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Dr. Ajay Kumar Dandotiya
Assistant Director of Physical
Education, St. Xavier's
College, Jaipur, Rajasthan,
India

Effect of 8 weeks kapalbhati intervention on rhythm ability of senior cricket players

Dr. Ajay Kumar Dandotiya

Abstract

The purpose of the study was to find out how yoga's Kapalbhati influenced a cricket player's sense of rhythm. The independent variable was kapalbhati, while the dependent variable was considered to be rhythmic ability. The Sprint at the Given Rhythm Test evaluates rhythmic abilities and produces instantaneous results. A random group design was used for the investigation. Two groups of 20 people each were created. These subjects consented to the inquiry of their own free choice. The participants who had studied and practised Kapalbhati were maintained in the experimental group (N = 20), whereas the other people remained in the control group (N = 20). The results of the statistical analysis below were used to ascertain the treatment's impact on the experimental group using pre-test and post-test data on Rhythm ability. To ascertain the effect of Kapalbhati on cricket players' Rhythm skills, pre- and post-test data were analyzed using ANCOVA (Analysis of Co-Variance) after two months (eight weeks) of treatment. Additionally, mean values for each parameter in connection to the pre- and post-test were emphasised in a visual presentation that was made for rapid reference comparison. It was decided that because Kapalbhati helps cricket players develop their sense of rhythm, it should be a part of their training routines.

Keywords: Yoga, kapalbhati, rhythm ability, cricket and ANCOVA

Introduction

A component of yoga sadhana is pranayama. In Sanskrit, Prana and Ayama combine to make Pranayama. Organs, the mind, and many other vital living processes get energy from prana. Ayama means control and expansion. The ancient texts emphasise pranayama. Yoga uses the yogic practise of pranayama to manage prana. The fourth of the eight steps of yoga outlined in the Patanjali Yogasutra ^[1] is pranayama. It is ranked second in the Hathapradipika and fifth in the Gherandasamhita ^[2]. The Patanjali Yoga Sutra defines pranayama as the cessation of inhalation and exhalation (PYS) movement ^[2].

Kapalbhati is Hindi meaning "forehead brightness" (or face). Performing kapalbhati regularly will make one's face more radiant. Inhale deeply to expand the belly while seated in any comfortable meditation position with the palms on the knees and the fingers resting on the thumbs. Exhale and then tighten the abdominal muscles. To retain exhaled air as long as possible, keep your abdomen tight. Keep your shoulders and chest steady. It might take between 15 and 100 minutes to complete this. At initially, one shouldn't do more than 20–25 repetitions. While sleeping, it may be completed in phases. Few yoga teachers advocate stomach breathing. By bringing the diaphragm down on an inhalation, the abdomen is blown out. Exhaling frequently while holding your breath is known as kapalbhati. People breathe unconsciously. Kapalbhati strengthens adenoids, clears the sinuses, and stimulates the medullata. It is the phase that follows pranayam. The kandha organ of yoga, which is located four fingers below the neck.

72,000 naries are supposed to originate from it in yoga. Kandh sanchalan assists in arousing the kundalini in the muladhar, which is located between the anus and scrotum, by energising its 72,000 naries. The stomach is immobile during kapalbhati. It stimulates the mouth, ear, eyes, ear canal, and sinuses (gyanindriyas). Agnisar and nauli kriya are both types of kandh sanchalan. Here, Kapalbhati and Kandh sanchalan are advised. Kapalbhati should not be performed by patients who have heart disease, excessive blood pressure, hernias, or stomach ulcers. Men have busy lifestyles. His one movement is the result of his body and mind operating in unison. With joint efforts, individual success rises. Things from the outer world enter our minds via the body (sense organs), and things from our minds go to the outside world through the body ^[3]. In order to create graceful movements, technical sports need highly developed technical skills and coordination. In many sports, especially those that largely depend on technical and tactical factors 2, coordination abilities determine the upper bounds of athletic performance advancement.

Corresponding Author:
Dr. Ajay Kumar Dandotiya
Assistant Director of Physical
Education, St. Xavier's
College, Jaipur, Rajasthan,
India

The largest challenge facing today's physical educators and coaches is giving progressive instructions based on scientific technique that result in the desired results. Different strategies have been developed throughout time to increase physical strength, speed, and other components, which have proven successful, but mental activity management, or coordinated efforts, is still a mystery.

Coaches and PE instructors in India use similar teaching techniques. Training without taking into account its effects. Sometimes coaches and PE instructors are unable to recognise the training property, which reduces performance. Cricket is a hobby, someone once stated. No longer slow and monotonous. Limited-over cricket is referred to as the "perfumed harlot." Physical agility is required for one-day games. Watching fielders move swiftly is lovely. An excellent try that still results in the ball popping out of frantic hands to give the delighted batsman the run he craves, a good catch, a precise throw, catching the scrambling batsman out of his crease, an angosing misfield that takes away runs the side can't afford, or a wonderful try that still results in the ball popping out of frantic hands, may turn the game around.

There are various department in Cricket i.e. Batting, Bowling, fielding and no other takes precedence over the other, they are all of course of equal importance. As science has improved, so have sports practises and training, and this has affected cricket, notably bowling and fielding. Great cricket players, coaches, and analysts say fielding should be prioritised. Tony Greig has written that "a side which never drops a catch never loses a match" [4].

Physical qualities of a sport modality contribute to its performance and allow coaches and scientists to notice distinctions among players of other modalities. Physical (general and particular circumstances), psychological (personality and motivation), anthropometrical (body morphology, anthropometry, and body composition), and biomechanical aspects affect sports performance.

Coordination is important to maximize conditional,

technical, and tactical capabilities. A sportsman can't maximize his psycho-biological powers and reserves without well-developed coordination. Coordination abilities determine the maximum limits of sports performance improvement in many sports, especially those that rely heavily on technical and tactical factors. Coordination evaluation and growth potential are key in identifying athletic talent.

Rhythm ability is the ability to perceive the externally given rhythm and to reproduce it in motor action. It also denotes the ability to reproduce a rhythm, existing in motor memory, in motor action. In some technical sports like gymnastics, figures skating the sportsman have to perceive an external rhythm, given in the form of music, and to express it in his movements. In many sports rhythm is not given from outside. In these cases the sportsman has to make use of the rhythm stored in his motor memory. This is essential for effective motor learning as well as for high quality of movement execution. The rhythm ability, like balance ability, is of fundamental importance in sports. This ability is not limited to the movement of the sportsman himself but extends to the perception of rhythm of others movement also e.g. group rhythm. The ability to perceive the rhythm of movement of others is the basis for sound perception of technical errors by coaches. It also finds expression in the tendency to "flow along with" the rhythm of someone else's action the research examined the effects of Kapalbhathi intervention on cricket players' Rhythm ability.

Methodology

Selection of Subject & Study Design

The random group design was used for the study. Two groups were made, each comprising of twenty subjects. These subjects participated voluntarily in the study. The subjects who learned and practiced Kapalbhathi were kept in the experimental group (N=20) and the other subject were kept in control group (N=20). The age of subjects was 18 to 25 years.

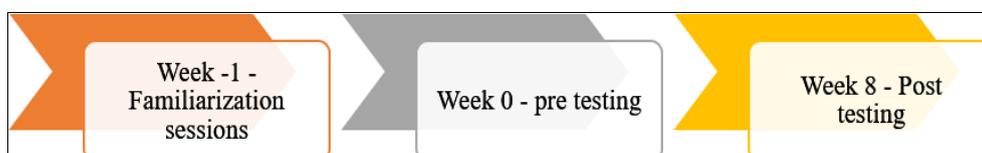


Fig 1: Intervention schedule

Administration of test

Sprint at the given rhythm test

Objective

To determine the Rhythm Ability of the subjects.

Equipment's

Eleven gymnastic hoops 1 meters in diameter each, one stop watch and one measuring tape

Description

The subject was run a distance of 30meters with maximum sprinting speed marked between two lines. The sprinting time of the subjects was taken by stop watch. In the second attempt the subject was run at a particular rhythm with

maximum speed through eleven hoops which were arranged systematically. Three hoops were kept in a sequence against each other at a distance of 5meters from the starting line. Similarly three hoops were kept at a distance of 5meters from the finishing line. Five more hoops were kept in a sequence in the middle of the running distance. The subject was run through those hoops stepping in between each hoop. The scholar explained the test along with one demonstration and each subject was given one trial run.

Scoring

The difference between the timing of first and second attempt was taken as the score.

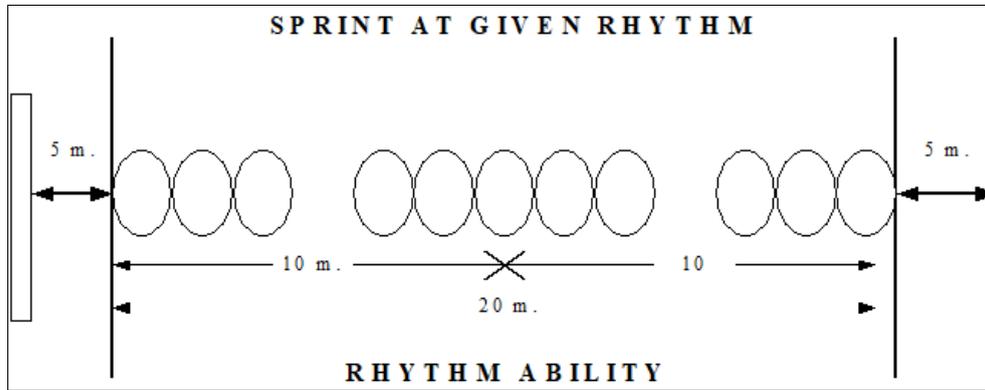


Fig 2: Rhythm ability

Training Schedule for the Experimental groups
(Eight weeks, Five days a week, 30-40 min/day)

Activities	Total time duration for all the Groups = 30-40 min
Prayer	3 min
Nadi Shuddhi	5 min
Kapalbhati	20-30 min
Shanti Path	2 min

Result

The collected data were analyzed statistically through analysis of covariance (ANCOVA) to find out the significance difference, if any between the groups. The 0.05 level of confidence was fixed to test the level of significance difference, if any between groups.

Table 1: Descriptive Statistics of Pre-Test and Post-Test of Experimental Group and Control Group in Rhythm Ability

Groups	Observation	M	S. D	N
Experimental group	Pre – test	2.130	.50262	20
	Post – test	1.6235	.55104	20
Control group	Pre – test	2.0650	.51939	20
	Post – test	2.0350	.5236	20

Above table and fig 3 includes mean (M) and standard deviation (SD) of rhythmic ability in the both observations i.e. on pre-test and post-test of experimental group and control group. Above table also indicates that the

Table 3: Post Hoc Comparison of Adjusted Post Test Means of Experimental and Control Group of Rhythm Ability

(I) groups	(J) groups	Mean Difference (I-J)	Std. Error	P-value	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
Experimental	Control	-.477*	.123	.000	-.726	-.227
Control	Experimental	.477*	.123	.000	.227	.726

*p value < 0.05 is significant

Above table 3 indicates that there was significant difference found between experimental group and control group as the

experimental group post – test mean value (1.62) was lower than pre – test mean value (2.13). In control group post – test mean value (2.150) was lower than pre – test mean value (2.06).

Table 2: Analysis of Co-Variance of Comparison of Adjusted Post Test Means of Experimental Group and Control Group of Rhythm Ability

Source	Type III Sum of Squares	Df	Mean Square	F	P-value
Pre	4.974	1	4.974	32.898	.000
Groups	2.271	1	2.271	15.016	.000
Error	5.595	37	.151		
Total	151.484	40			
Corrected Total	12.840	39			

*p value < 0.05 is significant

Above table 2 shows that there was a significant effect of training on rhythmic ability as the p-value was 0.00 which was less than 0.05. It also shows that there was significant difference found between experimental and control group during pre – test as the p-value was 0.00 which was less than 0.05.

Since, the analysis of covariance for rhythmic ability was found significant difference between experimental group and control group. Therefore post hoc comparison LSD test was applied.

p-value was 0.000 which was less than 0.05.

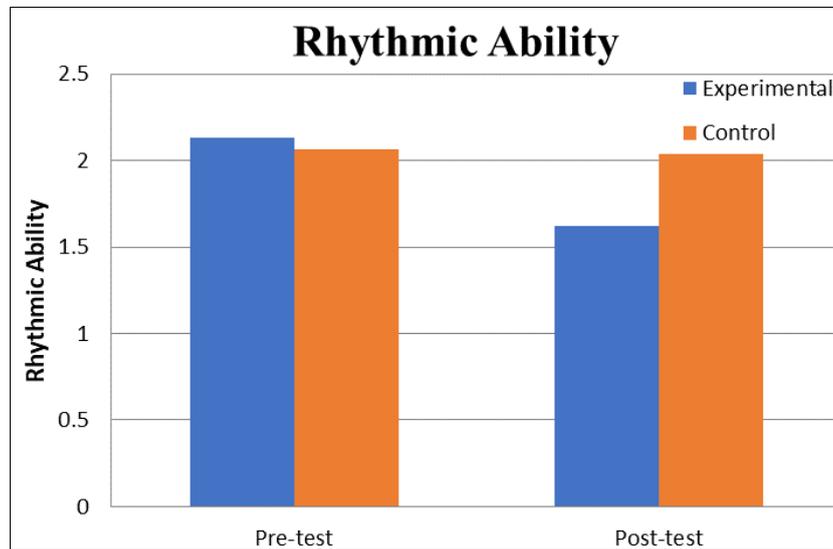


Fig 3: Graphical representation of Pre-Test and Post-Test of Experimental Group and Control Group of Rhythm Ability

Discussion on Findings

The research scholar examined the effect of Kapalbhathi on selected Coordinating ability i.e., Rhythm ability of Cricket. The results, in general, support that Kapalbhathi improved Rhythm ability of Cricketers. It was found that the experimental group improved significantly. The rate of improvement was higher for the experimental groups in comparison to the control groups. Finally, results show, that the subjects who followed the treatment of Kapalbhathi improved their Rhythm ability higher than participants in control group.

Conclusion

From the above findings, it is concluded that the Kapalbhathi having significant effect on selected Coordinating ability i.e., Rhythm ability as in 8 weeks.

References

1. Patanjaliyogasutra (PYS) II/10, Patanjaliyogasutra, PYS II/49.
2. Digambarji, Shastri RN. Hathapradipika of Svatmarama (H.P. II/3). Pune: Kaivalyadhama, S.M.Y.M. Samiti, Lonavala; c1998.
3. Digambarji, Gharote ML. Gherandsamhita. Pune: Kaivalyadhama, S.M.Y.M. Samiti, 2nd Edition. Lonavala; c1997.
4. Kansal DK. A practical approach to Test Measurement and Evaluation. New Delhi: SSS Publication; c2012.
5. Verma JP. A Text Book on Sports Statistics. New Delhi: Sports Publication; c2009.