



Survey Of Posture Using Newyork Postural Rating Scale-Impact Of Corrective And Aerobic Exercise On Posture And Physiological Variables

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Abstract:

The purpose of the study was to examine the effect of Corrective and aerobic exercise on Posture and selected Physiological components of poor posture Engineering Women students. To achieve the purpose of the study, the survey programme was conducted among 400 participants and New York postural rating scale was used and scoring is done for each individual from which forty participants of very poor posture were selected for this study. The subjects (n=40) were randomly assigned to two equal groups of twenty girls each. The groups were assigned as experimental group (EG) and control group (CG) in an equivalent manner. The pretest was conducted on all the selected variables of both experimental and control group. The experimental group participated in the Corrective and aerobic exercises training programme for a period of 12 weeks. The subjects of the control group were not participated in any physical activities. The corrective and aerobic exercises Training programme was scheduled at 6:00am to 7:00 am for five days in a week. The post test were conducted for all subjects on Posture, Physiological components namely Resting pulse rate, Body mass index, Blood pressure(Systolic and Diastolic) Percentage of Body fat. To analyze the data analysis of covariance was used. The result reveals that there was a significant difference on Resting pulse rate, Body mass index, Blood pressure (Systolic and Diastolic) Percentage of Body fat (Physiological variables) of experimental group than control group.

Keywords: *Corrective Exercise, Aerobic Exercise, Physiological components, Posture.*

Introduction

Poor posture is highly prevalent in our society. Basically posture refers to the body's alignment and positioning with respect to the ever-present force of gravity. Whether we are standing, sitting or lying down gravity exerts a force on our joints, ligaments and muscles. Good posture entails distributing the force of gravity through our body so no one structure is overstressed. Posture is essential for the human body to function correctly and allows the body to act as whole. Improper posture commonly causes muscular imbalances, which lead to faulty body mechanics. Posture is a habit that contributes to the well-being of an individual. Recognition of the prevalence of posture problems is important when discussing proper posture (Major.J, 1992). Postural deviations in athletes could lead to injury and pain. When deviations in posture occur, it can place added stress on joints and musculature which will increase the risk of injury, in time this additional stress may lead to chronic injuries. (Kristin L.Kenworthy, 2008).

Corrective Exercise is a form of exercise that brings the body back into a perfect postural position. Corrective Exercise is designed to undo all of these muscle imbalances and start to get the ones that haven't been working, working again. Aerobic exercise is a good, all round hindrance of poor Posture. Aerobic Exercise refers to exercise that involves or improves oxygen consumption by the body. Aerobic means "with oxygen", and refers to the use of oxygen in the body's metabolic or energy-generating process.

Purpose of Study

The purpose of the study was to examine the effects of Corrective and aerobic exercise on posture and selected Physiological components of Poor posture Engineering women students.

Methodology*Selection of Subjects*

The purpose of the study was to find out the effects of corrective and aerobic exercise on posture, Physiological components on engineering women students. To achieve the purpose of the study, the survey programme was conducted among 400 participants and New York postural rating scale was used and scoring is done for each individual from which forty participants of very poor posture were selected for this

study. The students whose score is less than 53 were taken as subjects for the study. The age group of the participants ranged from 17-21 years.

Procedure for selection

The subject being examined first assumes a comfortable and natural standing position between the plumb bob and the screen, straddling the floor line and facing the screen. After the subjects lateral posture and feet have been rated, she then turns left, sideward to the examiner and stands with her feet at right angles to the floor line; her left malleolus must be in line with the plumb bob.

Scoring

Scoring is done for each of the thirteen posture areas. For each posture area a score of 5,3 or 1 is assigned. Score of 5 represents good posture, a score of 3 represents fair posture and a score of 1 represents a poor posture. The thirteen scores are totaled to obtain the subjects posture score.

Study Design

The selected poor posture students were randomly divided into two groups of twenty each .Group I underwent Specific training of corrective and aerobic exercise programme for 5 days per week up to 12 weeks and Group II acted as control group who had not participated in any specific training other than their regular routine.

Results and Discussion

Experimental Group	Selected Variable	Sum of squares	df	Mean squares	Obtained 'F'- ratio
BMI	Between	0.0127	2	0.00637	0.663
	Error	0.365	38	0.00960	
Body fat	Between	0.464	2	0.232	1.398
	Error	6.302	38	0.166	
Resting Pulse rate	Between	2.133	2	1.067	0.297
	Error	136.533	38	3.593	
Systolic BP	Between	4.633	2	2.317	1.375
	Error	64.033	38	1.685	
Diastolic BP	Between	0.700	2	0.350	0.307
	Error	43.300	38	1.139	
Posture	Between	0.233	2	0.117	0.224
	Error	19.767	38	0.520	

Table 1: Analysis of covariance of Experimental and control Groups on Physiological Variables

Significant at 0.05 level. The table value required for significance at 0.05 level with df 2 and 38 is 3.24.

Adjusted post mean		Source of variance	Sum of squares	df	Mean squares	F-Ratio
Experimental	control					
53.13	36.51	Between groups	2684.81	1	2684.81	413.70*
		Within groups	240.11	37	6.49	

Table 2- Analysis of covariance of Experimental and control Groups on Posture

Significant at 0.05 level of confidence.

Table 1 and 2 shows that the obtained F ratio value are higher than the tablevalue 4.10 with df 1 and 37 required for significance at 0.05 level. Since the value of F ratios are higher than the table value it indicates that there is significant difference among the adjusted posttest means of experimental group and control groups.It was concluded that the corrective and aerobic exercise training adopted in this study influencedthe selected

Physiological Variables and also helps in enhancing the posture scores of women students with poor posture.

Discussion on Findings

After the pretest scientifically proven Corrective and aerobic exercises were given to the subjects (Poor posture students) of Experimental group. The subjects of the control group were not participated in any physical activity. After the period of 12 week of training the post test were taken and the results are as follows. The selected physiological components such as Resting pulse rate, Body mass index, Blood pressure(Systolic and Diastolic) Percentage of Body fat (Physiological variables)and Posture of Experimental group shown significant differences than the control group.

Conclusions

The following conclusions have made from the results of the statistical analysis

1. Experimental group with corrective and aerobic exercise training have significant improvement of Physiological components and posture variables
2. The control group has not shown significant improvement in all aspects of Physiological components and posture variables
- 3.It was found that Experimental group with corrective and aerobic exercise were found to be better than control group in all aspect of posture and physiological components such as Resting pulse rate, Body mass index, Blood pressure(Systolic and Diastolic) Percentage of Body fat (Physiological variables).

These conclusions suggested that corrective and aerobic exercises training programme could improve the physiological components and Posture variables of the Engineering women students with poor posture.

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