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## Instant effect of selected Pranayam practices on the performance of penalty stroke of hockey players

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### Abstract

**Aim:** The purpose of the study was to investigate the instant effect of selected pranayam Practices on the penalty stroke of hockey players.

**Material and Methods:** 24 female players aged between 17 to 25 years who have been participated in north zone Hockey intervarsity held at Aligarh Muslim University, Aligarh University in 2015-16 were selected as the subject for the study. The subjects were attending Hockey camp for seven days in Aligarh Muslim University, Aligarh University stadium was selected and a part of routine exercise during the period of experiment, however their dietary habits as per their socio-economic status. To find out the effect of exercises, the pre and post data were collected before and after the experimental programme.

**Statistical Process:** The 3 point scale was used in order to obtain the collection of the data. For the statistical analysis 't' test was applied a t0.05 level of significance.

**Results:** On the basis of the finding of the study the following conclusion were drawn that there was a significant difference found in the penalty stroke of the Hockey players.

**Keywords:** Penalty stroke, hockey and pranayama

### Introduction

Yoga is a complete science of life that originated in India many thousands of years ago. It is the oldest system of personal development in the world encompassing the entire body, mind and spirit. It is the union between a person's own consciousness and the universal consciousness. The Ancient Yogis had a profound understanding of man's essential nature and of what he needs to live in harmony with himself and his environment. They perceived the physical body as a vehicle, with the mind as driver, the soul as man's true identity, and action, emotion and intelligence as the three forces which pull the body-vehicle. In order for these to be integrated, these three forces must be in balance. Taking into account the interrelationship between body and mind, the Yogis formulated a unique method for maintaining this balance - a method that combines all the movements you need for physical health with the Breathing and Meditation techniques that ensure peace of mind.

The classical techniques of Yoga date back more than 5,000 years. In ancient times, the desire for greater personal freedom, Health and long life, and heightened self-understanding gave birth to this system of physical and mental exercise which has since spread throughout the world. The word Yoga means "to join or yoke together," and it brings the body and mind together into one harmonious experience.

Yoga is a method of learning that aims to attain the unity of mind, body, and spirit through these three main Yoga structures: Exercise, Breathing, and Meditation. The exercises of Yoga are designed to put pressure on the Glandular Systems of the body, thereby increasing its efficiency and total health. The body is looked upon as the primary instrument that enables us to work and evolve in the world, a Yoga student; therefore, treats it with great care and respect. The Breathing Techniques are based on the concept that breath is the source of life in the body. Yoga students gently increase their breath control to improve the health and the function of both body and mind. These two systems prepare the body and mind for Meditation, making it easier for students to achieve a quiet mind and be free from everyday stress. Regular daily practice of all three parts of this structure of Yoga produce a clear, bright mind and a strong, capable body.

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The process of Kapalbhathi is related to breathing process. The word Kapalbhathi is made up of two words, "Kapala" means "skull" here skull includes all the organs under the skull and "bhathi" means shining illuminating. Due to this process the organ under the skull mainly the brain and the small brain are influenced in a good manner. Since this process related to breathing, it should be performed sitting in padmasana.

Anuloma-viloma pranayama or the alternate nostril breathing exercise is one of the main practices of yoga. In Anuloma-viloma pranayama, breathing is done only through one nostril which is alternated. During this process another nostril is closed using the fingers. The thumb is used to close the right nostril and the ring finger is used to close the left nostril.

Hockey is a rough game for well-conditioned athlete. Hockey is a game in which the athlete must have strength, speed, agility, balance flexibility, endurance, co-ordination, cardiovascular endurance, desire, coverage and many other undefined qualities.

All Hockey players will follow the stretching exercise, strengthening exercise, cardiovascular exercise and isometric exercise. Each player will then continue his conditioning by following the sprinting exercise suggested for his individual position. Each player will condition a little differently according to the demands of the position he will be playing.

Hockey is a game of many-many short sprints with very little rest in between. The players must be in excellent cardiovascular condition and they must have great physical strength. There are many injuries in Hockey. So the seasonal strength programme is very important. The players and the coach must know how to regain strength quickly injury.

### Objective

The purpose of the study was to assess the instant effect of selected pranayam practices on the performance of penalty stroke of the Hockey players.

It was hypothesised that there would be no significant difference with the selected pranayam practices in the performance of penalty stroke of the Hockey players.

### Methodology

The study was delimited to the twenty four female Hockey players of Aligarh Muslim University, Aligarh University, who have been participated in women Hockey north zone

interversity competition held in Aligarh Muslim University, Aligarh belonging to the age group of 17 to 25 years. The study was also delimited in selected pranayam practices i.e. kapalbhathi and anuloma-viloma paranayama. They were attending Hockey camp in university stadium were selected and a part of routine exercise during the period of experiment, however their dietary habits as per their socio-economic status. The pre and post-test would be conducted in order to obtain the data. The scores of the subject in penalty stroke were used as a criterion variable in the study. The performances of the subject were assessed by three judges however elements related to the accuracy of goal were also added used in three point scale. Three points awarded in correct action and goal scored. Two points awarded in correct action but not goal. One point awarded if reached to the goal post. The subjects were made to take 5 (five) strokes before and after test administration from penalty stroke area.

### Test Administration

The researcher has told the purpose of the study and gives a demonstration to the subject so that they can understand clearly what they have to do to give their best performance. The subjects were made to take five strokes from the penalty area continuously one by one and their performance was assessed by the three judges and the score given by the judges would be taken as the score of the subject. After that immediately the subjects were made to sit in the position of Padma asana and told to perform kapalbhathi atleast 70 to 80 strokes in one set of kapalbhathi. After completing this they were told to perform anuloma-viloma atleast for 2 minutes for once. With the continuation of testing process in the same way 20 repetition of kapalbhathi and 20 repetitions of anuloma-viloma was conducted in alternate basis. After which the post test was administered the subject were again have to make five stroke from penalty area and their performance will be assessed by the 3 judges and scores will be collected.

### Statistical analysis

To find out the effect of pranayam exercises on the performance of penalty stroke ability of the Hockey players 't' test was applied at 0.05 level of significance.

### Finding and Results

**Table 1:** Comparison of Means of pre-test and post-test of Penalty Stroke Performance

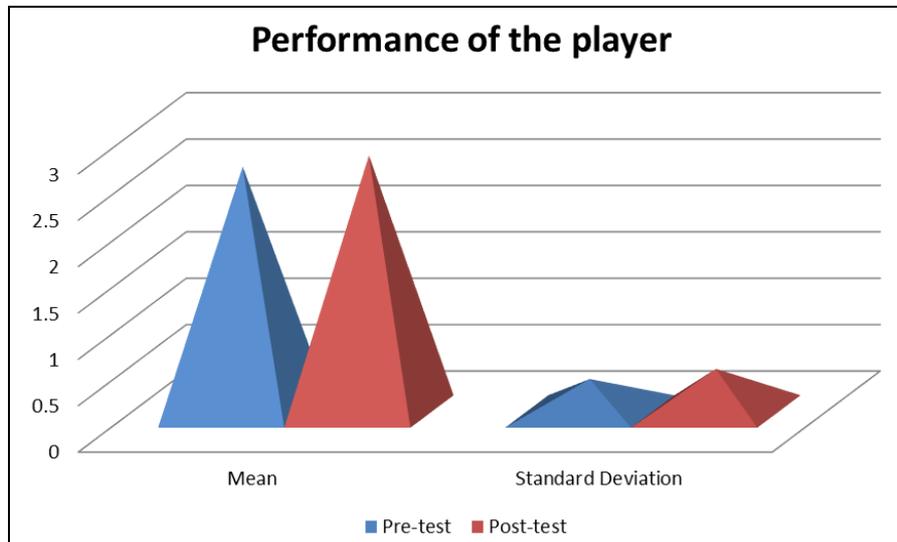
Test	Mean	Standard Deviation	Mean Difference	't' Ratio
Pre-test	2.64	.35	.11	0.62
Post-test	2.76	.46		

\*Significant at 0.05 level.

t.05 (23) = 2.07

The mean value of Pre-test and Post-test of the performance is 2.64 and 2.76 respectively. Standard deviation value of pre-test and Post-test is 0.35 and 0.46 respectively. Value of 't' ratio is .62, this value is insignificant at 0.05 level. To be significant at 0.05 level, the value of 't' ratio should be

greater than or equal to 2.07. It means that the random assignment to the subject was quite unsuccessful. The pranayam practices has not effected on the performance level of the players.



**Graph 1:** Shows the pre-test and post-test mean of penalty stroke performance

### Discussion of findings

It is evident from the finding that immediate pranayam exercises have not increased the performance level of penalty in Hockey players. This might be because of the error that occurs at the time of random assignment of the subjects. May be kapalbhati and anuloma-viloma method of exercises were not performed properly by the subject which produce no effect to increase the performance level of Hockey players. Another fact was the player's pre learnt skill and their daily routine exercises that could also affect their performances were considered as the major limitation of the study. This might be attributed to the fact that the diet and other socio economic factor could also influence the performance of the subject was also considered as the limitation of the study.

### Discussion of hypothesis

It was hypothesised that there would be no significant difference with the selected pranayam exercise in the performance of penalty stroke of the Hockey players was accepted.

### Conclusion

It was concluded that the pranayam exercises could not produce any positive effect upon the instant performance level of penalty stroke in Hockey players.

Finding of this study can be used in improving the training programme to enhance the penalty shooting abilities of the Hockey player.

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