

## IMPACT OF HATHA YOGA AND BHANGRA DANCE PRACTICE ON SELECTED AGILITY AND FLEXIBILITY VARIABLES OF SEDENTARY GIRLS

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### Abstract

Due to advanced technology and automation in our lives, there is an almost compulsory lack of physical activity, carrying negative effects on health and daily living. Yoga is a science of life which helps man to attain their highest potential and highest state of consciousness. The purpose of the study was to evaluate the motor fitness response, to find out the changes if any in agility and flexibility following the yoga and Bhangra dance practices. The total subjects were 120 divided into four groups and their age ranges from 18-22 years. The duration of total practice period was 6 weeks (3 days in a week for 30 minutes). Pre-test and Post test data were analyzed by paired 't' test' method was adopted by (Garrett, 1981). The organised yoga and bhangra dance programme definitely improved their performance in selected agility and flexibility variables.

**Keywords:** Ability, Work, Flexibility and Punjabi.

This exercise is a fabulous workout that not only helps in maintaining someone fitness level, also makes their heart stronger. It involves some motor fitness responses such as agility and flexibility. Bhangra dance is a popular exercise in adult. In this article an attempt has been made to observe the improvement occur in the agility and flexibility following bhangra and yoga practices among the adolescent girls.

### Methodology

The total subjects were one hundred and twenty (120) selected from the Chandigarh University Gharuan, Mohali (Punjab) and age ranging from 18–22 years. All the subjects possessed sound physique. All the subjects were divided into four groups i.e. Hatha Yoga, Bhangra dance, Combined and Control groups.

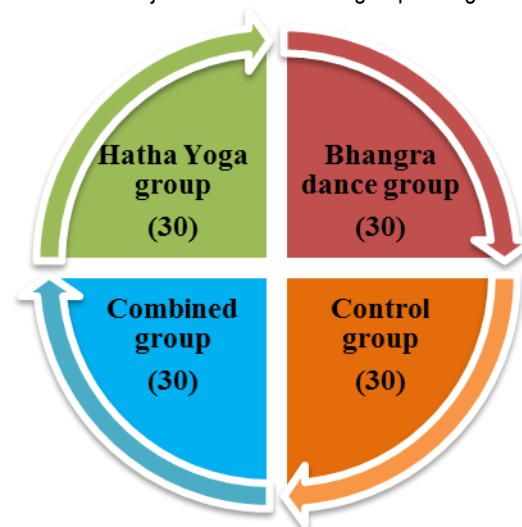
### Introduction

Human beings have very active and creative by nature and physical activity has been part of their life. In the present age we are going through a very rapid change. The advancement of scientific knowledge, technique and methods in every field, even in the field of physical health. Yoga is a science of life which helps man to attain their highest potential and highest state of consciousness. The origin of hatha yoga developed in India. In Sanskrit 'Ha' means 'Sun' and 'Tha' means 'Moon'. 'Hatha' means 'forceful' implying that powerful work must be done to purify the body. Yoga means to yoke, or to join two things together, hence hatha yoga is meant to join together, Sun (masculine, active) energy with the moon (feminine, receptive) energy, thus producing balance and greater power in an individual. It is the branch of yoga which concentrates on physical health and mental well being. Hatha yoga uses bodily postures (Asanas) with the goal of bringing about a sound health body and clear, peaceful mind. Bhaṅgrā (Punjabi: **ਭੰਗੜਾ** (Gurmukhi), (Perso-Arabic); pronounced [pə̀ŋgrɑː])

refers to several types of dance originating from the Punjab region of the Indian subcontinent. The earliest developed of these was a folk dance conducted by Punjabis in the central northern areas of the region to celebrate the harvest, and whose general practice had ended by the Partition, 1947. In the 1950s, a new folk dance, representative of the state of Punjab and composed of glimpses of men's Punjabi dance styles, was created and eventually received the title of bhangra.

Figure-1

Division of subjects in different four groups are given below:



(a) Practice Schedule: The total period of treatments was 6 weeks and each group practiced three days in a week and duration was 30 minutes which supervised exercise program for experimental subjects and control group continued usual activity. The subjects practiced the Asanas and Pranayamas. Yoga Group: Practiced Tadasana, Tratoch, Kati Chakrasana, Surya Namaskar, Sarbanganasana Halasana, Paschimothanasana and Pranayams were Nadi Sodhana, Kapalbhati, Bhamari, Yoga-Nidra.

Bhangra Dance Group: Practiced bhangra dance with music.  
 Combined Group: Practiced Yoga 30 min./day and bhangra 30 min./day approximately.  
 Control Group: The control group subjects were continued usual activity.

(b) Criteria measured: Age, height and weight were measured by university record, Stadiometer and weighing machine accordingly. On the other hand motor fitness variables such as agility and flexibility were measured by Sit and Reach Test (Johnson and Nelson. 1982) and Stop Watch respectively. Experimental subjects were completed a six week supervised exercise programme. Control subjects continued usual activity. The subjects practiced the asanas and pranayamas 30 min/day.

For statistical analysis standard procedures have been adopted. Mean and SD were first computed. Then pretest and post test data were analysed by paired 't' test method (Garrett, 1981). For obtaining the significant differences ANCOVA method (Garrett, 1981) was adopted.

**Result and Discussion**

For testing the differences between means scores selected motor fitness variables of Hatha Yoga Group, Bhangra dance group, Combined group and Control group of subjects. The level of significance were at 0.01

**TABLE – 1**  
 ANALYSIS OF COVARIANCE IN AGILITY THE DIFFERENT GROUPS

Source of Variation	df	SSx.y	SSy.x	Msy.x(Vy.x)	Fy.x	SDy.x
Among Group means	3	-3.03	7.68	2.56	16.60	0.39
Within Group SS	115	13.01	17.74	0.15		
Total	118	9.98	25.43			

**TABLE – 4**  
 SIGNIFICANCE OF DIFFERENCES AMONG ADJUSTED Y MEANS OF AGILITY.

S. No.	Variables	Diff. Adjusted Mean	SED
1	Yoga VS Bhangra group	0.35**	0.10
2	Yoga VS Combined group	0.05	0.10
3	Yoga VS Control group	0.79**	0.10
4	Bhangra VS Combined group	0.32**	0.10
5	Bhangra VS Control group	0.41**	0.10
6	Combined VS Control group	0.73**	0.10

\*\*Significant. at 0.01 level

The significant differences among the means. ANCOVA (Table-3) was done to find out the significant effect after participating the exercise programme among the groups. So treatment had positive effect on the groups. In post test of agility, Bhangra dance group was better than other three groups. In post test yoga group performed better. After six weeks of exercise programme agility was decreased (Table-4) in all the groups at 0.01 level of significance except yoga vs. Combined group. Exercise programme had positively influence this improvement. Barik and Banerjee (1990) observed that after 6 weeks of conditioning programme strength, agility increased significantly.

**TABLE – 5**  
 THE TABLE SHOWS THE ANALYSIS OF VARIANCE (ANOVA) FOR FLEXIBILITY AMONG THE DIFFERENT GROUPS.

Sr. No.	Tests	Source of Variance	Ss	df	Ms	F
1.	Pre-Test	Between Groups	2884.09	3	961.36	8.00
		Within Groups	13933.83	116	120.12	
		Total	16817.93	119		
2.	Post- Test	Between Groups	8320.83	3	2773.61	35.57
		Within Groups	9046.47	116	77.99	
		Total	17367.30	119		

F.05 = 2.68, F.01 = 3.96 F is sig. at both level

**TABLE – 6**  
 THE TABLE SHOWS THE ANALYSIS OF COVARIANCE OF FLEXIBILITY OF DIFFERENT GROUPS.

Source of Variation	df	SSx.y	SSy.x	Msy.x(Vy.x)	Fy.x	SDy.x
Among group means	3	4521.75	3547.24	1182.41	31.59	6.12
Within group SS	115	8128.80	4304.24	37.43		
Total	118	12650.55	7851.48			

F.05 = 2.68, F.01 = 3.96. F is significant at both level.

**TABLE – 7**  
 THE TABLE SHOWS THE SIGNIFICANCE OF DIFFERENCES AMONG ADJUSTED Y MEANS OF FLEXIBILITY.

Sr. No.	Variables	Diff. Adjusted Mean	SED
1	Yoga VS Bhangra group	12.82**	1.58
2	Yoga VS Combined group	0.48	1.58
3	Yoga VS Control group	10.60**	1.58
4	Bhangra VS Combined group	12.34**	1.58
5	Bhangra VS Control group	2.22	1.58
6	Combined VS Control group	10.12**	1.58

\*\*Significant at 0.01 level

From the Table 1(a) & 1(b) it was found that means ± S.D of flexibility before training of all the groups were – 2.80 ± 12.29, - 13.90 ± 11.56 – 1.23 ± 9.36, - 4.97 ± 10.40 and after training were 7.33 ± 7.22, - 11.97 ± 12.42, 7.47 ± 3.27, - 4.53 ± 9.74 respectively. Participating in yoga and Bhangra dance programme all the experimental groups increased their flexibility. Since all the mean scores of flexibility were not equal, analysis of variance was computed (Table 5) to find the significant differences among the four groups. It was observed from that the F value was significant at 0.01 level. ANCOVA (Table 6) was done to find out the significant effect after participating the exercise programme among the groups. So treatment had positive effect on the groups. In post test flexibility of combined group was better than other three groups. The negative relationship found in this study may be attributed due to direction of scores. After six weeks exercise programme flexibility was increased in all experimental groups at 0.01 level of significance except yoga vs combined group and bhangra dance vs. control group. A number of researchers. Nunneys (1960) and Metz 1968, Edwards (1974). Mcnamara (1978) showed that following training programme flexibility improved both male and female. From these finding it may be concluded that the performance in two fitness test items were improve significantly following the participation in hatha yoga and bhangra dance programme by sydentry girls.

### Conclusion

On the basis of the results and discussions specific conclusions may be drawn.

1. The mean scores of all the groups were decreased in agility. It was observed the agility was decreased of all the experimental groups. Significance difference occurred of all the groups at 0.01 level in agility except yoga vs. Combined group.
2. Flexibility increased in all the groups Flexibility of two experimental groups was increased significantly in 0.01 level in compare to control group. Yoga vs. bhangra dance and bhangra dance vs. combined increased at 0.01 level of confidence.

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