



## EFFECT OF YOGIC PRACTICES AND PRANAYAMA ON AGILITY AND COORDINATION OF WOMEN VOLLEYBALL PLAYERS

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### ABSTRACT :

*The aim of this study was to find out the influence of yoga and pranayama on agility and coordination of women volleyball players. 60 women volleyball players from Sri Krishnadevaraya University affiliated colleges in Ananthapuramu in Andhra Pradesh in the age group of 18 to 21 years were divided into three groups namely Yogasana Group, Pranayamas Group and control group on random basis. Pre test was conducted on all the three groups to determine their anaerobic power and after 12 weeks training on yogic practices and pranayama post test scores were obtained. To test statistical significance ANCOVA was employed. The results of the study proved that agility and coordination of women volleyball players were significantly altered by 12 weeks yogasana and pranayama which may be due to conversion of some of the Fast Twitch (F.T.) muscle fibres into Slow Twitch fibres (S.T.) during yogic training and pranayama training. The results further proved that there was significant difference between yogasana group and pranayama group on agility and yogic practices group was significantly better than pranayama in improving agility. There was no significant difference between experimental group on coordination. It was concluded that yogasanas or pranayama can be practiced to improve agility and coordination of women volleyball players.*



**KEYWORDS :** *influence of yoga and pranayama , women volleyball players.*

### INTRODUCTION:

Volleyball at the higher skill levels, technical performance may be limited by physical characteristics as well as physical fitness, and performance characteristics such as speed and flexibility. Kongkaew C et. al. (2018) examined the effectiveness of Thai yoga on physical fitness and found yoga exercises appeared useful, in particular, on body and right shoulder joint flexibility. Satish V et.al. (2018) documented that Yoga is very effective in improving health especially cardio-respiratory fitness and also overall performance in adolescents and concluded yoga can improve cardio-respiratory fitness and aerobic capacity as physical exercise intervention in adolescent school children. Ramos-Jiménez A, et.al. (2009) observed that Hatha Yoga (HY) can be an alternative to improve physical activity in middle-aged and older women. Reddy and Ravikumar (2001) conducted a study on yogasanas and aerobic dance and their effects on selected motor fitness components in girl subjects. The speed, shuttle run, agility, sit and reach to test flexibility and 9 min run/walk to test cardio respiratory endurance were conducted for control, yogasana and aerobic dance groups. And found practice of Yogasana improved significantly the speed, agility, flexibility and cardio-respiratory endurance, while practice of aerobic dance also improved significantly the above factors and

there was no difference in between yogasanas and aerobic dance groups after training with regard to the speed, agility, flexibility and cardio-respiratory endurance.

Thus, the theoretical foundations proved that yogic practices and pranayama together has contributed for improving selected physical fitness variables among different groups of women. However, it was found that there was further scope for research to find out whether yogic practices or pranayama is more effective in in improving agility and coordination of women volleyball players which would directly influence their overall skills including agility and coordination. Hence, this study was attempted.

## METHODOLOGY

To achieve the purpose sixty women volleyball players from Sri Krishnadevaraya University affiliated colleges in Ananthapuramu in Andhra Pradesh in the age group of 18 to 21 were selected randomly as subjects.

They were further divided into three groups namely Yogasana Group, Pranayamas Group and control group on random basis, each group consisting of 20 subjects. Pre test was conducted on all the three groups to determine their agility and coordination through shuttle run test and Scott Motor Coordination tests and after 12 weeks training on yogic practices and pranayama post test scores were obtained. To test statistical significance ANCOVA was employed.

## RESULTS

**Tab 1: Effect of Yogic Practices and Pranayamas on Agility and Coordination of women Volleyball Players**

	Yogasana Group	Pranayama Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained F
<b>RESULTS ON AGILITY</b>								
Pre Test Mean	12.53	12.27	12.70	Between	1.88	2	0.94	2.79
				Within	19.16	57	0.34	
Post Test Mean	11.94	11.38	12.63	Between	15.69	2	7.85	24.52*
				Within	18.24	57	0.32	
Adjusted Post Test Mean	11.91	11.58	12.46	Between	7.20	2	3.60	52.41*
				Within	3.85	56	0.07	
<b>RESULTS ON COORDINATION</b>								
Pre Test Mean	22.00	22.71	22.71	Between	6.63	2	3.31	1.74
				Within	108.54	57	1.90	
Post Test Mean	20.69	21.64	22.76	Between	42.93	2	21.46	13.18*
				Within	92.84	57	1.63	
Adjusted Post Test Mean	21.08	21.44	22.56	Between	22.93	2	11.46	42.72*
				Within	15.03	56	0.27	

Table F-ratio at 0.05 level of confidence for 2 and 57 (df) =3.10, 2 and 56 (df) =3.10.

\*Significant

Since significant differences were recorded on agility and coordination due to experimental treatments, the results were subjected to post hoc analysis using Scheffe's Confidence Interval test. The results were presented in Table II.

**Tab 2: Scheffe's Confidence Interval Test Scores on Agility and Coordination**

MEANS				Required C I
Yogasana Group	Pranayama Group	Control Group	Mean Difference	
<b>Analysis on Agility</b>				
11.91	11.58		0.33*	0.21
11.91		12.46	0.55	0.21
	11.58	12.46	0.88	0.21
<b>Analysis on Coordination</b>				
21.08	21.44		0.36	0.41
21.08		22.56	1.47	0.41
	21.44	22.56	1.11	0.41

\* Significant

The post hoc analysis of obtained through paired means comparisons proved that yogic practices and pranayama were significantly altered agility and coordination compared to control group. While there was no significant between treatment groups on coordination, pranayama group was found to be significantly better than yogic practices group in altering agility of women volleyball players.

## DISCUSSIONS

The results of the study proved that there was reduction in time to cover shuttle run and motor coordination to yogic practices and pranayama. However, the paired mean comparisons proved that pranayama was significantly better than yogic practices in altering agility among women volleyball players. And there was no significant difference between treatment groups on coordination. The results of this study were in agreement with the findings of Kongkaew C et. Al. (2018), and Reddy and Ravikumar (2001) who found physical fitness variables can be improved by yogasanas.

## CONCLUSIONS

It was concluded that yogasanas or pranayama can be practiced to improve agility and coordination of women volleyball players.

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