

## **Effect of Practice of Yoga Exercises on Balance and Perception of National Level Players**

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**Abstract:** *The purpose of the study was to find out the effect of practice of yoga exercises on balance and Perception of Punjab National level players. The experiment study was conducted on 40 male players of Gymnastics and Kho-Kho who at least participated in the state championship and there age ranged was between 14-40 years. The total 40 players (as subjects) were divided into two groups namely control groups and experimental groups (20 each). The test of balance (static&dynamic) and perception were taken as criterion measures. The experimental group was given an exercise schedule of selected yogaasana for the period of six weeks. He control group was not given any sort of special training. The analysis of datashowed that the practices of yogic exercises are found effective to develop the balance and perception.*

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### **I. Introduction**

Yoga is an ancient science which was developed thousands of years ago India. As a holiday science Concerned with all aspect of human functioning, yogic science provide a unifying framework by which we come aware of what is, of what sensations exist right now in the body and corresponding through that exists in the mind. This is becoming aware of what puts us in touch with emotions that may have been ignored. The wonderful Paradox of awareness is that when we become truly aware of what is, things being to change. For no other reasons than this, asana practice can be wonderful antidote to the stress of modern life.

Yoga involves a systematic method by which the awareness of the Processes of stress can be expended and thus gain control over them. In a practical sense, yoga gives the tools and techniques by which one can expended one's conscious awareness into the unconscious part of the mind.

Yoga is defined as a "Unitive Discipline" the discipline that leads to inner and outer union, harmony and joy. Yoga is indeed associated with certain metaphysical notions, but the Practice in itself does not require any spiritual or religious adoption. Even open minded agnostics can practice yoga with great benefit. Yoga is like a tree that is more than five thousand years old. It has big tangled roots, a gigantic stem, several huge branches, numerous secondary branches and countless twigs. Some the branches are quit dead while other are very much alive blossoming a new every spirit. Our posture says a lot about our inner life. Posturing is always an attempt to conceal a weakness. Good posture suggests inner balance. When good posture is maintained with ease in all circumstances, we have poise.

Asana is straight forward and practical techniques that make concrete the process of becoming present in the movement. Through this process, one can surrender the old patterns of feeling and move towards the freshness of the possible.

Balance is an important aspect of efficient motor response and is one of the basic motor factors. It is the ability to maintain the neuromuscular system in a static condition for an efficient response or to control it in a specific efficient position while it is in motion. It is the ability to maintain balance during whole body movement and to regain balance quickly after the balance disturbing movement. Balance activity can be of two types:

- a) Ability to maintain balance during stationary position or slow movement (Static balance). It depends primarily on kinesthetic, tactile and to some extent on vesicular sense organs.
- b) Ability to maintain or regains balance during large range movements and during rapidly changing positions of the body. It depends primarily on the function capacity of the vestibular sense organs.

Balance is essential to perform many motor tasks/skills. It is an example of a motor response depends on the integration of stimuli from the visual and kinesthetic systems. Whenever you have to maintain your body balance, a stream of sensory information is integrated in the central nervous system and your muscles constantly activate or relax as needed. A person must maintain balance in an almost infinite number of situations. Sometimes we balance stationary (Static balance) and sometimes when moving (Dynamic balance).

A person can perform one type of balance tasks quite well but may perform another type at only an average level. For this, the balance development is best related to the specific balance tasks used to assess performance. The pattern of improvement of balance depends on the assessment tasks. It is possible that at certain ages and on certain tasks, children attempt more efficient movement patterns resulting, presumably temporary, decline in quantitative score.

Perception is involved in all voluntary muscles movements except reflex action. There is very little evidence to indicate a direct relationship between learning specific perceptual motor skills and learning to read and write. Perception and interpretation of stimuli in the performance of the perceptual motor response, to other activities occurs; the capacity of the child in both areas is improved.

When the term perception is used, the most of the people think of visual perception. Vision is not only source of sensory input. Information can be received through the channels of sound, touch, smell, taste, awareness of the body position (Kinesthetic) and sight (visual). These are the components of perception. In complex motor activity, the sense is used in an integrated manner to allow for efficient movement. Research accomplished that the process of Perceiving can be improved through certain education procedures.

## **II. Methodology**

The forty male gymnastic and kho-kho players who at least participated in the National level Championship were selected for this experimental study. Their age ranged was between 14-20 years. The subjects were divided randomly into two groups (20 each) namely control group and experimental group. The test of balance (State and Dynamic) and of perception was taken as criterion measures for the purpose of the study. A six weeks yogic asana training schedule was given to them to see the effect on perception and balance.

For static balance test, the stroke stand test, the bass stick test (both cross wise and lengthwise) was counted on the subjects. The modified bass test of dynamic balance was conducted. The distance perception test and ball throw test were conducted on the subjects to the test the perception. Before conducting the tests, the research scholar has explained and demonstrated to the subjects and further tests were implemented with the help of assistants.

### **Distance Perception Jump Test**

This test was designed to measure the ability of the Performer to Perceive the distance jumped without the use of eyes, by concentrating on the feel of the jump. Validity and reliability of the test are accepted at face value. The test is useful for both sexes, age 10 through college age. A measuring tape, blindfolds, chalk and marking tape are needed to conduct this test.

#### **Procedure**

Two lines are placed on the floor 24 inches apart. The student stands at the starting line and visually reviews the situation. Then he or she closes the eyes, Pauses for 5 seconds, jumps from the starting position trying to judge the distance of the jump so that the heels lands on the target line.

#### **Scoring**

The number of inches the student jumps the target line and the heel farthest from the line is measured to the nearest quarter inch. The student has two trials, and the score is the total inches measured for the trials.

### **Ball Throw Test**

The purpose of this test is to measure the performer's ability to throw a ball at specified distance without using his eyes. In other words, the test measures kinesthetic perception as it relates to throwing. Equipment needed is a softball and blindfold at each testing station.

#### **Procedure**

The student stands on the starting line in a throwing position and reviews the situation careful, trying to develop a sense of the distance to the target line. Then while blindfolded, he or she attempts to throw a softball in such a way that it lands on the target line.

#### **Scoring**

The student is allowed three trials, and the score for each trail is the distance the ball misses the target line, measured to the nearest foot. The final score is the total of the score for three trails.

The thirteen asana were taken on the basis that whole body parts to be involved in performing asana. The progression of yogic exercises, over a period of six weeks is presented in the Table 1.

The subjects were dividing randomly into two group's viz.: control group and experimental group. Each group of total 20 subjects. The experimental group was given an exercise training of selected yogic asana for the period of 6 weeks. Whereas the control group was not given any sort of special training. The practice session was conducted for duration as per Table-1, in the morning except Sunday for the period of 6 weeks. Similarly, the subject of control group was asked to perform their regular physical training programme under the super vision of the their coach /phy.edu teacher for the same duration. The experimental groups was treated as per the following scheduled of Table-1.

**Table 1: Selected Yogic Asana Practiced By the Experimental Group.**

Sr. No.	Yogic Asanas	1 <sup>st</sup> and 2 <sup>nd</sup> and 3 <sup>rd</sup> weeks(Min)	Duration (weekly wise) 4 <sup>th</sup> and 5 <sup>th</sup> and 6 <sup>th</sup> weeks(Min)
1	Vrikshasana	1.0	1.5
2	Paschimatanasana	1.0	1.5
3	Yogamudra	1.0	1.5
4	Sarvangasana	1.0	1.5
5	Halasana	1.0	1.5
6	Matsyasana	1.0	1.5
7	Bhujangasna	1.0	1.5
8	Salabhasana	1.0	1.5
9	Dhanurasana	1.0	1.5
10	Chakkarasana	1.0	1.5
11	Bakrasana	1.0	1.5
12	Utkatasana	1.0	1.5
13	Shavasana	2.5	2.5

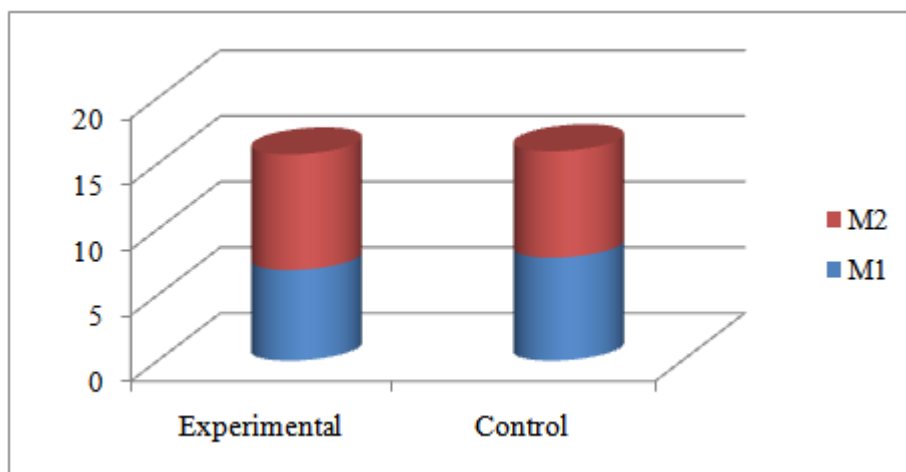
### III. Result And Discussion

The mean difference of both group for selected yogaasana were tested for significance of difference by 't' test. The difference of initial and final score was taken into account and the difference in the mean gained, was tested by 't' test. The level of significance was at .05 level of confidence. All the score of static and dynamic balance and perception obtained during Pre and Post- test, before and after the experimental period of six weeks, are shown in the Table 2 to Table 7

**Table 2: The Scores Of Strok Stand Test**

Group	M1	M2	D	SE	t ratio
Experimental	6.90	8.80	1.90	0.72	2.61*
Control	7.84	8.10	0.26	0.58	0.46

\*Significant at .05 level of confidence.

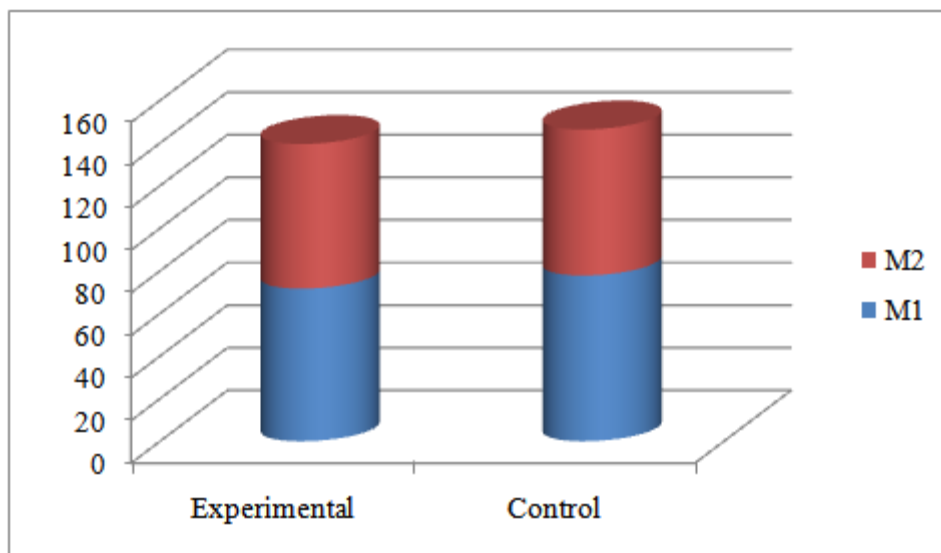


The data presented in Table 2, reveals that the initial mean values in case of static balance are concerned which was measured with the help of Stork Stand Test of Experimental, and Control group was 6.09 and 7.84 respectively. The final mean value of static balance is 8.80 and 8.10 respectively after six weeks of experimental period is over. The difference was found statically significant at 0.05 level of confidence. Thus, this shows that the mean gains in static balance, can be increased, significantly, by administering a training schedule of yogic exercise.

**Table 3: The Scores Of Bass Stick Test(Cross Wise)**

Group	M1	M2	D	SE	t ratio
Experimental	71.64	77.84	6.20	1.81	2.22*
Control	67.90	68.50	0.60	3.70	0.16

\*Significant at .05 level of confidence.

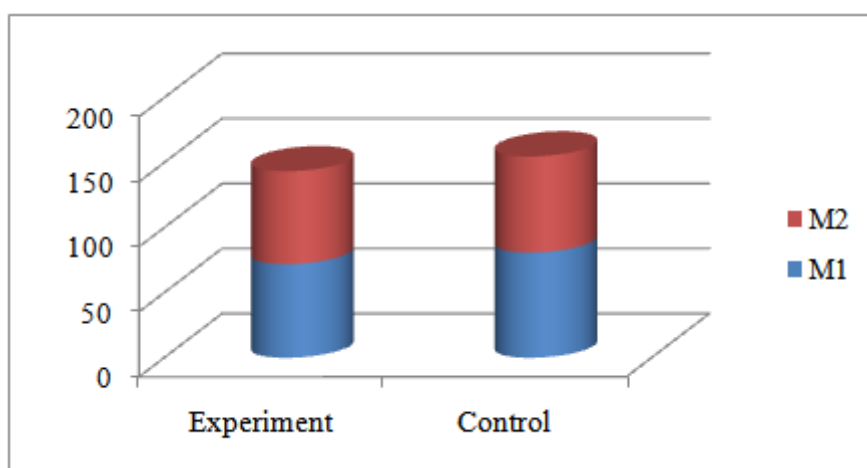


The initial mean values in Table 3, in case of static balance which measured with the help of Bass Stick Test (cross-wise) of Experimental and control groups were 71.64 and 67.90 respectively. The final mean value was 77.84 and 68.50; at the control group 't' value was 0.16. This shows that the mean gains in static balance can be increased significantly by administering a training programme of yogic exercises.

**Table 4: The Scores Of Bass Stick Test(Length Wise)**

Group	M1	M2	D	SE	t ratio
Experimental	72.05	80.95	8.90	2.50	2.71*
Control	71.45	73.90	2.45	2.20	1.14

\*Significant at .05 level of confidence.

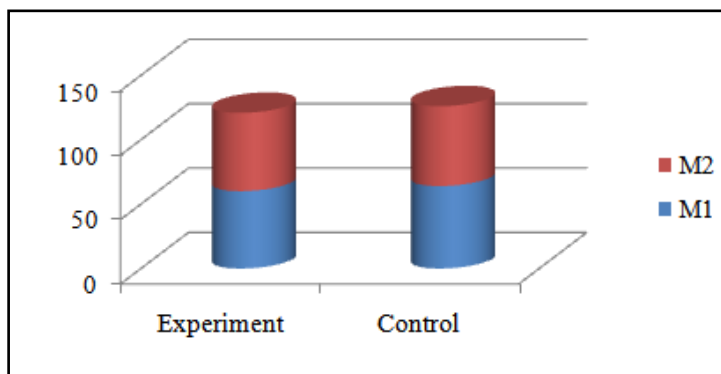


The data presented in Table 4, indicates that the initial mean value, in case of static balance, which was measured with the help of Bass Stick Test(length-wise) for the experimental and control groups, were 72.05 and 71.45 respectively. The final mean value of both groups was 80.95 and 73.90, after six weeks of training. The 't' test value obtained for the experimental group was 2.71 at 0.5 level of confidence. Thus, this shows that the mean gains in static balance can be improved significantly by administering a training programme of yogic exercise.

**Table 5: The Scores of Modified Bass Stick Test**

Group	M1	M2	D	SE	t ratio
Experimental	60.10	64.05	3.95	1.78	2.52*
Control	60.80	62.00	1.20	2.02	0.51

\*Significant at .05 level of confidence.

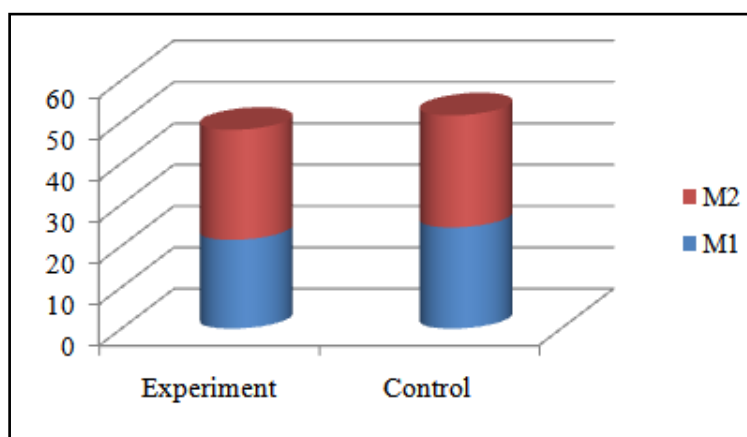


The initial mean values of dynamic balance which was measured with the help of Modified Bass Stick Test, in the case of experimental and control group were 60.10 and 60.80 respectively. The final mean value of dynamic balance for both group were 64.05 and 62.00 respectively, at the conclusion of six weeks of experimental period. The 't' value of experimental and control groups were 2.52 and 0.51 respectively. This indicates that the mean gains in dynamic balance can be increased significantly by implementing a training schedule of yogic exercises for six weeks.

**Table 6 : The Scores Of Distance Perception Test**

Group	M1	M2	D	SE	t ratio
Experimental	21.45	24.45	3.00	2.41	4.80*
Control	26.60	27.10	0.50	0.64	0.61

\*Significant at .05 level of confidence.

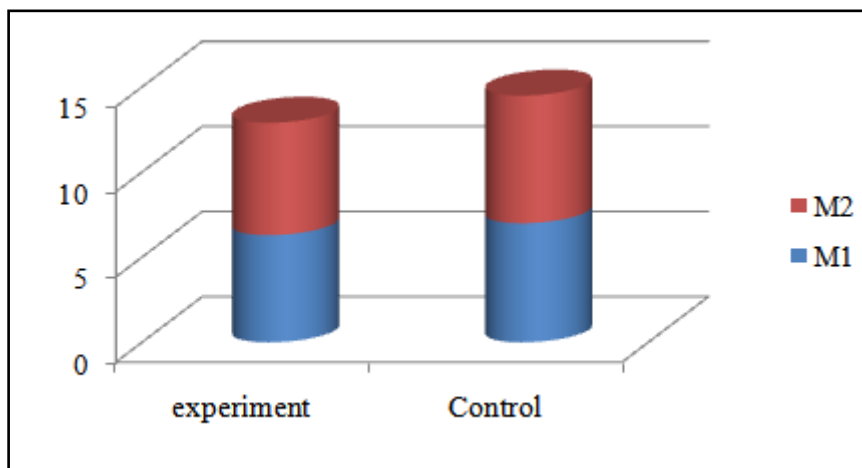


The initial mean values in the case of perception which was measured with the help of Distance Perception Test for experimental and control group were 21.45 and 26.60 respectively. The final mean value of perception of both groups was 24.45 and 27.10 after the training of yogic asana of experimental group is over. The 't' value obtained in respect of experimental group was 4.80 and in respect to control group 't' of 0.61. This shows that the mean gains in perception were increased significantly by attending a six weeks training programme of yogic exercises.

**Table 7: The Scores Of Ball Throw Test**

Group	M1	M2	D	SE	t ratio
Experimental	6.30	7.00	0.70	1.40	1.00
Control	6.60	7.50	0.90	1.48	1.20

\*Significant at .05 level of confidence.



The initial mean value in case of Ball Throw Test of Experimental and control Groups were 6.30 and 6.60 respectively and the final mean value of the Ball Throw Test score of both groups were 7.00 and 7.50 at conclusion of six weeks of experimental period. The obtained 't' value in respect of experimental and control group were 1.00 and 1.20 respectively, which was not found statically significant at the level of 0.05 confident. Thus, this shows that there is no effect of yogic exercise of Ball Throw Test scores.

#### **IV. Conclusions**

From the results of this study the researcher conclude that longer duration of yogic exercises will significantly improves the balance and perception. It was concluded from the analysis of data that:

- Static balance can tie increased by giving training schedule of yogic asana.
- Perceptual development can be influenced through training of selected yogic asana.
- The training in Yogic exercise can be found effective to develop perception and balance.

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