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Effect of aerobic and traditional dance on body composition among female adolescents

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Abstract

The human body is designed to work when it is active. Experts are of the opinion that the menace of rising disease and disorder can be halted with an ideal lifestyle. The study was conducted in order to investigate the impact of aerobic dance and traditional dance on body composition on female adolescents. 150 subjects were selected for the study and were divided into three groups of 50 each: the aerobic dance group, the traditional dance group and the control group. The experimental program of the aerobic dance and traditional dance lasted for a period of twelve weeks and it included sixty-minute training sessions three times a week. The dance training session of each workout lasted 40 minutes, and it involved high, low and moderate impact segments. The body composition was evaluated through the Body Mass Index based on height and weight. The finding of this study showed that twelve weeks of aerobic dance and traditional dance training had significant effects on the body composition of the subjects in the experimental group.

Keywords: Aerobic dance, traditional dance, body composition and female adolescents

Introduction

Human body adapts to exercise stress and in doing so improve fitness, likewise is also rapidly adapts to lack of exercise. Our body is designed to work when it is active. Exercise is a particular form of physical activity which is characterized by 'structured and repetitive bodily movement done to maintain one or more components of physical fitness'. [Cherubini, 1998] ^[1] Doing any kind of exercise will help us to develop a healthful body composition. Dance is a great form of exercise, which provides both aerobic and anaerobic movements. In dance, aerobic exercise can be achieved by jumping, swaying, twirling and the like. Anaerobic exercises include holding squat positions, lifting someone else or own body, and balancing. There are endless benefits when it comes to getting a complete workout through dance. Dance is an enjoyable social activity that has been shown not only to provide increased levels of physical exercise, but also the opportunity to improve coordination, cognition and general mental wellbeing. Exercise done during childhood, youth and middle age serve the body well during old age. It is important to establish a positive habit towards regular and lifelong physical exercise from the earliest age to lead a healthy life.

Methodology

The purpose of the study is to find the impact of aerobic and traditional dance training on body composition of female adolescents. To achieve the purpose, 210 female adolescent students aged 17 and 18 were selected as subjects for the study. The subjects were assigned into three groups of seventy each. Group I served as the aerobic dance group, group II as the traditional dance group and group III as the control group. Pre-test and post-test were administered using the Body Mass Index using height and weight of the subject to find out the body composition of female adolescents. The training program was conducted by professional experts under the supervision of the investigator, three days a week with sixty minutes per session for twelve weeks. The training was given with an intensity of 55-60% in weeks 1-4, 60-65% in weeks 5-8, 65-70% in weeks 9-12. The collected data was analysed using Analysis of Covariance.

Results and Discussion

The computation of analysis of covariance of aerobic dance, traditional dance and control group on body composition is given below in table 1.

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Table 1: Computation of Analysis of Covariance of Aerobic dance, Traditional dance and Control dance on Body Composition

	Aerobic Dance Group	Traditional Dance Group	Control Group	Source of Variance	Sum of Square	df	Mean Square	Obtained F ratio
Pre Test Mean	24.98	24.57	24.33	Between	15.29	2	7.65	1.07
				Within	1479.77	207	7.15	
Post Test Mean	23.10	24.00	24.30	Between	54.48	2	27.24	3.90*
				Within	1445.29	207	6.98	
Adjusted Post Test Mean	22.77	24.05	24.58	Between	120.65	2	60.32	90.85*
				Within	136.79	206	0.66	

Table F-ratio at 0.05 level of confidence for 2 and 207 (df) =3.04, 2 and 206 (df) =3.04

*Significant

The post-test means of the aerobic dance, traditional dance and control group were 23.10, 24.00 and 24.30 respectively. The obtained F-ratio for the post-test was 3.90 and the table F-ratio was 3.04. Hence, the post-test mean F-ratio was significant at 0.05 level of confidence for the degree of

freedom 2 and 207. This proved that the differences between the post test means of the subjects were significant. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe’s post hoc test. The results are presented in Table II.

Table 2: Scheffe’s test scores on Body Composition

Adjusted Post-Test Means			Mean Difference	CI
Aerobic Dance Group	Traditional Dance Group	Control Group		
22.77	24.05	---	1.28*	0.20
---	24.05	24.58	0.53*	
22.77	---	24.58	1.81*	

* Significant at 0.05 level of confidence

The multiple comparisons showed in Table II proved that there existed significant differences between the adjusted means of traditional dance and control group (0.53), aerobic

dance and control group (1.81), aerobic dance and traditional dance (1.28) at 0.05 level of confidence with the confidence interval value of 0.20.

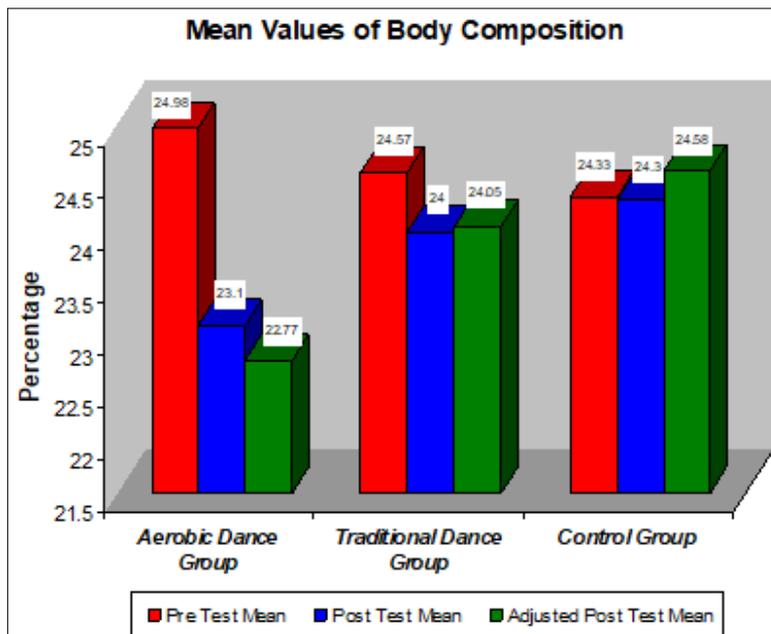


Fig 1: Pre, Post and Adjusted Post Mean of the Aerobic dance, Traditional dance and Control group on Body Composition

Body composition of traditional dance group (24.05%) was better than the control group (24.58%). Body composition of aerobic dance group (22.77%) was better than the traditional dance group and control group.

It is well known that prolonged exercise training of moderate intensity is the best way not only to maintain a healthy body weight, but also improve general health.

Conclusion

- It was concluded that aerobic dance and traditional dance training programme controlled the body composition of the female adolescents.

- It was concluded that aerobic dance training programme had more control over the body composition than the traditional dance and control group.

Recommendation

- The result of the study recommends to give importance duration, intensity, and type of exercise training to lose weight.
- It is highly recommended to adapt to any form of dance from childhood to attain and maintain ideal body weight and health fitness.

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