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Impact of circuit training with pranayama practices on selected motor ability components and skill performance variables among inter collegiate level women volleyball players

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Abstract
The purpose of the present study was to find out the effect of circuit training with pranayama practices on selected motor ability components and skill performance variables among inter collegiate women volleyball players. To achieve the purpose of the present study, thirty women volleyball players were selected from the Tamil Nadu Physical Education and Sports University and Chettinadu medical university, Chennai Tamil Nadu, India. The subjects were randomly selected and their age ranged from18-25 years. The selected groups were divided into two equal groups each (n=15). Group I acted as Experimental Group and Group II acted as control group. The experimental group underwent the circuit training with pranayama practices. The control group was not undergone any training other than their daily activities. The duration of the training period was restricted to six weeks and the session for five days in a week. Circuit training is considered as the independent variables. The agility and flexibility were known as dependent variables. The statistical technique Analysis of 't' test was used to analyze the pre-test and post-test data of experimental group and control group. The results showed that the circuit training with Pranayama practices Program group had significant improvement the selected criterion variables such as agility and flexibility compared to the control group.

Keywords: Circuit training with pranayama practices, muscular strength and medicine ball throw

Introduction
Circuit training is a physical exercise of low to high intensity that depends primarily on the aerobic energy-generating process. "Aerobic" means "relating to, involving, or requiring free oxygen", (Kenneth, 1997) [2] and refers to the use of oxygen to adequately meet energy demands during exercise via aerobic metabolism. Generally, light-to-moderate intensity activities that are sufficiently supported by aerobic metabolism can be performed for extended periods of time (Sharon and Denise, 2007) [5]. What is generally called aerobic exercise might be better termed "solely aerobic", because it is designed to be low-intensity enough so that all carbohydrates are aerobically turned into energy.
Pranayama, from prana and ayama, is the yoga science of breath control. The ancient yogis studied anatomy and discovered body and consciousness has reciprocal relationship between the emotions and breathing. It was found that when we are excited, our rate of respiration becomes faster. When we are composed, our breathing is slow, calm and rhythmical. The yogi seeks, by controlled and measured breathing, to influence consciousness itself. By control of the breath, the mind can be stilled and made one-pointed. Pranayama is a means to self - mastery and psychic powers.

Statement of the problem
The purpose of the study was to find out the Impact of circuit training with pranayama practices on selected motor ability components and skill performance variables among inter collegiate women volleyball players.

Hypothesis

It was hypothesized that the circuit training with pranayama practices muscular strength and Medicine ball throw would improve the selected criterion variables among women volleyball players.

Methodology

The purpose of the present study was to find out the impact of circuit training with pranayama practices muscular strength and medicine ball throw would improve the selected criterion variables among inter collegiate women volleyball players. To achieve the purpose of this study, thirty volleyball players were selected from the Tamil Nadu Physical Education and Sports University and Chettinadu medical university, Chennai Tamil Nadu, India. The subjects were randomly selected and their age ranged from 18-25 years. The selected subject was divided into two equal groups of fifteen each Group I (EG) (N=15) was considered as an experimental group who underwent for six weeks circuit training with pranayama practices muscular strength and medicine ball throw for five days in week and group II (CG) (N=15) as a control group without any specific training. On muscular strength and medicine ball throw were selected as variable for the study. The Data was collected from the selected criterion variables before and after a training programme as pre and post-test respectively. The Analysis of 't' test was used to find out the significant difference between the groups of selected criterion variable separately.

Analysis of the data

The analysis of using 't' ratio on muscular strength and medicine ball throw of circuit training with pranayama practices group and control group have been analyzed and presented below. The data collected on circuit training with pranayama practices muscular strength and medicine ball throw was variables due to effect of circuit training were statistically processed and discussed in this chapter 30 intercollegiate level women volleyball players were divided into two equal groups such as experimental group [N=15] and control group [N=15]. The data were statistically analyzed for significant different if any by using 't' ratio.

Table 1: significance of mean gains and losses between pre and post test scores on selected variables of circuit training group (ctg)

S.No.	Variables	Pre-Test Mean	Post-Test Mean	Mean Difference	Std. Dev. (±)	σ DM	't' Ratio
1	Muscular Strength	8.73	11.66	2.93	1.66	0.43	6.81*
2	Medicine ball throw	30.33	34.86	4.53	2.16	0.55	8.10*

*Significant at 0.05 level of confidence

Table - 1 shows the obtained 't' ratios for pre and post-test mean difference in the selected variable of muscular strength (6.81), Forearm Pass (8.45). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the means gain and losses made from pre to post-test were significantly improved the motor ability components and skill performance variables. So it was found to be significant. The results of this study showed that statistically significant and explained its effects positively.

Table 2: Significance of mean gains and losses between pre and post test scores on selected variables of control group (cg)

S.No.	Variables	Pre-Test Mean	Post-Test Mean	Mean Difference	Std. Dev. (±)	σ DM	't' Ratio
1	Muscular Strength	8.33	8.40	0.06	1.53	0.39	0.16
2	Medicine ball throw	30.73	20.73	21.33	3.36	0.86	0.07

*Significant at 0.05 level of confidence

Table - 2 shows the obtained 't' ratios for pre and post-test mean difference in the selected variable of muscular strength (0.16), Forearm Pass (0.68). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the means gain and losses made from pre to post-test were significantly improved the motor ability components and skill performance variables. So it was found to be insignificant.

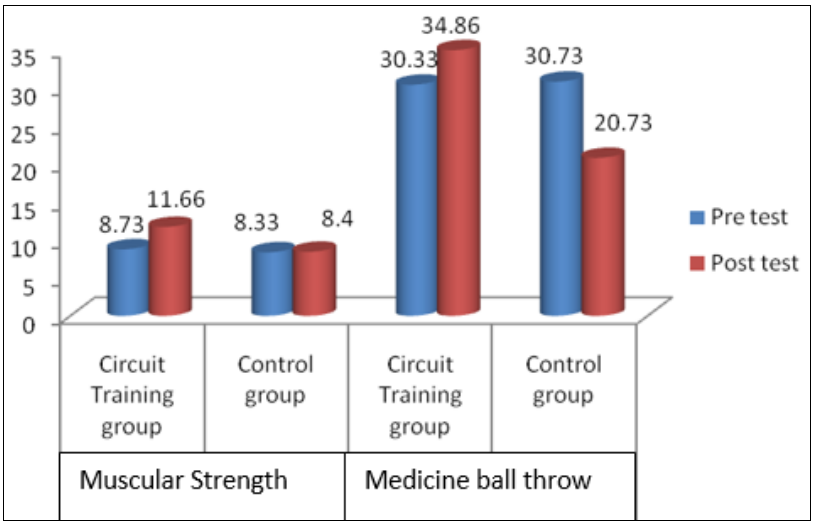

Fig 1: Mean scores of tests of circuit training and control groups on muscular strength and medicine ball throw.

Discussion on the findings

The results of the study indicate that the circuit training were significantly improved the muscular strength and medicine ball throw which have influenced to increase the circuit training level and performance of inter collegiate women volleyball players. The results of the study indicate that there is a significant improvement on muscular strength and medicine ball of the circuit training with Pranayama practices when compared to the control group. This study is supported by the results of the study are in agreement with several reports. Shahana *et al*. (2010) [4] determined that combined strength and explosive training was better to improve muscular strength and medicine ball throw when comparing to the control group concluded that 6 weeks of circuit training improved circuit training with pranayama practices Marques *et al*. (2011) [3] have improves circuit training were significantly improved the muscular strength and medicine ball throw.

Conclusions

The results of the study reveal that there is a significant improvement on muscular strength and medicine ball throw of in the circuit training with pranayama practices group when compared to the control group. These changes are due to training as well as due to participating in muscular strength and medicine ball throw of circuit training with pranayama practices. The training inspires changes in muscular strength and medicine ball throw of the women volleyball players. The unique profile should be taken into consideration while administering training to the volleyball players.

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