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Effect of Zumba dance with yoga on body composition and vo2 max of school girls

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Abstract

This study was investigated the impact of Zumba dance with yoga practice on body composition and Vo2 max of school girls. To achieve the purpose of the study 40 school girls were selected from Sri Saratha Vidhayalaya higher secondary school Salem. The subjects were randomly assigned to two equal groups (n=20). Group- I underwent Zumba dance with yoga practice (ADWYG) and group - II was acted as control group (CG). The Zumba dance with yoga Practices was given to the experimental group for 3 days per week (Monday, Wednesday and Friday) for the period of twelve weeks. The control group was not given any sort of training except their routine work. The physical parameters of body composition (skin fold caliper) and Vo2 max (Queens's college step test) before and after training period. The data collected from the subjects was statistically analyzed with 't' test to find out significant improvement if any at 0.05 level of confidence. The result of the present study Zumba dance with yoga practices significantly improved body composition and Vo2 max of school girls.

Keywords: Zumba dance with yoga practices, body composition and Vo2 max

Introduction

Group fitness exercises represent the form of programmed physical activity to improve health and change body shape. The zumba fitness is a new kind of dance workout, inspired by Latin American music and Latin American dances. The exercise combines the basic of dance merengue, salsa, samba, cumbia, recreation and other Latin American dances, uses basic aerobic steps, but also enriches their composition of the other dance like hip-hop, belly dancing, Indian, African dance, etc. It is fusion of basic principles of aerobic interval training and strengthening exercises which promote consumption of calories, improve cardiovascular system and strength of the whole body (Perez & Greenwood-Robinson, 2009) [4]. This modern approach of fitness exercising satisfies goals such as harmony of the body, improving posture and strengthening bone-joint segments of the locomotors apparatus (Furjan-Mandic, Kosalec & Vlastic, 2011) [1]. The researches confirm that the implementation of various forms of group fitness program contributed to statistically significant effects in improving functional and motoric abilities of a woman (Mandacic, 2011), and changes in women body composition, as well. Also, the latest researches separate dance aerobic as the most effective group fitness program (Hiznayova, 2013) [2] which through motivating music implement creative choreography primarily aimed to entertain the trainees. The advantage of this model of exercise is that every practice is a new entertainment based on various dance steps with different intensity and form of exercising, what makes the participants more motivated (Perez and Greenwood-Robinson, 2009) [4]. This is very important from the aspect of maintaining interest for continuous exercise, since the main reason for leaving the group fitness program is monotony of each training session in long term of practicing (Stoiljkovic et al., 2010).

Methodology

In this study the selected 40 school girls selected from Sri Saratha Vidhayalaya higher secondary school Salem. The subjects were randomly assigned in to two equal groups namely, Zumba dance with yoga Practices group (ZDWYP) (n=20) and Control group (CG)(n=20). The respective training was given to the experimental group the 3 days per weeks (alternate days) for the training period of twelve weeks.

The control group was not given any sort of training except their routine. The evaluated physical parameters were bod composition was assessed by skin fold calliper test and the unit of measurement was in percentage, Vo2 max was assessed by queen college step test and the unit of measurement was in ml/kg/min.

Training programme

The training programme was lasted for 60 minutes for session in a day, 3 days in a week for a period of 12 weeks’ duration. These 60minutes included 10 minutes warm up, zumba dance for 25 minutes and Yoga practice for 25 minutes and warm

down. The equivalent in zumba dance with yoga is the length of the time each action in total 3 days per weeks (Monday, Wednesday and Friday).

Statistical analysis

The collected data before and after training period of 12 weeks on the above said variables due to the effect of Zumba dance was statistically analyzed with ‘t’ test to find out the significant improvement between pre and posttest. In all cases the criterion for statistical significance was set at 0.05 level of confidence. (P< 0.05)

Table 1: Computation of ‘t’ ratio on selected parameters on experimental group and control group (Scores in numbers)

Group	Variables		Mean	N	Std. Deviation Pre	Std. Deviation Post	T ratio
Experimental Group	Body Composition	Pre test	29.45	20	1.19	1.18	15.98*
		Post test	28.35	20			
	Vo2 Max	Pre test	22.40	20	5.48	5.40	
		Post test	29.30	20			
Control group	Body Composition	Pre test	29.30	20	1.08	1.27	1.45
		Post test	29.40	20			
	Vo2 Max	Pre test	22.25	20	4.98	5.03	
		Post test	22.10	20			

*significant level 0.05 level degree of freedom (2.09, 1 and 19)

Table I reveals the computation of mean, standard deviation and ‘t’ ratio on selected Body Composition and vo2 max experimental group. The obtained ‘t’ ratio on Body Composition and vo2 max were 15.98 and 14.03 respectively. The required table value was 2.09 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and ‘t’ ratio on Body Composition and vo2 max control group. The obtained ‘t’ ratio on Body Composition and vo2 max were 1.45 and 1.83 respectively. The required table value was 2.14 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were lesser than the table value it was found to be statistically not significant.

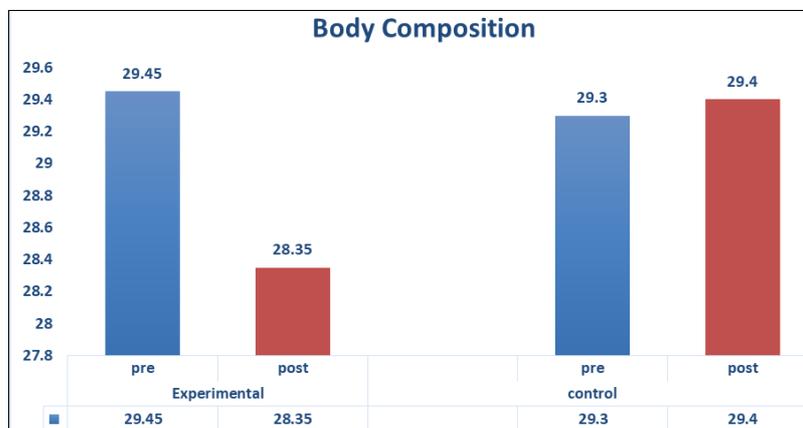


Fig 2: Bar diagram showing the mean value on Body Composition of School Girls on Experimental and Control group (Scores in numbers)

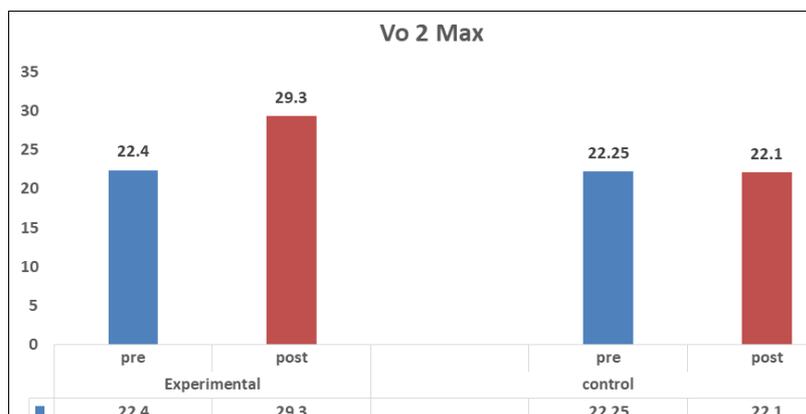


Fig 2: Bar diagram showing the mean value on vo2 max of School Girls on Experimental and Control group (Scores in numbers)

Discussion and findings

The present study experimented the effect of Zumba dance training with yoga on physical parameters of school girls. The result of the study shows that the Zumba dance training with yoga Practice improved the Body Composition and vo2 max. The findings of the present study had similarity with the findings of the investigations referred in this study. However, there was a significantly changes of subjects in the present study the Body Composition and vo2 max was significantly improved of subject in the group may be due to the in zumba dance with yoga. Sovova E et al., (2015) ^[11] found out that maximum oxygen consumption significantly higher performance in Yoga group as a result of 2 years among normal population. According to Barene (2014) ^[10] 12 weeks' practice of soccer and zumba were found to be significantly improved the VO2 max peak among female hospital employees. Kodgire et al., (2013) ^[7] reported that significant improvement on Vo2 max had increased yoga group as a result of 8 weeks of Yoga activity among school girls. Mikalacki et al., (2011) ^[9] reported the level of significance was improved the value of Fitness Index (FITIND) and VO2 max had developed due to pole walking as a result at 3 months among elderly women. Mivachi et al., (2009) found out that prediction of VO2 max with daily step counts predicted and predicted VO2 max correlated well with measured VO2 max suggesting that step count is useful for Vo2 max in Japanese women. Arnulflo RamoS- Jimenez et al., (2009) ^[6] studied that improvement on VO2 max had increased due to Hatha Yoga training group of 11 weeks among middle aged and older women.

Conclusions

It was concluded that 12 weeks twelve weeks zumba dance with yoga practice significantly improved the Body Composition and vo2 max of school girls.

Reference

1. Furjan-Mandic G, Kosalec V, Vlassic J. The effects of aerobic exercise on the increase of repetitive strength in women, 2011.
2. Hiznayova K. exercises intensity during zumba fitness and tea bo aerobics journal of human sports and exercises 2013;8(2):228-s241.
3. Mandarić S, Sibinović A, Mikalački M, Stojiljković S. The effects of the program HI-Low aerobics on morphological characteristics and functional ability students in the eighth grade. Journal of Sports science and Health 2001;1(1):18-23. [1:46 PM, 8/21/2021]
4. Perez B, Greenwood-Robinson M. Zumba: Ditch the workout, join the party! The Zumba weight loss program, New York, NY: Maggie Greenwood-Robinson, 2009.
5. Stojiljković S, Mandarić S, Todorović K, Mitić D. The effects of aerobics program on body composition of women. Physical Culture 2010;64(2):59-67.
6. Arnulfo Ramos-Jimenez, "Cardiovascular and metabolic effects of intensive Hatha Yoga training in middle-aged and older women from northern Mexico." Year 2009;2(2):494.
7. Kodgire et al., "Comparative effect of yoga and aerobic exercises on selected physiological variables of school girls", Golden Research Thoughts 2013;3(6):1: <http://connection.ebscohost.com/c/articles>.
8. Miyachi et al., "Prediction of V02max with daily step counts for Japanese adult women, European Journal of Applied Physiology 2009;105(2):289.

9. Mikalacki et al., "Effect of Nordic Walking on Functional Ability and Blood pressure in Elderly Women", Collegium Antropologicum 2011;35(3):889. <http://connection.ebscohost.com/c/articles/3599115>
10. Barene S. "The effectiveness of soccer and Zumba on fitness and health indicators in female", Scandinavian Journal of Medicine & Science in Sports 2014;24(6):990-999. <http://onlinelibrary.wiley.com/doi/10.1111/sms.12138>.
11. Sovova E, Cajka V, Pastucha D, Malincikova J, Radova L, Sovova M. "Positive effect of yoga on cardiorespiratory fitness" A pilot study. Int J Yoga 2015;8:134-8. [serial online] [cited 2016 Jun 12]; Available from: <http://www.ijoy.org.in/text.asp?2015/8/2/134/158482>.