International Journal of Scientific Research in Science, Engineering and Technology

Print ISSN - 2395-1990
Online ISSN : 2394-4099

OPEN ACCESS

Available Online at :www.ijsrset.com
doi : https://doi.org/10.32628/IJSRSET25122131

Effect of Pranayama on Orientation Ability of Cricketers of JECRC University Jaipur

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ARTICLEINFO

Article History:

Accepted : 13 March 2025
Published: 16 March 2025

Publication Issue :
Volume 12, Issue 2
March-April-2025

Page Number :
278-282

ABSTRACT

The objective of present study was to find out effect of the eight weeks training programme of Pranayama on the Orientation Ability of male cricketers of JECRC University. For the purpose of study, 80 male Cricketers from the JECRC University, Jaipur was randomly selected as subjects for this study. The subject age was ranged between 17 to 24 years. 40 subjects were selected for each group i.e. one experimental groups and one control group. All subjects were, randomly divided into one experimental groups and one control group. The groups 'A' was experimental groups and received training program. The group B served as a control group and continued participating in the normal program. Pranayama were considered as independent variable. Orientation was selected as dependent variable. Findings revealed that "t" values (8.88) of comparison between treatment pre group and treatment post group in relation to Orientation Ability was found to be significant at 0.05 level. On basis of findings it is concluded that significant effect of eight weeks training program of Pranayama on Orientation Ability of cricketers of JECRC University.

Keywords: Pranayama, Orientation Ability, cricketers etc.

INTRODUCTION

Pranayama, a form of controlled breathing in yoga, has been shown to positively influence cognitive functions, including orientation ability, even in the short term.

1. **Improved Focus and Attention:** Pranayama techniques, such as Nadi Shodhana (alternate nostril breathing) or Kapalabhati (skull-shining breath), enhance focus and attention by calming the mind and reducing mental clutter. This can improve spatial awareness and orientation in the short term.
2. **Reduced Stress and Anxiety:** Controlled breathing activates the parasympathetic nervous system, reducing stress and anxiety. Lower stress levels can enhance cognitive clarity, making it

easier to process spatial information and maintain orientation.

3. **Enhanced Brain Oxygenation** Pranayama increases oxygen supply to the brain, which can improve cognitive functions, including spatial awareness and orientation, even after a short session.
4. **Balanced Hemispheric Activity:** Techniques like Nadi Shodhana balance the activity of the left and right hemispheres of the brain. This balance can improve spatial reasoning and orientation skills.
5. **Mind-Body Connection:** Pranayama fosters a stronger mind-body connection, which can enhance proprioception (awareness of body position in space) and contribute to better orientation.
6. **Short-Term Effects:** Even a single session of pranayama (10–15 minutes) can lead to immediate improvements in mental clarity, focus, and spatial awareness, which are essential for orientation ability.

Statement of the Problem

Keeping in view the significance of research the purpose of the study was to find out the "Effect of pranayama on orientation ability of cricketers of JECRC University Jaipur".

Objective of the Study

The objective of present study was find out the training effects of eight weeks training programme of pranayama on Orientation ability during their normal daily routine.

Selection of Subjects

For the purpose of this study, 80 male Cricketers was randomly selected as subjects for this study.

i.e. 40 for treatment group and 40 for control group. The subject age was ranged between 17 to 24 years

Selection of Variables

The students reviewed the available scientific literature pertaining to the effect of six weeks training program of Asana and Pranayama on selected as independent variable and muscular endurance was selected as dependent variable.

Experimental Design

For the study pre test – post test randomized group design which consists of one control group (N=40) and one experimental groups (N=40) was used. Equal numbers of subjects were assigned randomly to the groups. One groups (Pranayama) served as experimental groups on which treatment was assigned and another group served as the control group.

Pranayama Group O1 T1 O2

Control Group O3 O4

O = Observation, T = Treatment

Pranayama practices were conducted for six weeks (5 days in a week).

Criterion Measures

Orientation Ability was measured by numbered medicine ball run test and score of the subject recorded in seconds. The score was best of the three attempts.

Treatment Protocols

Training was given for 30-45 min .Each pranayama perform for one and half min & 30 sec rest and three rounds of each pranayama. In the first two week, participants performed three types of pranayama, two rounds of each pranayama with one and half min duration for each round. After two the pranayama were performing same as first two weeks but time intensity was 30 sec increase. In beginning phase subjects were taught that how to perform the activities, all the precaution, prose and cones and principles of activities. In initiation phase repetitions were less and as subjects were being familiar with activities no of repetition were increase as fix schedule.

Administration of test

Numbered Medicine Ball Run Test

Purpose: To assess the orientation ability of participants.

Materials Needed: Five medicine balls weighing 3 kg each, one medicine ball weighing 4 kg, Stopwatch, Five metal number plates, Clappers and Pencil and paper

Description / Method: Arrange the five 3 kg medicine balls in a semicircle on a double field, spaced 1.5 meters apart, Place the sixth medicine ball (4 kg) 3 meters behind the semicircle. Position the five metal number plates (numbered 1 to 5) near the 3 kg balls. Before starting, the participant stands facing away from the sixth medicine ball. On the tester's signal, the participant turns, runs to the numbered ball called out by the tester, and returns to the sixth ball. This process is repeated three times, with the tester calling out different numbers each time.

Scoring: The total time taken to complete the course is recorded in seconds. Each participant is given two attempts, and the best time is recorded as their final score.

Collection of data

The data for proposed study was collected from 40 male cricketers from the JECRC University. The data was collected by administration of standard tests for Physical and physiological variables. The tests were administered during morning classes.

Statistical Technique

The data was collected from 40 male cricketers from JECRC University, Jaipur. The data was analyzed to see the significant Impact of Pranayama on Orientation Ability of cricketers with the help of Dependent t-test. The level of significance was set at 0.05.

Table –1 Descriptive Statistics of within Control Group in relation to Orientation Ability of cricketers.

Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-Control Group	40	8.132	0.780	0.123
Post-Control Group	40	7.871	0.723	0.114
Pre-Treatment Group	40	8.122	0.756	0.119
Post-Treatment Group	40	6.697	0.562	0.088

From the table number -1, it is revealed that mean of pre-control group and post-control group mean was 8.132 and 7.871 with the standard deviation of 0.780 and 0.723 respectively, whereas the mean of pre-treatment group and post-treatment group were 8.122 and 6.697 with the standard deviation of 0.756 and 0.562 respectively.

Table – 2 Paired "t" test for difference of mean of Experimental Group and Control Group in relation to the Orientation Ability of the cricketers.

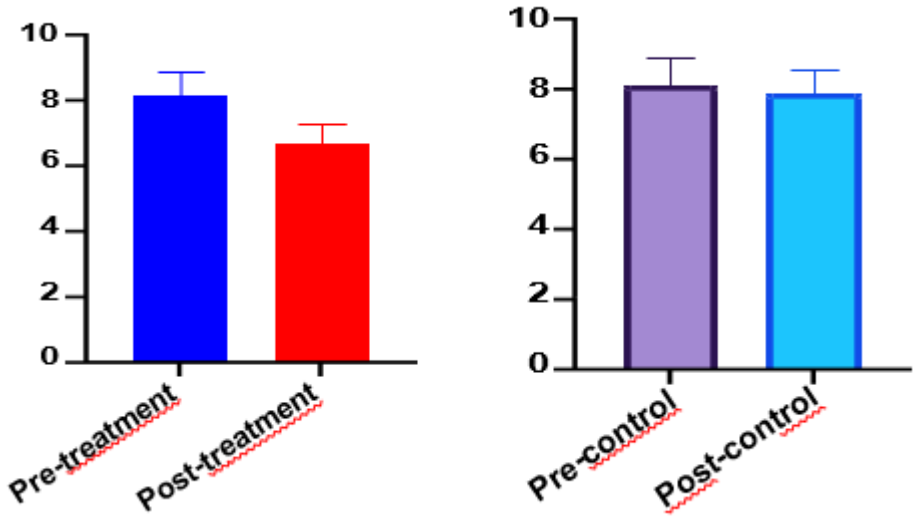
Paired Samples Test									
Group		Paired Differences					"T"	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pre-Control V/S Post-Control	0.261	0.057	0.009	0.10	0.27	1.52	39	0.379

Paired Samples Test									
Group		Paired Differences					"T"	Df	Sig. (2-tailed)
		Mean	Std. Deviatio n	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 2	Pre-Treatment V/S Post-Treatment	1.425	0.194	0.031	0.65	1.57	8.88	39	0.155

*significant at level 0.05. "t" value required to be significant at 1, 39 df = 8.88

Table 2 this is show that the paired treatment group and paired control group of calculated "t" values is 8.88 and 1.52 which is greater than 0.05 at the level of significant. This result indicate that treatment was given to subjects it is Improved of the Orientation Ability of subjects at significant level.

Figure -1 The Graphical representation of mean of pre-post control and experimental group in relation to orientation ability is presented with the help of figure-1.



DISCUSSION OF THE FINDINGS

The researcher examined the effect of pranayama on Orientation Ability of cricketers. The results show that the Orientation Ability of cricket improved throw the pranayama practice. It was found that the experimental group improved significantly. The rate of improvement was higher in the experimental groups in compared to control groups. Finally, the results show that participant who continued pranayama treatment improved their orientation ability to a greater extent than participants of control group. A similar study was conducted by Gore study on "The Effect of Kapalbhati on Some Body Functions", Kapalbhati involves forced but quick voluntary abdominal respiratory exercises. The effect of Kapalbhati on some body functions i.e., Orientation Ability was tested using the channel printing system. 30 observations were made on 10 healthy people and trained subjects. During Kapalbhati heart rate increased by 15 beats/min, eye movement was observed increased by Kapalbhati even if the eyes were closed. The alpha activity from parieto-occipital a showed a marginal decline in 57% of observations indicating mind calming effect on the brain.

CONCLUSIONS

From the above findings it is concluded that 8 weeks of pranayama practices having a significant impact on the orientation ability of the cricketers.

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