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# The Effect of Selected Yogic Posture on Flexibility and Balance among College-Level Taekwondo Players

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***Abstrac***t: *the aim of the present study was to find out the effect of selected yogic posture on flexibility and balance among college-level taekwondo players. For this purpose, forty subjects were randomly selected from Rajiv Gandhi Arts and Science College, Puducherry and their ranged between 18 to 22 years. Subjects included in the study were not controlled with regard to their lifestyle, diet and habits which may have influenced their performance. The subject's body type and the economic status were not taken into consideration. The groups were assigned as experimental and control group in an equivalent manner. Experimental group underwent for eight weeks on selected yogic posture for 60 minutes. The practice was started from 6.00 am to 7.00 am for three alternative days per week for eight weeks. The pre and post-test on flexibility and balance was measured. The data was statistically analysed by using 't' ratio to find out the significant difference between two groups. The finding of the study revealed that there was a significant on flexibility and balance for the experimental group when compared to the control group.*

***Keywords***: *Balance, Flexibility, Posture, Taekwondo and Yoga.*

## 1. INTRODUCTION :

Yoga is skill in action, states the Bhagavad Gita. the best known of all Indian philosophical epics, but this is not intended to mean action in just the narrow sense of physical movement for as well as exercise for improving the 'skill' of your body, yoga also comprises techniques that act on your mind emotions and provides a complete philosophy for living. The secret of yoga lies in the fact it deals with entire man, not with just one of his aspects. It is concerned with growth, physical, mental, moral and spiritual.

Regular practice of asana maintains the physical body in an optimum condition and promotes health even in an unhealthy body. Through asana practice, the dormant energy potential is released and experienced as increased confidence in all areas of life. Yoga have a deeper significant value in the development personality.

Taekwondo is a combative contact sport and so the competitors wear body, head and shin protectors, as well as mouth guards, gloves and a groin guard, to protect themselves from injury. The participants need to be highly disciplined and prepared to develop both their bodies and their minds. The sport is for everyone and is a great way to gain self-confidence and strength. It can help to develop discipline and leadership, improve self-confidence and self-esteem, enhance flexibility, and develop quick reflexes and agility.

These activities can lead to improved muscle tone and appearance, and increased strength and stamina. As well as the psychological benefits such as weight loss, improved circulation and heart rate, a desire for a healthy and active lifestyle, discipline and values both of which are applicable to any area of life.

### 1.1 Flexibility

Flexibility is an important part of physical fitness and is defined as the ability to move the joints freely. Both range of motion and mobility are common terms when discussing flexibility. Flexibility training is a general term to describe any exercise done to improve the body's flexibility. Activities such as stretching, yoga, are a few examples of types of flexibility training. Yoga originated in India and involves stretching exercises, breathing techniques, and meditation.

### 1.2 Balance

Balance is defined as an individual's ability to control their centre of gravity within the limit of base of support . Body balance control is a complex body function that involves regulating posture and movement via the cerebellum by processing sensory inputs from the vestibular visual and proprioceptive systems in the cerebral cortex. Balance exercise is one of the four types of recommended exercise along with strength, aerobic and flexibility exercises to improve health and physical ability.

## 2. STATEMENT OF THE PROBLEM :

The purpose of the present investigation was to find out the effect of selected yogic posture on flexibility and balance among college-level taekwondo players.

## 3. HYPOTHESIS :

It was hypothesized that

- There would be a significant improvement in the selected physical components due to the influence of selected yogic posture among college-level taekwondo players.
- There would be a significant improvement in the experimental group than the control group due to the influence of selected yogic posture among college-level taekwondo players.

## 4. METHODOLOGY :

### 4.1 Selection of Subjects

To achieve the purpose of the study, forty subjects were selected from Rajiv Gandhi Arts and Science College, Puducherry. Their age groups were ranged between 18 to 22 years. The selected subjects were divided into two groups. Experimental group and control group. It consists of twenty subjects were underwent selected yogic posture practice and control group did not participate in any special training.

### 4.2 Selection of Variables

**a) Independent Variables**

- Selected Yogic Posture

**b) Dependent Variables**

- Flexibility - Sit and Reach Test (In Centimetres)
- Balance - Stork Balance Stand Test (In Seconds)

### 4.3 Experimental Design

The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects ($n$ = 40) were randomly assigned to two equal groups. The groups were assigned as experimental group (yogic posture) and control group respectively. Pre-test was conducted for all subjects on flexibility and balance. The experimental group participated in their selected yogic posture for a period of eight weeks. The post-test was conducted on the above said dependent variables after a period of eight weeks in the respective practices.

### 4.4 Collection of Data

The subjects of the study were selected randomly and divided into two groups. Among the two groups, the control group was strictly under control, without undergoing any special activity. The experimental group underwent the selected yogic practices. The experimental group were well acquainted with their allotted techniques and did only the practices given to them for a period of eight weeks under the personal supervision of the researcher.

### 4.5 Training Programme

The experimental group performed the selected yogic posture prescribed to them thrice a week (alternatively) for a period of eight weeks. The practice session included yogic prayer, warming up, selected yogic posture and relaxation for a total duration of 60 minutes. After the adaptation period of two weeks the practice load was increased gradually and after a specific time intervals. The intensity of the practice schedule was increased by increasing the holding time at the final position of each posture. The practice schedule is yogic prayer (10 mins), warming up (10 mins), selected yogic posture (30 mins) and relaxation (10 mins).

| S.No | Yogic Posture (Flexibility) | Yogic Posture (Balance) |
|---|---|---|
| 1 | Intense Side Stretch (Parsvottanasana) | Sideways Bending Using One Arm (Konasana) |
| 2 | Head to Knee (Janu Sirsasana) | Sideways Bending Using Both Arms (Konasana 2) |
| 3 | Cat – Cow (Bitilasana Marjaryasana) | Standing Spinal Twist (Katichakrasana) |
| 4 | Bow Pose (Dhanurasana) | Standing Forward Bend (Hastapadasana) |
| 5 | Low Lunge (Anjaneyasana) | Standing Backward Bend (Ardha Chakrasana) |
| 6 | Wide Angle Seated Forward Bend (Upavistha Konasana) | Triangle Pose (Trikonasana) |
| 7 | Cow Face Pose (Gomukhasana) | Tree Posture (Vrikshasana) |
| 8 | Plow Pose (Halasana) | Warrior Pose (Veerabhadrasana) |

## 5. STATISTICAL TECHNIQUES :

The data collected from the two groups namely experimental group (yogic posture) and control group on flexibility and balance were statistically analysed by using 't' ratio in order to determinate the differences if any among the groups at pre and post-test. The calculated't' ratio is tested for significance at 0.05 level of confidence.

**Table -1**

**Difference in Mean, Mean Deviation, Standard Deviation, Standard Error and't' ratio Value on Flexibility**

| Group | Test | Mean | Standard Deviation | Mean Deviation | Standard Error | 't' ratio |
|---|---|---|---|---|---|---|
| **Experimental Group** | Pre-test | 23.20 | 4.61 | 1.80 | 0.31 | 5.71* |
| | Post-test | 25.00 | 3.69 | | | |
| **Control Group** | Pre-test | 22.67 | 4.33 | 0.27 | 0.23 | 1.18 |
| | Post-test | 22.95 | 3.83 | | | |

**Significant at 0.05 level of confidence.*

***The table value required for 0.05 level of significance with df is 2.065***

The table I shows the mean score of flexibility between experimental group and control group are 3.69 and 3.83 respectively. As the obtained't' ratio 5.71 is greater than required value 2.065 at 0.05 level of confidence at 38 degree of freedom. The above table result shows that there was a significant difference between experimental group and control group on the changes in flexibility.

**Fig.1 – Difference in Mean Scores of Experimental and Control Groups on Flexibility**

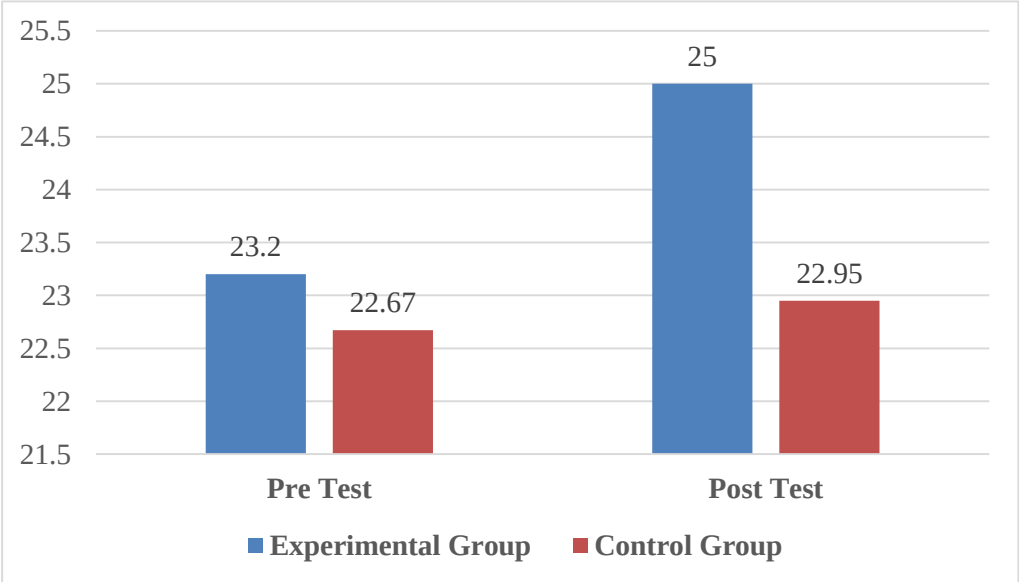


**Table -2**

**Difference in Mean, Mean Deviation, Standard Deviation, Standard Error and't' ratio Value on Balance**

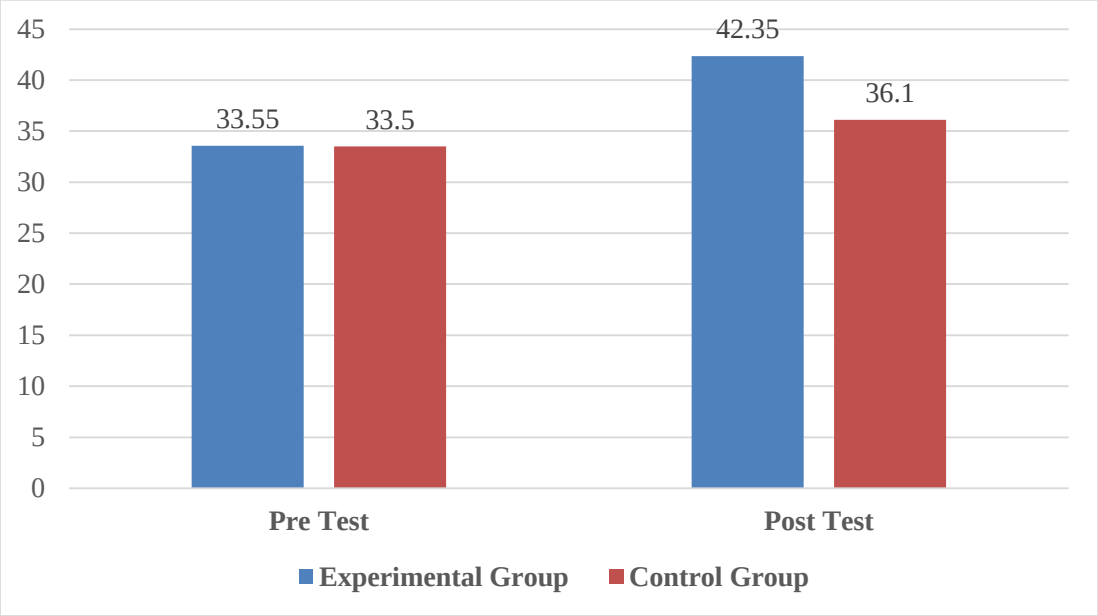
| Group | Test | Mean | Standard Deviation | Mean Deviation | Standard Error | 't' ratio |
|---|---|---|---|---|---|---|
| **Experimental Group** | Pre-test | 33.55 | 6.32 | 8.80 | 2.05 | 4. 29* |
| | Post-test | 42.35 | 11.76 | | | |
| **Control Group** | Pre-test | 33.50 | 9.39 | 0.60 | 1.25 | 0.48 |
| | Post-test | 36.10 | 7.71 | | | |

**Significant at 0.05 level of confidence.*

***The table value required for 0.05 level of significance with df is 2.065.***

The table II shows the mean score of balance between experimental group and control group are 11.76 and 7.71 respectively. As the obtained't' ratio 4.29 is greater than required value 2.065 at 0.05 level of confidence at 38 degree of freedom. The above table result shows that there was a significant difference between experimental group and control group on the changes in balance.

**Fig. 2 - Difference in Mean Scores of Experimental and Control Groups on Balance**




## 6. DISCUSSION OF FINDINGS :

The results of the study indicated that the effect of selected yogic posture on flexibility and balance among college-level taekwondo players. These findings are also in agreement with the findings of (***Prashad, 2004***) study stated that the yoga physical postures and breathing exercise improve muscle strength, flexibility, blood circulation and oxygen uptake as well as hormone functions. The result of this study is in consonance with the findings of the following studies by (***L.B. Johan Walsakom, 2000***), ***K.Bharatha Priya & R.Gopinath, 2011***), ***K.M.Manimagali and S.Chitra, 2011***), (***Iyengar, 1995***), the studies are positively related with result of the present study.

## 7. CONCLUSION:

The experimental group (yogic posture) resulted in the following changes in the yogic posture when compared with the control group The results of the study showed that there was a significant difference exist between experimental group (yogic posture) and control group on flexibility and balance and also there was a significant improvement on flexibility and balance due to selected yogic posture.

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