



Influence of Brisk Walking and Jogging Exercise on Body Composition and Trunk Flexibility among Middle Aged Men

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Abstract

The purpose of the study was to find out the influence of brisk walking and jogging exercise on body composition and trunk flexibility among middle aged men. To facilitate the study, 45 middle aged men were selected from Bharath Walking Club, Nehru Stadium, Coimbatore, Tamilnadu, India. The age of the participants ranged between 40 and 50 years. The selected participants were divided into two experimental groups and a control group with fifteen participants (n=15) in each group. Experimental Group I (BWG=15) underwent brisk walking training, Group II (JG=15) underwent jogging training and Group III acted as control group (CG=15). All the subjects were tested prior to and immediately after the 12 weeks treatment body composition and trunk flexibility. The data collected from the three groups before and after the experimental period were statistically examined to find out the significant improvement using the analysis of covariance (ANCOVA). Whenever the 'F' ratio was found to be significant, Scheffe's test was used as post-hoc test to determine which of the paired means differed significantly. In all cases the criterion for statistical significance was set at 0.05 level of confidence. The result reveals that the both experimental groups showed significant improvement on body composition and trunk flexibility.

Keywords: Brisk Walking, Jogging, Body Composition, Flexibility, Men.

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Introduction

As walking is a lifestyle activity it may more easily circumvent frequently cited barriers to exercise, such as lack of time and the belief that one is not the sporty type, than other forms of exercise. Indeed, walking has been described as the nearest activity to perfect exercise. Recent recommendations suggest that adults should exercise in a continuous or intermittent fashion (minimum of 10-min bouts) for 20–60 min, 3–5 days per week at 55–90% of maximum heart rate. Much research concerning walking interventions has assessed the effects of training typically 4 or 5 days per week for 30–60 min. (E.M. Murtagh, 2005)

Jogging is easy running and an elementary, economical and personally geared exercise programme to develop general physical fitness. Though jogging gross muscle groups and ankle and knee joints can be exercised. However, its major contribution is towards the, development of cardio-respiratory fitness. Group jogging programmes are becoming increasingly popular all over the world as they also provide fun and enjoyment to the individual.

Methodology

The purpose of the study was to find out the influence of brisk walking and jogging exercise on selected health related physical fitness variables among middle aged men. To facilitate the study, 45 middle aged men were selected from Bharath Walking Club, Nehru Stadium, Coimbatore, Tamilnadu, India. The age of the participants ranged between 40 and 50 years. The selected participants were divided into two experimental groups and a control group with fifteen participants (n=15) in each group. Experimental Group I (BWG=15) underwent brisk walking training, Group II (JG=15) underwent jogging training and Group III acted as control group (CG=15). All the subjects were tested prior to and immediately after the 12 weeks treatment on body composition and trunk flexibility. The data were collected from each subjects prior and after experimentation on selected variables were statistically analyzed by using dependent 't' test and analysis of covariance (ANCOVA). In all the cases to test the significance 0.05 level of confidence was used. As per the available literatures the following standardized test were used to collect relevant data on the body composition and trunk flexibility among middle aged men and they were presented in table I.

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Table I. Variables and Test Items

Variables	Test	Unit of measurement
Body Composition	Skin fold Caliber	In Pounds
Trunk Flexibility	Sit and Reach Box Test	In Inches

Statistical Analysis

The data pertaining to the variables in this study were examined to find out the significant improvement and analysis of covariance for each variables separately

in order to determine the difference and tested 0.05 level of significance. The analysis of dependent 't' test on data obtained for body composition and trunk flexibility of the pre test and post test means of middle aged men.

Results**Table II.** Computation of Analysis of Covariance on Body Composition

Adjusted post test means			Sources of Variance	Sum of square	df	Mean squares	F ratio
BWG	JG	CG					
7.15	7.14	7.70	Between	2.88	2	1.44	4.23*
			Within	13.97	41	0.34	

BWG-Brisk Walking Group, **JG**- Jogging Group, and **CG**-Control Group

*significant at 0.05 level of confidence

(The table value required for significance at 0.05 level with df 2 and 41 is 3.23)

Table shows the adjusted post test means of brisk walking group (BWG) and jogging group (JG) and control group (CG) are 7.15, 7.14 and 7.70 value 3.23 with df 2 and 41 required for significance. The result of the study indicates that there are significant mean differences on Body Composition among the adjusted post test means of brisk walking group (BWG) and jogging group (JG) and control group (CG) at 0.05 level.

Hence it is clear that the training package significantly improved the body composition of the subjects. Since significant improvements were recorded among the adjusted post test means, the results were further subjected to post hoc analysis using Scheffe's confidence interval test to find out which of the three paired means had a significant difference. The results are presented in Table III.

Table III. Scheffe's Post Hoc Test on Body Composition

Adjusted Post Test Mean			Mean Difference	Confidence Interval
BWG	JG	CG		
7.15		7.70	0.55*	0.54
7.15	7.14		0.01	
	7.14	7.70	0.56*	

BWG-Brisk Walking Group, **JG**- Jogging Group, and **CG**-Control Group

*significant at 0.05 level of confidence

Table III, shows that the adjusted post-test mean difference in body composition between brisk walking group (BWG) and control group (CG) and between jogging group (JG) control group (CG) are 0.55 and 0.56, respectively which were statistically significant at

0.05 level of confidence. The adjusted post-test mean difference in body composition between brisk walking group (BWG) and jogging group (JG) was 0.01, which was lesser than the confidence interval value at 0.05 level.

Table IV. Computation of analysis of covariance on trunk flexibility

Adjusted Post Test Means			Sources of Variance	Sum of Square	df	Mean Squares	F ratio
BWG	JG	CG					
132.53	132.12	111.15	Between	2009.43	2	2009.43	7.14*
			Within	281.99	41	281.99	

BWG-Brisk Walking Group, **JG**- Jogging Group, and **CG**-Control Group

*significant at 0.05 level of confidence

(The table value required for significance at 0.05 level with df 2 and 41 is 3.23)

Table IV shows the adjusted post test means of brisk walking group (BWG) and jogging group (JG) and control group (CG) are 132.53, 132.12 and 111.15 value 3.23 with df 2 and 41 required for significance. The result of the study indicates that there are significant mean differences on trunk flexibility among the adjusted post test means of brisk walking group (BWG) and jogging group (JG) and control group (CG) at 0.05 level.

Hence it is clear that the training package significantly improved the trunk flexibility of the subjects. Since significant improvements were recorded among the adjusted post test means, the results were further subjected to post hoc analysis using Scheffe's confidence interval test to find out which of the three paired means had a significant difference. The results are presented in Table V.

Table V. Scheffe's post hoc test on trunk flexibility

Adjusted Post Test Mean			Mean Difference	Confidence Interval
BWG	JG	CG		
132.53		111.15	21.38*	15.58
132.53	132.12		0.41	
	132.12	111.15	20.97*	

BWG-Brisk Walking Group, **JG**- Jogging Group, and **CG**-Control Group

*significant at 0.05 level of confidence

(The table value required for significance at 0.05 level with df 2 and 41 is 3.23)

Table V, shows that the adjusted post-test mean difference in trunk flexibility between brisk walking group (BWG) and control group (CG) and between jogging group (JG) control group (CG) are 21.38 and 20.97, respectively which were statistically significant at 0.05 level of confidence. The adjusted post-test mean difference in trunk flexibility between brisk walking group (BWG) and jogging group (JG) was 0.41, which was lesser than the confidence interval value at 0.05 level.

Conclusion

It was concluded that two different training programme (brisk walking group (BWG) and jogging group (JG) helped to improve the body composition and trunk flexibility.

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