Naveen Shodh Sansar (An International Refereed / Peer Review Multidisciplinary Research Journal)
RNI No.- MPHIN/2013/60638, ISSN 2320-8767, E- ISSN 2394-3793, Scientific Journal Impact Factor (SJIF)- 8.054,
October to December 2025, E-Journal, Vol. I, Issue LII (52), ISO 9001:2015 - E2024049304 (QMS)

A Study of The Effect of Pranayama and Asanas on Breath Holding of Football Players

Deepak Veerwal* Dr. Santosh Lamba**

*Ph.D. Scholar (Physical Education) JRN Rajasthan Vidyapeeth University, Udaipur (Raj.) INDIA
** Assistant Professor (Physical Education) JRN Rajasthan Vidyapeeth University, Udaipur (Raj.) INDIA

Abstract: The of football players effect on breath holding capacity through training of Pranayama and Asanas. In this study, 20 subjects were selected in each group by dividing them into two parts as experimental group and control group. After selection, they were divided into Pranayama group, Asana group and control group. Improvement in breath holding capacity was observed in the selected students after taking training in Pranayama and Asanas. The main objective of this research was to study the effect of training in Pranayama and Asana on the breath holding capacity and of boys. selection of samples, methods of measurement, this study included football player from the tribal area of Southern Rajasthan. In this study, boys studying at school level were selected. The age of the selected boys was between 14 and 16 years.

Introduction - The process of stopping the movement of Prana by exhaling completely is called Rechak Pranayama. And the process of stopping the movement of breath by inhaling is called Poorak Pranayama. Stopping Prana completely inside is called Antar Kumbhak and exhaling it completely is called Bahya Kumbhak. The process of stopping the movement of Prana by inhaling is called Kumbhak. When only Kumbhak is stable without any effort, then it is said to be siddha. This Pranayama is the best for enlightening the soul.

Pranayama is the science of breathing. It is an axis around which the wheel of life revolves. According to the science of yoga, the age of a person is not measured by years, but by the count of breaths. This is the reason why Yogis breathe in a slow, rhythmic manner. The life force is strengthened by the process of breathing, the pulse remains calm, the cravings and desires are reduced and the door to liberation starts opening by conquering the mind. Concentration increases. If Pranayama is practiced in the wrong way, then one may have to face many problems like arthritis, asthma, bruises, etc. It takes more time to breathe deeply slowly. Desires are reduced by practicing Pranayama, due to which the divine light inside the body shines with full glory.

Review of literature:

Robinson and Seuss (1980) in their study on running activity, gave two groups thirty minutes. One group was given a continuous running program, and the other group was given 100-, 200-and 600-meter time tasks and rest after the test was done in a multiple of 1:3. The groups continued with the normal work, as a result of which the continuous running group's score increased by 8.9 percent. And the rest group and the controlled group's score increased by 3.1 and 3.2 percent. The maximum continuous running distance from the start of the physical test increased by 15.6 percent for the group, while the rest group increased by 11.3 percent and the controlled group increased by 6.5 percent. Thus, the positive effect of general training and intensive training on the performance of strength is evident in the physical capacity and endurance. Endurance performance is more closely related to the differences in A2 max.

Menk and Mera (1978) worked on the effect of a heat stimulating program on physical ability and physiological variables of graduate level children. The physiological variables included blood diffusion endurance. Male and female samples were selected. They were participants of Boston University's Physical Education Training Program, Weight Training Program and Calisthenics. The groups were given a total of 23 hours of exercise three days a week for 10 weeks. A pre-test and a post-test were conducted before the 10 week program. Significant improvement was seen in females than in males in these training variables, no difference was seen after the training method.

Uppal and Dutta (1998) worked on the effect of gymnastics and yoga on development and growth in their study. Children from one to five years of age were selected for this. 107 children studying in class four and five of primary class were selected. For the experimental study, two groups were formed and variables were selected and research work was done on body dimensional measurement, dynamic components and body subject

variables. Training was given for about ten months under the guidance of gymnastics master and yoga research center. Both the experimental groups were taught different weights in five blocks. Variance and covariance separation of data was done. As a conclusion, it was found that gymnastics and yoga had similar effect on the variables of this study. Gymnastics education was better than yoga for the physical development of children.

Prabhu Bhai (2001) in his study worked on physical fitness and physiology variables like blood circulation endurance, vital force and breath holding capacity through aerobic exercise and yoga. In this, 100 students studying physical education were selected. In this study, 100 male students aged 18 to 22 years were randomly selected and divided into three experimental and one control group. Training was given to three experimental groups for 12 weeks. First group had yoga, second group had aerobic exercise and third group had yoga and aerobic exercise. There was a group of 25 students each. Pre-test and post-test 'H' test was used to find the difference between the means. Significant level of 0.05 was set to test the hypothesis. At the end of the study, as a conclusion, a difference was found in the combined training of yoga and aerobic exercise and yoga and aerobic exercise in all the three experimental groups. While no difference was found in the control group. Training in flexibility, circulatory tolerance, vital force, breath-holding capacity and nervous endurance showed positive results on physiological variables.

Research objective: To study the of football players effect on breath holding capacity through training of Pranayama and Asanas.

Hypothesis: There is no significant difference on breath holding capacity by training in Pranayama and Asanas.

Research Methodology : The main objective of this research was to study the effect of training in Pranayama and Asana on the heartbeat, breath holding capacity and lung capacity of boys. The physiological variables like heartbeat, breath holding capacity and lung capacity are important. In this chapter, selection of samples, methods of measurement, reliability of the subject and separation of data have been shown.

This study included boys from the of Southern Rajasthan. In this study, boys studying at school level were selected. The age of the selected boys was between 14 and 16 years.

Outline of Subjects

Sequence	Group	Type of Training	Subjects
1.	Pranayama Group	Pranayama	20
2.	Asana Group	Asana	20
3.	Controlled Group	Free from Training	20
Total			60

The following measurements were used for this exercise.

Measurement Method

S.	Variable	Test	Measurement
1.	Breath holding capacity	Measuring breath holding capacity	seconds

Test Method (Test Methodology)

In the present study, training program was used for collection of data to obtain information about physical capacity, validity, reliability and definite form.

Reliability of Instruments (Standardized Instruments and Standardized Instruments)

Standardized instruments were used in the measurement method. Which were used after fulfilling the criteria of reliability.

In this study, 20 subjects were selected in each group by dividing them into two parts as experimental group and control group.

After selection, they were divided into Pranayama group, Asana group and control group.

(Planning of Study)

Plan of the Study (System and Pattern)

In this exercise, a total of 60 boys were selected as sample. Random method was used in the selection process. The selected boys were divided into three parts and divided into two experimental groups and one control group. The number of boys in each group was kept 20. There was a Pranayama group, Asana group and a control group. The groups of Pranayama and Asanas were given practical training for one week. After training in the selected Pranayama and Yogasanas, data was collected through pre-test and final test to measure the heartbeat, breath holding capacity and lung capacity of the boys of both the groups.

(Test Administration and collection of Data)

Before starting the training, data was collected by conducting a pre-test and testing the selected variables. After that, the data was collected by conducting a final test of the experimental group and the control group.

Ability to hold breath (Holding breath) Stop birthing capacity

The objective was to measure the ability to hold breath.

Equipment, tools and facilities (Thumbprint) Stopwatch.

Method (Method)

The boys were made to stand near a table, after which they were explained about the test by giving complete information. The activity of inhaling the breath into the lungs and then holding it was done. As soon as the breath was inhaled, the stop watch was turned on with the help of the assistant and as soon as the breath was exhaled, the stop watch was turned off. In this way, the capacity to hold the breath was measured.

Calculation (Counting)

The time between inhaling the breath into the lungs and exhaling it was noted. This activity was done three times. The better time in the three times of the activity was noted.

Calculation

The number shown in liters in the picoflormeter was noted. This activity was done three times. The best time obtained in the three times of the activity was noted.

Note (Chhath) Before the test, necessary instructions were given to the selected samples.

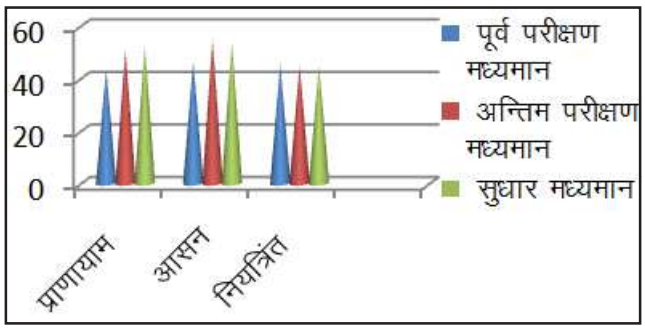
Table-2: Table showing partial difference between the means of two experimental and one control group in breath holding capacity test

Test mean			Mean	
Pranayama	Asana	control group		
52.245	53.492		1.247	2.999
72.186		44.797	7.448*	
	53.492	44.797	8.695*	

Level of significance 0.05 level

In the above table 4, we can clearly see the difference between the mean of the two experimental groups and a control group for the test of breath holding ability. The above table shows the difference between the mean and the pranayama and asana, pranayama and control, asana and control groups. It is easy to understand how much continuous improvement was seen in which group after training with partial difference. The significant effect of the experiment was not seen between the two experimental groups. But, the significant effect of the experiment was seen on both experimental groups in comparison to the control group.

Research discussion: This makes it clear that after testing the breath holding ability of the subjects due to pranayama and asana, the pranayama and asana training group showed improvement in comparison to the control group. Improvement was seen in the breath holding ability of the students selected for the eight-week pranayama and asana training.



Graph showing the mean of three experimental and one control groups in breath holding capacity test -1

Conclusions: Improvement in breath holding capacity was observed in the selected students after taking training in Pranayama and Asanas.

Suggestions and Recommendations :

1. This type of research can be done on players of any sport.
2. This type of research can be done on players of different levels.
3. This type of research can be done at different levels of school and college.
4. This type of research can be done by selecting the variables of psychology.
5. This type of research can be done using different types of dietary supplements, Ayurvedic medicines and training methods of Pranayama and Asanas.

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