiratory endurance among under graduate students in ANU affiliated selected students. The analysis of co variance (ANCOVA) was used to analyze the significant deference, if any among the groups. And also the improvement on cardio respiratory endurance was in favor for continuous running group than interval training group. The result of this study was in agree with the results of Gasser and Wilson and Guy Thilbault, in which they got the significant improvement on selected criterion variables due to interval and continuous running.

INTRODUCTION

Physical activities are an important ingredient in the quality of like because it increases energy and promote physical, mental and psychological wellbeing in additional to conferring worthy health habits. Physical inactivity is considerably more dangerous than physical activity.

Training has of been explained a program me of exercise designed to improve the skill and increase energy capacities of an athlete for a particular event training has been a port of human life since ancient times. It denotes the process of preparation from some tasks through systematic training programme on can improve his fitness both physically and mentally.

INTERVEL TRAINING

Interval training as the name implies, is a series of repeated bouts of exercise usually constitutes this relief period. (Fox et al., 2011)

CONTINUOUS TRAINING

Continuous exercise is basically constant cardio. This particular exercise is a type of aerobic exercise that utilizes oxygen. Aerobic exercises maximize the amount of oxygen that runs through your blood. In addition, this exercise keeps you moving at a steady, constant pace. Continuous exercise is performed all at one time without any breaks in between.

METHODOLOGY

The purpose of the study was to find out the effects of interval and continuous training on cardio respiratory endurance among college men. For the purpose of the study, forty five men students from Undergraduate colleges affiliated to Acharya Nagarjuna University in the department of physical education were selected as subjects and they were divided into three equal groups of fifteen subjects each at randomly selected. Group I and Group II underwent interval training and continuous training respectively for three days for week for twelve weeks. And group III acted as control who did not undergo any special training programme apart from their regular physical education program of the curriculum. All the subjects of the three groups were tested on cardio respiratory endurance at prior and immediately after the training programme as pre and post-test respectively. All the subject of three group were tested on selected dependent variables at prior to and immediate after the training program. The analysis of co variance (ANCOVA) was used to analyze the significant deference, if any among the groups. The .05 level of confidence was fixed as the level of significant to test the "F" ratio obtained by the analysis of co variance, which was considered as an appropriated.

ANALYSIS OF DATA

The analysis of co variance on cardio respiratory endurance of pre and post tests for interval training continues training and control groups was analysed and presented in table I.

TABLE I: ANALYSIS OF COVARIANCE ON CARDIO RESPIRATORY ENDURANCE OF PRE AND POST TESTS INTERVAL TRAINING, CONTINUOUS TRAINING AND CONTROL GROUPS

Test	Interval training group	Continuous training group	Control group	Source of variance	Sum of squares	D_f	Means squares	Obtained 'F' ratio
Pre test								
Mean	1217.99	1217.92	1219.90	Between	0.069	2	0.034	0.650
SD	1.24	1.25	91.20	Within	2.23	42	1.153	
Post test								
Mean	1397.43	1438.26	1220.85	Between	2.73	2	1.36	35.18*
SD	0.21	0.19	0.18	Within	1.63	42	0.038	
Adjusted post test								
Mean	1397.39	1437.27	1219.88	Between	3.09	2	1.54	247.15*
				Within	0.148	41	0.0036	

*Significant at .05 level of confidence

(The table values required for significance at .05 level of confidence for dt 2 and 42, 2 and 41 are 3.222 and 3.226 respectively)

The table I shows that the adjusted post-test means of interval training group continuous training group and control group on cardio respirator endurance were 1397.39, 1437.27 and 1219.88 respectively. The obtained 'F' ratio for adjusted post-test of 247.15 which was more than the table value of 3.226 with d 2 and 41 required for significance at .05 level of confidence.

The results of the study indicated that there was a significant difference on cardio respiratory endurance among the adjusted post-test means of interval training group, continuous training group and control group.

Since, three groups were compared, whenever they obtained 'F' ratio for adjusted post-test was found to be significant, the shuffle's test to find out the paired mean differences and it was presented in table IA.

TABLE IA:THE SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN PAIRED MEANS ON CARDIO RESPIRATORY ENDURANCE

Interval training Group	Continuous Running Group	Control Group	Mean Difference	Confidence Interval Value
1397.39	1437.27	-	39.88*	11.26
1397.39	-	1219.88	177.51*	11.26
-	1437.27	1219.88	217.39*	11.26

*significant at .05 level of confidence

The table IA shows that the mean difference values between interval training group and continuous running group, interval training group and control group and continuous running group and control group 39.88, 177.51 and 217.39 respectively on cardio respiratory endurance which were greater than the required confidence interval value 11.26 for significance. The results of this study showed that there was a significant difference exists between interval training group and continuous running group, interval training group and control group and continuous running group and control group on cardio respiratory endurance.

RESULTS AND DISCUSSION

1. The interval training and continuous running groups showed significant improvement on cardio respiratory endurance when compared to control group.
2. And also the improvement on cardio respiratory endurance was in favour for continuous running group than interval training group. The result of this study was in agree with the results of **Gasser and Wilson** and Guy Thilbault, in which they got the significant improvement on selected criterion variables due to interval and continuous running.

REFERENCES

1. Albert, Mark., Eccentric Muscle Training in Sports on Orthopaedics. London. Churchill Living stone Ine., 1991.
2. Avery D. Faigenbaum et at., "The Effects of Strength training and Detraining on Children", The Journal of Strength and Conditioning Research, 10:2, 1996.
3. Baechle, Thomas R., Essentials of Strength Training and conditioning. Champaign, Illinois: The Human Kinetics Publishers, 1994.
4. Blakkey J.GG. and D.southard, "Thee Combined Effects of weight Training and Poly metric Training on Dynamic Leg Strength and Leg Power", Journal of Applied Sports Science Research, 1:1, 1987.
5. Guy Thibaul, "A Graphical Model for interval Training". IAAF New Studies in athletics, 3, 2003.