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Effects of Asanas and Varied Pranayama Practices on Physical Variables among Inter Collegiate Players

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Abstract

The purpose of this study was to find out the effects of Asanas and varied pranyama practices on physical variables among inter collegiate players. To achieve the purpose of the study (N=60) sixty inter collegiate players were randomly selected from three engineering College AIT, KCT and SRE College, Coimbatore and their age ranged between 18 and 25. The subjects were divided into three equal groups. Experimental Group I named as Asanas and varied Pranyama (Sithali and Sitkari), Experimental Group II named as Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices and Group III acted as control group (CG) pre – test was conducted for all the groups on selected variables and the score was recorded in their respective units as pre – test score. After pre – test the experimental group were treated with their respective training for three day per week for a period of twelve weeks. After completion of twelve weeks of training post – test was conducted on selected variables and the score were records in their respective units as post – test score. The pre and post test scores were analyzed with analysis of Co – variance and Scheffe's post hoc test. In all the cases.0.5 level of significance was fixed. The results of the study showed that there was a significant difference found among the experimental groups. Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices Group is found to be better than other groups.

Keywords: Flexibility, Leg Explosive Power, Agility, Abdominal Strength.

Introduction

Yoga is the subject derived from ancient Indian tradition, which effected devotional wisdom, ethics and spiritual, moral, physical and psychological effect on human mind and body. Yoga is a way of life, a conscious act and not merely a set or series of learning principles. Asana can be defined as a physical Yoga posture or position that is designed to help master the body and enhance the body's functions. Yoga poses are in essence, Yoga exercises creating strength and endurance, improving circulation and energy flow, cleansing organs and other systems, and expanding muscles and joints. Yoga exercises evolved thousands of years ago from the need to create a healthy body in order to move more readily to the state of oneness and realization. When the body is cluttered with stress, tension, and disease, this clouds the mind and the ability to connect with the inner self. The physical freedom attained from the Yoga exercises increases one's ability to sit with silence and joyful observation. Pranyama are breathing exercises which clear the physical and emotional obstacles in our body to free the breath and so the flow of prana - life energy. Breath is a physical aspect or external manifestation of prana, the vital force, and thus Pranyama begins with the regulation of the breath. In the practice of Yoga, Asana denotes the art of sitting still and also any posture useful for restoring and maintaining a practitioner's well-being and improving the body's flexibility and vitality, cultivating the ability to remain in seated meditation for extended periods.

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Methodology

The purpose of this study was to find out the effects of Asanas and varied pranyama practices on physical variables among inter collegiate players. To achieve the purpose of the study (N=60) sixty inter collegiate players were randomly selected from three engineering College AIT, KCT and SRE College, Coimbatore and their age ranged between 18 and 25. The subjects were divided into three equal groups. Experimental Group I named as Asanas and varied Pranyama (Sithali and Sitkari), Experimental Group II named as Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices and Group III acted as control group (CG) pre – test was conducted for all the groups on selected variables and the score was recorded in their respective units as pre – test score. They are doing the regular asana and pranayama practice the experimental group were given asana and pranayama practice for 3

days a week for twelve weeks in total. Among the physical variables only Flexibility, Leg explosive power, Agility and Abdominal strength were selected variables. Flexibility, Leg explosive power, Agility and Abdominal strength were assessed by standardized tests.

Analysis of the Data

The data collected from the experimental groups and control group on pre and after experimental on selected variables were statistically ermined by analyzes of covariance (ANCOVA) if there was any significant difference among the treatment means of each variable. Scheffe's post hoc test was applied to test the significance of difference between the paired adjusted means at 0.05 level of confidence. The analysis of covariance (ANCOVA) on Flexibility, Leg explosive power, Agility and Abdominal strength of experimental groups and control group have been analyzed and presented in Table- I.

Table I. Analysis of covariance for experimental groups and control group on physical variables among inter collegiate players

Variables	Adjusted post test means			SV	SS	df	MS	'f '
	AVPSS	AVPKB	CG					
Flexibility	27.28	28.78	23.97	Between	241.21	2	120.60	17.04
				Within	396.19	56	7.07	
Leg explosive power	2.12	2.13	2.02	Between	0.15	2	0.08	9.21
				Within	0.48	56	0.01	
Agility	18.27	18.11	19.93	Between	40.48	2	20.24	34.08
				Within	33.25	56	0.59	
Abdominal strength	33.78	34.09	28.46	Between	263.36	2	131.68	66.22
				Within	111.35	56	1.98	

***Significant at 0.05 level of confidence**
(The table value required for significance at 0.05 level with df 2 and 55 is 3.16)

Table 1 shows that the adjusted post test mean value of Flexibility, Leg explosive power, Agility and Abdominal strength for Group I named as Asanas and varied Pranyama (Sithali and Sitkari) practices, Group II named as Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices and Group III acted as control group (CG) were 27.28, 28.78, 23.97, 2.12, 2.13, 2.02, 18.27, 18.11, 19.93, 33.78, 34.09 and 28.46 respectively. The obtained 'f' – ratio 17.04, 9.21, 34.08 and 66.22 for the adjusted post test mean was more than the table value 3.16 for df 2 and 55 required for significance at 0.05 level of confidence. The results of the study indicate that there was a significant mean difference on post test means of experimental group and control group on the decrease of Flexibility, Leg explosive power, Agility and Abdominal strength. To determine which of the paired mean had a significant difference Scheffe's post hoc test was applied and the results are presented in table II.

Table II. The scheffe's test for the difference between the adjusted post tests paired mean on physical variables among inter collegiate players

Criterion Variables	AVPSS	AVPKB	CG	MD	CI
Flexibility	27.28	28.78	--	1.5	2.11
	27.28	--	23.97	3.31	
	--	28.78	23.97	4.81	
Leg explosive power	2.12	2.13	--	0.01	0.08
	2.12	--	2.02	0.10	
	---	2.13	2.02	0.11	
Agility	18.27	18.11	--	0.16	0.60
	18.27	--	19.93	1.66	
	---	18.11	19.93	1.82	
Abdominal strength	33.78	34.09	--	0.31	1.15
	33.78	--	28.46	5.32	
	---	34.09	28.46	5.63	

***Significant at 0.05 level of confidence**

Table II shows that the adjusted post mean for differences on Asanas and varied Pranyama (Sithali and Sitkari) practices, Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices and control group, Asanas and varied Pranyama (Sithali and Sitkari) practices, Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices and control group on Flexibility, Leg explosive power, Agility and Abdominal strength were (1.50, 3.31, 4.81), (0.01, 0.10, 0.11), (0.16, 1.66, 1.82) and (0.31, 5.32 and 5.63) respectively. The values are greater than the confidence interval value (2.11), (0.08), (0.60) and (1.15) which shows significant differences at 0.05 level of confidence. The adjusted post test means values of experimental group and the control group on Flexibility, Leg explosive power, Agility and Abdominal strength were graphically represented in the figures.

Figure I. Bar diagram on ordered adjusted mean on flexibility for (AVPSS), (AVPBK) and (CG)

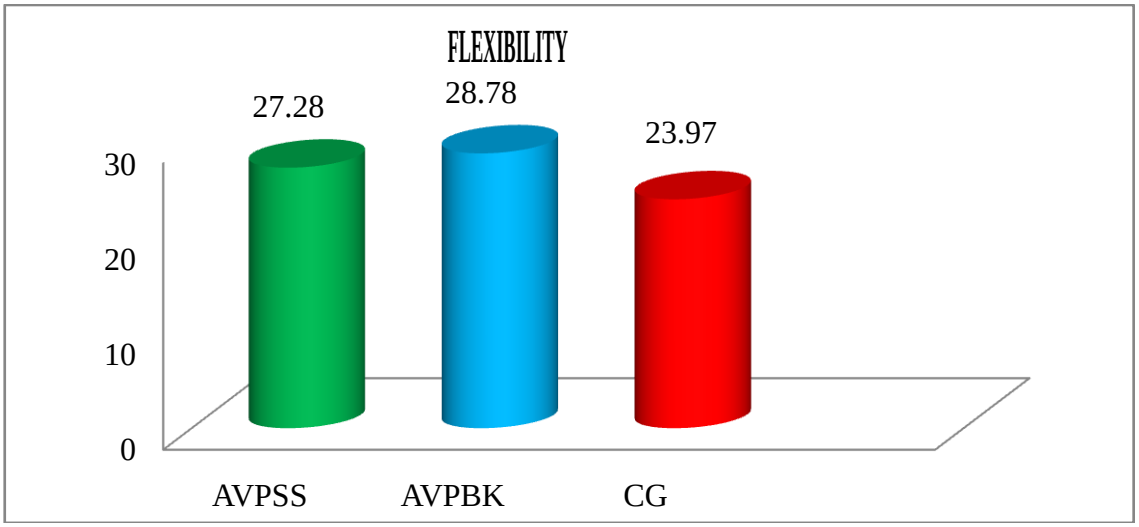


Figure II. Bar diagram on ordered adjusted mean on leg explosive power for (AVPSS), (AVPBK) and (CG)

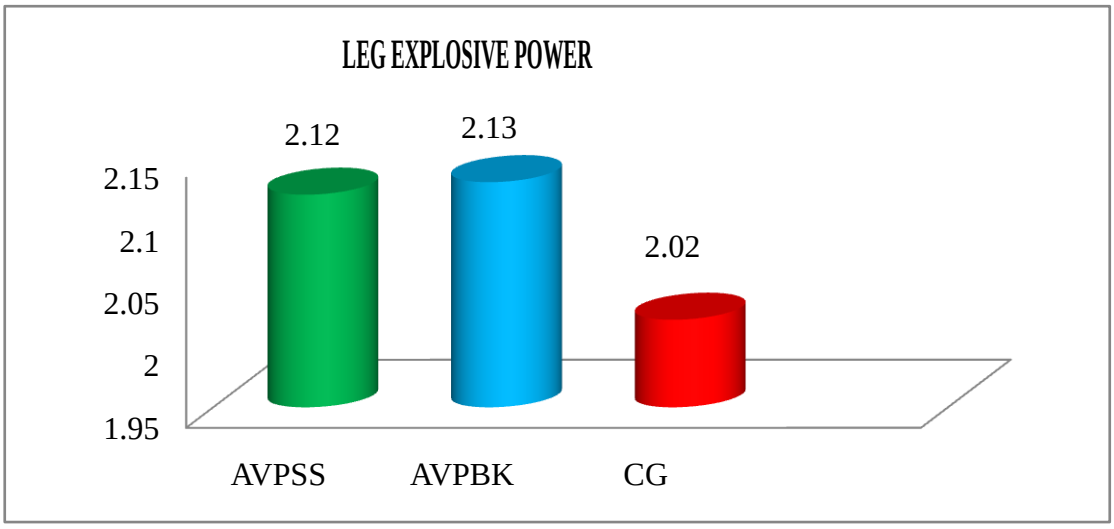


Figure III. Bar diagram on ordered adjusted mean on agility for (AVPSS), (AVPBK) and (CG)

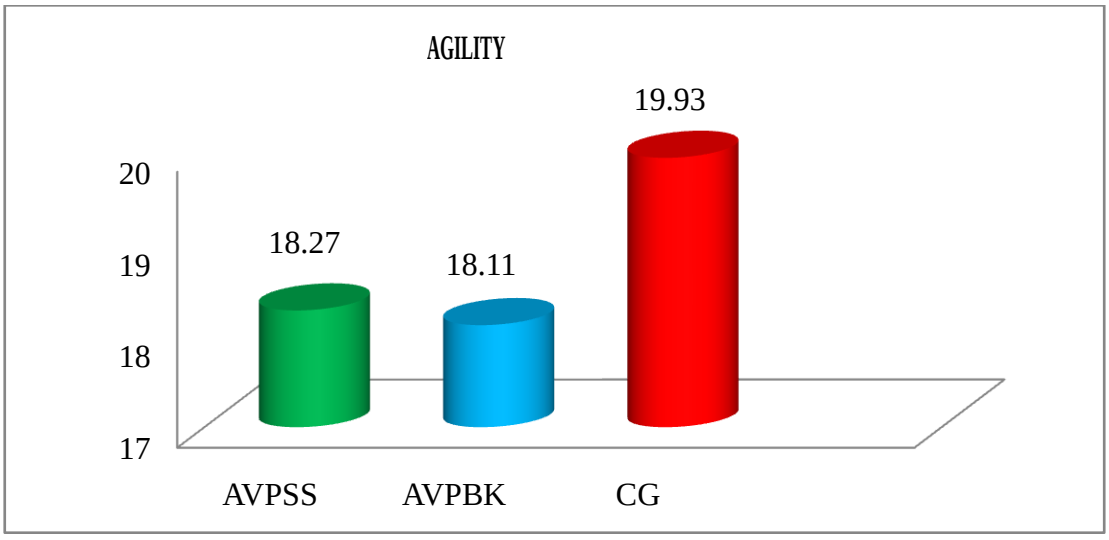
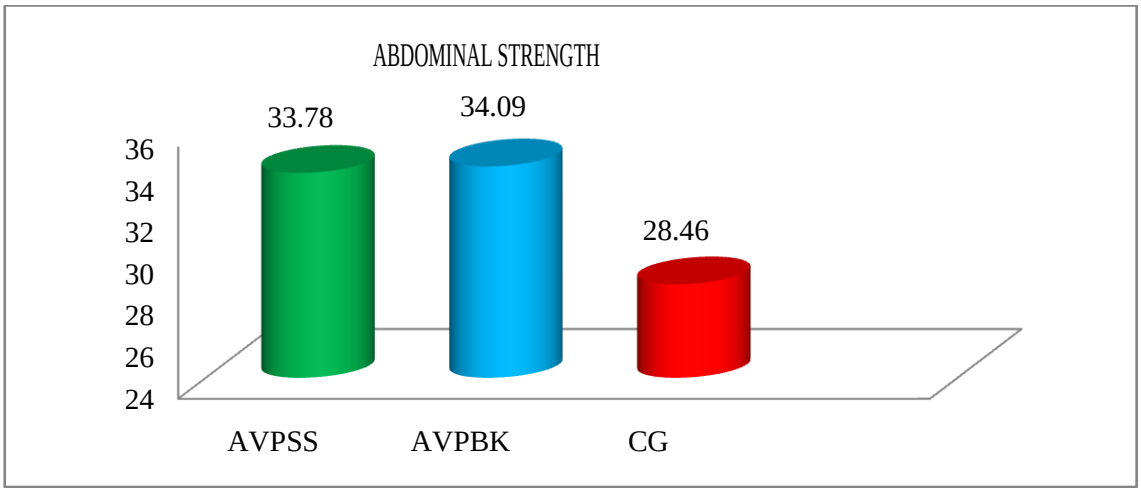


Figure IV. Bar diagram on ordered adjusted mean on abdominal strength for (AVPSS), (AVPBK) and (CG)



Finding

From the results of the study that there was a significant difference in Flexibility, Leg explosive power, Agility and Abdominal strength between the adjusted post test mean of Asanas and varied Pranyama (Sithali and Sitkari) practices, Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices and control group. However the Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices increased in Flexibility, Leg explosive power, Agility and Abdominal strength was significantly. Decrease in Asanas and varied Pranyama (Sithali and Sitkari) practices. Therefore it may be result that the Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices group was found to be better than the Asanas and varied Pranyama (Sithali and Sitkari) practices.

Discussion on Finding

Both the experimental groups showed significant improvement on pre to post test on Flexibility, Leg explosive power, Agility and Abdominal strength with control group. When comparing the effects of (AVPSS) and (AVPBK) the Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices group showed significant improvement on Flexibility, Leg explosive power, Agility and Abdominal strength of inter collegiate players. **(**Sukhdev Singh et al., 2011)These data provide more evidence to support the beneficial effect of yoga asana training on agility and muscular strength and thus, such training may be recommended to enhance sports performance. (Surender Kumar et al., 2013) Regular practice of yogic exercise has improved the flexibility, endurance, agility, strength and speed of the subject. (Mark Tra et al., 2001), In summary, the results of this investigation indicate that 8 weeks of hatha yoga practice can significantly improve multiple health-related aspects of physical fitness in young, healthy, predominantly female subjects. More specifically, yoga training can increase muscular strength, muscular endurance, flexibility, and cardio respiratory endurance. However, in the present study, hatha yoga did not have a significant effect on either body composition or pulmonary function.

Conclusion

1. It was concluded Asanas and varied Pranyama (Sithali and Sitkari) and (Bhasthirika and Kabalabathi) practices group showed better improvement on pre to post test on Flexibility, Leg explosive power, Agility and Abdominal strength.
2. It was concluded that Asanas and varied Pranyama (Sithali and Sitkari) and (Bhasthirika and Kabalabathi) practices group showed better improvement when compared to control group on pre to post test on Flexibility, Leg explosive power, Agility and Abdominal strength.
3. The Asanas and varied Pranyama (Bhasthirika and Kabalabathi) practices showed better improvement than the Asanas and varied Pranyama (Sithali and Sitkari) practices group on Flexibility, Leg explosive power, Agility and Abdominal strength.

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