

# EFFECT OF FLEXIBILITY TRAINING AND YOGIC TRAINING ON FLEXIBILITY

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## Abstract

**Yoga** is essentially a spiritual discipline based on an extremely subtle science, Flexibility in some joints can be increased to a certain degree by exercise, with [stretching](#) a common exercise component to maintain or improve flexibility. The multiple ways and the different contexts in which it is used make it a problematic term. contractility, preload, and after load. The age of the subjects ranged from 16-22 years. The subjects were (n=15) randomly assigned as to three equal groups of college players. Experimental Group –I act as control (CG), Group –II acted as Yogic training group(YTG), Group –III acted as flexibility training exercises (FTG)for a period of 6 weeks training except Saturday and Sundays every weeks as in stipulated time . The subjects were tested in order to find out felxibility. The data were collected before and after the training period, pre and post test were analyzed by using ANACOVA. The levels of significance for the study were chosen as 0.05 level. felxibility has significance difference among in three groups. Yogic training flexibility training proportions are the better proportion to increases the flexibility ultimately it leads to increase the physical fitness.

Key words: yogic training, flexibility training, flexibility.

## Introduction

Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body. It is an art and science of healthy living. The word 'Yoga' is derived from the Sanskrit root 'Yuj', meaning 'to join' or 'to yoke' or 'to unite

According to modern scientists, everything in the universe is just a manifestation of the same quantum firmament. One who experiences this oneness of existence is said to be in yoga, and is termed as a yogi, having attained to a state of freedom referred to as mukti, nirvana or moksha. Thus the aim of Yoga is Self-realization, to overcome all kinds of sufferings leading to 'the state of liberation' (Moksha) or 'freedom' (Kaivalya). Living with freedom in all walks of life, health and harmony shall be the main objectives of Yoga practice."Yoga" also refers to an inner science comprising of a variety of methods through which human beings can realize this union and achieve mastery over their destiny. Yoga, being

widely considered as an ‘immortal cultural outcome’ of Indus Saraswati Valley civilization – dating back to 2700 B.C., has proved itself catering to both material and spiritual upliftment of humanity. Basic humane values are the very identity of Yoga Sadhana..

Daniel(2014) Flexibility or limberness refers to the range of movement in a joint or series of joints, and length in muscles that cross the joints to induce a bending movement or motion. Flexibility varies between individuals, particularly in terms of differences in muscle length of multi-joint muscles. Flexibility in some joints can be increased to a certain degree by exercise, with stretching a common exercise component to maintain or improve flexibility. The multiple ways and the different contexts in which it is used make it a problematic term. Yet for employers as well as governments, flexibility in the use and deployment of labour is seen as critical to maintain competitive advantage. However, despite what might be based on good intentions, this drive towards flexibility may leave certain parts of the workforce at least confused and uncertain. There may be other employees who feel part of a “core” group, for whom change is more often positive. Those at the other end of the spectrum are at risk of social exclusion, denied the benefits of full participation in society.

## **METHODOLOGY**

The subjects for the present were selected on the basis of random group design. Thirty (N=45) male students were selected as subject for the present study from Murugappa Polytechnic College Players, Avadi, Chennai. INDIA. All subjects ranged between the chronological age of 16-22 years. The selected subjects were further divided into two groups. Experimental treatment was then assigned to group –I acts as control, and Group –II acted as flexibility training exercises, Group –III acted as Yogic training group for a period of 6 weeks training except Saturday and Sundays every weeks as in stipulated time . The subjects were tested in order to find out flexibility by sit and reach method. The data were collected before and after the training period, pre and post test were analyzed by using ANACOVA. The levels of significance for the study were chosen as 0.05 level. felxibility has significance difference among in three groups. Yogic training flexibility training proportions are the better proportion to increases the flexibility ultimately it leads to increase the physical fitness. The subjects were subjected to the six week training programme of Swastikasana, Mayurasana, Matsyendrasana, Paschimottanasana and Gomukhasana.

## **Purpose**

To measure the development of hip and flexion as well as extension of the hum string muscles of the legs. The object is to see how far you can extend the finger tips beyond the foot line with the leg straight.

## **Equipment**

Flexomeasure case with Yard stick and tape.

## Description

1. Line up the 15 inch mark of the yard stick with a line on the floor and tape the ends of the stick to the floor. So that the flexomeasure case (window side) is face down.
2. Sit down and line up to heels with the near edge of the 15 inches mark and slide to seat back beyond the zero end of the Yard stick.
3. Have a partner stand and brace his toes against to heels. Also have an assistant on each side to hold the knees in a locked position as own level to prepare to stretch.
4. With heels not more then 5 inches apart, slowly stretch forward, while pushing the flexomeasure case as far down the stick as possible with the finger tips of both hands. Take the subjects reading at near edge of flexomeasure case.

## Scoring

The best of three trails measured to the nearest quarter of an inch is the test of the score.

## ANALYSIS OF COVARIANCE OF DATA ON FLEXIBILITY BETWEEN PRE AND POST TEST OF CG, YTG AND FTG

Test	CG	YTG	FTG	SOV	SOS	df	MS	Obtained 'F' ratio
<b>Pre test Mean</b>	9.33	9.48	9.35	B	0.21	2	0.10	0.13
<b>SD</b>	0.69	1.14	0.74	W	32.60	42	0.78	
<b>Posttest Mean</b>	9.33	10.16	10.01	B	5.81	2	2.90	2.55
<b>SD</b>	0.71	1.30	1.09	W	47.89	42	1.14	
<b>Adjusted post mean</b>	9.40	10.05	10.06	B	4.20	2	2.10	17.19*
				W	5.01	41	0.122	

\*significant at 0.05 level of confidence. The table value required for significance at 0.05 levels with df 2 and 42 are 3.22 and 2 and 41 are 3.23 respectively

The table -I shows that the pre test mean value on Flexibility for CG, YTG and FTG, 9.33, 9.48 and 9.35 were respectively. The obtained 'F' ratio value 0.13 for pre test scores on Flexibility which lesser than the table value 3.22 for significance with df 2 and 42 at 0.05 level of confidence. The post test mean values on Flexibility for CG, YTG and FTG, were 9.33,

10.16 and 10.01 respectively. The obtained 'F' ratio value 2.55 for post test scores on Flexibility, which was greater than the table value 3.22 for significance with df 2 and 41 at 0.05 level of confidence. The adjusted post test mean values on Flexibility CG, YTG and FTG, were 9.40, 10.05 and 10.06 respectively. The obtained 'F' ratio value 17.19 for adjusted post test scores on Flexibility, which was greater than the table value 3.23 for significance with df 2 and 41 at 0.05 level of confidence.

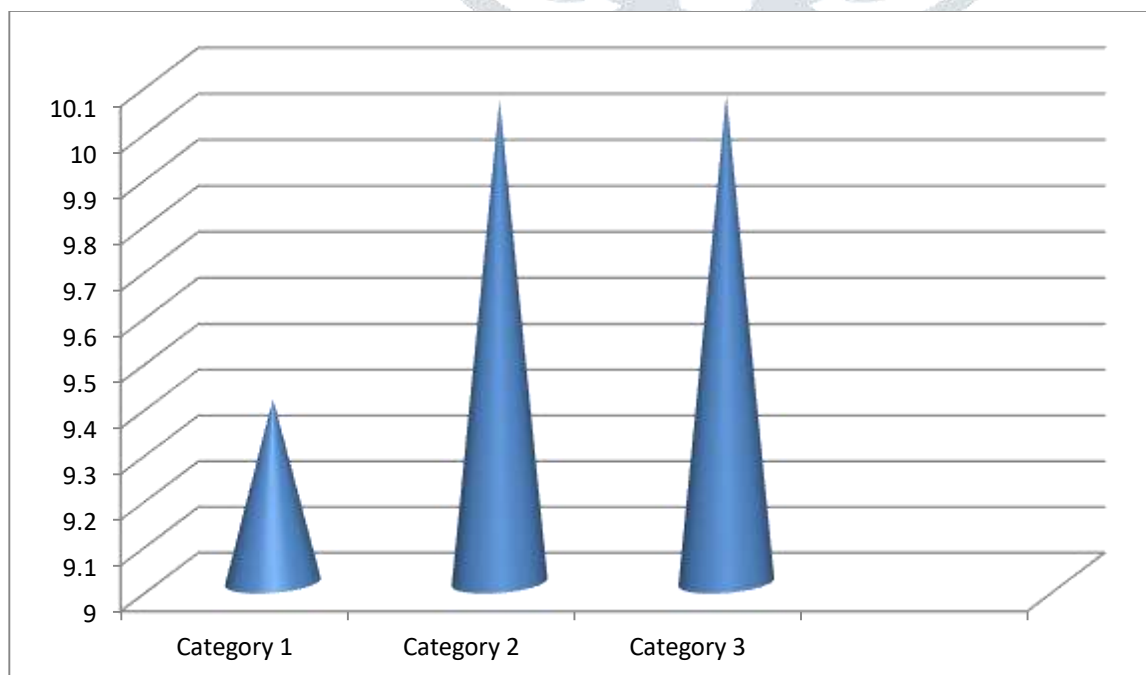
The results of the study showed that there was a significance difference among CG, YTG and FTG, on Flexibility. However the improvement was in favor of YTG.

Since three groups were involved the Scheffe's post hoc test was applied to find out the paired mean difference if any, and it is presented in the table - II

### SCHFEE'S POST HOC TEST FOR THE DIFFERENCE BETWEEN THREE PAIRED ADJUSTED POST TEST MEANS OF FLEXIBILITY

ADJUSTED POST TEST MEAN TEST			MEAN DIFFERENCE	CONFIDENCE INTERVAL
9.40	10.05		0.65	0.37
	10.05	10.06	0.01	0.37
9.40		10.06	0.66	0.37

The table shows that the adjusted post test mean difference of CG ,YTG,FTG and were 9.40,10.05 and 10.06 respectively. They were greater than the confidence interval value 0.37 at 0.05 level, which indicates that there was a significant difference among all of CG ,YTG and FTG. **The adjusted post- test mean values on flexibility for all the groups are graphically presented in Figure- 1**



## RESULTS AND DISCUSSION

Flexibility is important for completing everyday activities with ease. Getting up out of bed, lifting groceries and vacuuming the floor require a certain level of flexibility, which, if not attended to regularly, will deteriorate with age. Engaging in regular flexibility training can assist with increased joint mobility, better posture, decreased back pain and a lower risk of injury.

Ray and Groups (2001) study was undertaken to observe any beneficial effect of yogic practices during training period on the young trainees. 54 trainees of 20-25 years age group were divided randomly in two groups i.e. yoga and control group. Yoga group (23 males and 5 females) was administered yogic practices for the first five months of the course while control group (21 males and 5 females) did not perform yogic exercises during this period. From the 6th to 10th month of training both the groups performed the yogic practices. Physiological parameters like heart rate, blood pressure, oral temperature, skin temperature in resting condition, responses to maximal and submaximal exercise, body flexibility were recorded. Shoulder, hip, trunk and neck flexibility improved in the yoga group. There was improvement in various psychological parameters like reduction in anxiety and depression and a better mental function after yogic practices

Bal, B.S.1 ; Kaur, P.J.2 (2009) presented was to determine the effects of selected asanas in hatha yoga on agility and flexibility level. The subjects for the study were selected on the basis of random group design. Thirty (N=30) male students were selected as subject .The study showed that there was significant increase in flexibility.

Brega, Karla . Paula, and Ana Cristina, Carvalho(2005) investigated in Interaction between resistance training and flexibility training in healthy young adults. To test the hypothesis that increases in muscle strength and flexibility are developed by specific training programs, 43 healthy young adults were tested before and after 4 different interventions conducted twice a week for 12 weeks: (a) resistance training only (n 5 13); (b) flexibility training only (n 5 11); (c) resistance and flexibility training (n 5 9); and (d) no intervention (n 5 10). There was no change in either strength or flexibility in the control group ( p . 0.05). Resistance training improved muscle strength either alone (114%; effect size 5 0.53; p , 0.001) or in combination with flexibility training (116%; effect size 5 0.66; p 5 0.032), but did not change flexibility ( p 5 0.610). Flexibility increased with specific training alone (133%; p , 0.001) or in combination with resistance training (118%; p , 0.001). In conclusion, in young, healthy subjects, resistance training alone did not increase flexibility, but resistance training did not interfere with the increase in joint range of motion during flexibility training.

Roberto Moriggi Junior et al., 2017 was to compare the effect of flexibility training immediately before resistance training (FLEX-RT) versus resistance training without flexibility training (RT) on maximum strength and the vastus lateralis muscle cross-sectional

area (CSA). These results show that performing flexibility training immediately before resistance training can contribute to a lower number of repetitions, total volume, and muscle hypertrophy.

## CONCLUSION

The study revealed that showed significant increase in flexibility among players due to yogic training and flexibility training when comparatively with control group.

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