



EFFECT OF ZUMBA STEP DANCE AND ZUMBA TONING DANCE TRAINING ON AGILITY, CARDIO RESPIRATORY ENDURANCE AND HEMOGLOBIN CONTENT OF FEMALE UNDERGRADUATE STUDENTS

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ABSTRACT

The purpose of the present study was to find out the effect of Zumba step dancing and Zumba toning dancing on agility, cardio respiratory endurance and hemoglobin content of female under graduate students. To achieve this purpose 45 female students were selected from SAS SNDP Yogam college, konni, Pathanamthitta, Kerala as subjects. Their age ranged from 16 to 21 years. They were divided into three equal groups of 15 subjects each and were assigned as experimental group -1, experimental group-2 and control group. The experimental group-1 underwent zumba step dancing, experimental group-11 zumba toning dance and control group was not given any specific training. All the subjects underwent the test of agility, cardio respiratory endurance and hemoglobin content. Data was collected before after the training period of 12 weeks. The analysis of covariance was used to analyze the data. The study revealed that the agility, cardio respiratory endurance and hemoglobin content significantly improved among two modes of zumba dancing.

Keywords: Zumba toning, Zumba step, agility, cardio respiratory endurance, flexibility

INTRODUCTION

Sports achievements of a country depend mostly on the training designed for a particular sport. Success in the competitive sports and games can be attributed to many factors, but training is the most important factor. Need for good physical fitness and accompanying optimal health is vital for every one. The human need for regular exercise is critical in modern society. If you exercise regularly and adopt positive lifestyle habits you can not only promote better health but also you can decrease the risk of diseases, disability and premature death. In recent years because of increased mechanization, the need for regular exercise has increased. Different training methods have been commonly used to improve physical fitness and related standards of performance of athletes. Regular exercise causes your body to make adjustments that result in improved health and physical functioning. Continuing with regular exercise enables your body to maintain these benefits. Regularly doing the right types of exercise at the correct intensity, and for an appropriate duration, results in the most benefit. Babo and Yarbough(1999) examined the effects of long term aerobic dance on agility and selected measures of flexibility. Fifty four experienced and non experienced aerobic dance teachers were tested on these parameters. No significant differences were



identified in any parameter. On the basis of the data it was concluded that extended participation in aerobic dance did not contribute to better sit and reach flexibility, trunk flexibility, dynamic rotational flexibility or agility and that aerobic dance teachers participated in general flexibility stretching activities and secondary activities to improve and/or maintain agility and general coordination. Zumba step and zumba toning are fairly new forms of aerobic exercise and it is one of the best exercises to improve the physical fitness and quality of life. The term zumba step and zumba tone are varied intensity zumba dance exercises. This dance is a combination of wide variety of disciplines such as step aerobics, floor aerobics, zumba dance and supported by music. These two different forms of zumba dance improve your level of physical fitness and body work more efficiently. The cardio respiratory system is the primary system used by the body during this workout. Sandeep kumar and priyanka (2016) conducted a study on the effect of zumba dance and aerobic dance on a group of college girls aged between 18-24 for a period of 12 weeks. The result of one way analysis of the data shows that zumba and aerobic group has significant improvement in cardio respiratory endurance and body composition. In this study an attempt is made to find out the effects of two modes of zumba dancing on agility, cardio respiratory endurance and hemoglobin content of female undergraduate students.

METHODOLOGY

Purpose of the study was to look into the outcome of zumba step dance training and zumba toning dance training programme will enhance or improve the agility cardio respiratory endurance and hemoglobin content

of female undergraduate students. To achieve the purpose forty five undergraduate students were selected from SAS SNDP Yogam college, Konni, Pathanamthitta, Kerala as subjects. Their age ranged from 18 to 21 years. They were divided into three equal groups of 15 subjects each and were assigned as experimental group-1, experimental group-2 and control group. The experimental group -1 underwent Zumba step dancing (45 minutes) experimental group -2 underwent zumba toning dance (45 minutes) for five days in a week and the control group was not given any specific training. The entire subjects underwent the test of speed, leg explosive power and anaerobic power. They were assessed before and after the training period of 12 weeks. The analysis of Covariance was used to analyse the data.

ANALYSIS OF THE DATA AND RESULT OF THE STUDY

Since, there were two groups for this experimental study viz. Zumba step dance training group and zumba tone dance training group, where the researcher had decided to compare the adjusted mean score of agility, cardio respiratory endurance and hemoglobin content by taking pre test score as covariate in order to see the effect of zumba step dance training and zumba tone dance training group of college girls aged 16-to 21 years. One way ANCOVA test was appropriately used for the data.



TABLE -I
COMPUTATION OF ANALYSIS OF COVARIANCE OF AGILITY

	Exp. Group -1	Exp. group-2	Control group	SV	SS	DF	MS	F
Pre-test Means	10.81	10.84	10.95	B	0.002	2	0.0001	0.14
				W	29.34	42	0.69	
Post-test Means	10.43	10.26	10.99	B	19.01	2	9.51	6.20*
				W	53.89	42	1.28	
Adjusted Post-test means	10.50	10.28	10.92	B	8.36	2	4.18	
				W	4.96	42	0.12	33.53*

Table value for 0.5 level 3.23

The pre test, post test and adjusted post test means of the agility were (10.81, 10.84, 10.95) (10.43, 10.26, 10.99) (10.50, 10.28, 10.92) for the experimental group I, II and the control group respectively. The obtained 'f' ratio of post and adjusted post test were 6.20 and 33.53. The table value is 3.23 at 5% level of significance for the degree of freedom (2.42 and 2.41). Therefore it is proved that experimental group 11 was better than the other two groups.

TABLE II
COMPUTATION OF ANALYSIS OF COVARIANCE OF CARDIO RESPIRATORY ENDURANCE

	Exp. Group -1	Exp. group-2	Control group	SV	SS	DF	MS	F
Pre-test Means	1755.00	1750.00	1755.00	B	0.1	2	0.005	0.08
				W	2.64	42	0.62	
Post-test Means	1780.00	1805.00	1750.00	B	2.53	2	1.20	18.10*
				W	2.43	42	0.05	
Adjusted Post-test means	1775.00	1795.00	1795.00	B	2.09	2	1.05	20.52*
				W	8.05	42	0.19	

Table value for 0.05 level 3.23

Table -II shows the analysed data on cardio respiratory endurance. The pre test, post test and adjusted post test means of the cardio respiratory endurance were (1755.00, 1750.00, 1755.00) (1780.00, 1805.00, 1750.00) (1775.00, 1795.00, 1745.00) for the experimental group I, II and the control group

respectively. The obtained 'F' ratio for pre test 0.08, post test 18.10 and adjusted post test were 20.52. The table value is 3.23 at 5% level of significance for the degree of freedom (2.42 and 2.41). Therefore it is proved that experimental group- I was better than the other two group.

TABLE -III
COMPUTATION OF ANALYSIS OF COVARIANCE OF HEMOGLOBIN

	Exp. Group -1	Exp. group-2	Control group	SV	SS	DF	MS	F
Pre-test Means	14.22	14.40	14.15	B	0.05	2	0.02	0.04
				W	1090.3	42	25.95	
Post-test Means	14.30	14.45	14.12	B	839.44	2	419.76	12.94*
				W	1362.80	42	32.43	
Adjusted Post-test means	14.26	14.43	14.13	B	170.19	2	85.09	
				W	761.29	42	18.56	4.58*

Table value for 0.5 level 3.

Table III shows the analysed data on aerobic power. The pre test, post test and adjusted post test means of the anaerobic power were (14.22, 14.40, 14.15) (14.30, 14.45, 14.12) (14.26, 14.43, 14.13) for the experimental group I, II and the control group respectively. The obtained 'F' ratio for the pre test 0.04 post test 12.94 and adjusted post test 4.58. The table value is 3.23 at 5% level of significance for the degree of freedom (2.42 and 2.41). Therefore it is proved that experimental group- I was better than the other two groups.

CONCLUSION

Within the limitations of the present study, the following conclusions were drawn:

- Agility, cardio respiratory endurance and hemoglobin significantly improved due to the



influence of the two modes of zumba dance training.

- Experimental group- I (zumba step dance group) significantly improved the agility, cardio respiratory endurance and hemoglobin. It was greater than that of experimental group-II (zumba toning dancing group) and the control group.

- Experimental group-II (zumba toning dance group) significantly improved the agility, cardio respiratory endurance and hemoglobin. It was greater than that of the control group.

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