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## **EFFECTS OF KAPALBHATI ON THE PERFORMANCE OF TARGET GAMES PLAYERS**

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# Effects of Kapalbhathi on the Performance of Target Games Players

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**Abstract – The purpose of the study was to determine the effects of Kapalbhathi on the performance of target games players. Hundred male target games players in the age group of 16 to 35 years were selected as subjects for the study. The subjects were divided in to two equal groups (Fifty each). One group served as Central group and another as the experimental group. The experimental group went under the training for Kapalbhathi for twelve week duration, for six days in a week for 15 to 20 minutes each. Prior to this training a Pretest was taken. The test was repeated at the end of second, fourth and six, eighth, tenth and finally twelfth week. In order to compare the effectiveness of the training program on the performance of the of target games players t-test was employed. The level of significance was set at 0.05.**

## INTRODUCTION

Kapalbhathi is the process of forceful exhalation and inhalation after the manner of an iron- smith bellows. Of course, iron smith presses the bellows with his hand, while for kapalbhathi abdominal wall is pressed by bringing into to play the abdominal muscles and then let loose. Bhramanand advised both exhalation and inhalation to be forceful; though in fact for Kapalbhathi only exhalation requires effort inhalation automatically follow without any force being applied by the person who is taking this exercise. Swami Kulvayananda, therefore, does not stress applying of force for inhalation. He emphasizes inhalation and exhalation in rapid succession. The purpose of the study was to see the effect of kapalbhathi on the performance of concentration of Target games players. The study was delimited to Hundred (100) Target games players in the age group of 16 to 35 years. The study was further delimited to selected technique of kapalbhathi.

## METHODOLOGY

**Selection of Subjects:** Hundred male Target games players in the age group of 16 to 35 years were selected as subjects for the study. Then the subjects were divided into two equal groups (fifty each). One group served as experimental and other as control groups. **Selection of Variables:** The target games require a high degree of development of psychomotor components especially the concentration. Thus the concentration was selected as dependent variables for the study- and the Kapalbhathi was chosen as independent variable. **Administration of Tests and Collection of Data for Concentration Purpose:** To measure the concentration ability of the subjects **Equipment:** Electrical mirror Drawing Apparatus. **Procedure:** A clam and quite atmosphere as required to

conduct this test was provided. The subject was asked to sit in front of the mirror drawing apparatus. The rubber pin having thin rod was given to the subject and was placed at the starting point in the star. The wooden plate was adjusted horizontally at adequate height above the hand of the subject so that start task was not directly visible to the subject. The subject was asked to move the pin in such a manner so that it does not touch the outer parts of the smaller and bigger star and subject was also instructed to concentrate into the mirror while performing star task with his hand. For each trial total number of errors and total time taken to complete each trial was recorded and in similar way they were given three trials and the average of total time and errors for each individual was calculated. Before collecting the final data each subject was given two trials in order to make them familiar with the apparatus. **Scoring:** The total number of errors were those when the iron rod touched with either outer parts of the smaller and bigger star and this was recorded in the meter recording number of errors. The stopwatch was started on the command was given and stopped as the subject completed the star task. The total time taken to complete the task recorded. The average of three trials recorded in order to obtain reliable scores as three trials in each case considered to be sufficient to yield reliable sources.

## TRAINING PROGRAMME: ADMINISTRATION OF TRAINING PROGRAMME FOR KAPALBHATHI

Although kapalbhathi is not a pranayam in the strictly technical sense of word, it is a breathing exercise and as such all that is said about the place, the time etc. One can assume any sitting posture conveniently to him. The spine of the practitioner should be erect and there should not be any abnormal curve in the spine.

Broadly speaking kapalbhathi is a breathing exercise of the abdominal or diaphragmatic type in which sudden expulsion or breath follow one another in quick successions and which is characterized by the absence of any pause in the movement of breath so long as the exercise continuous. This exercise consists of Rechaka and Puraka. Rechaka is the principal part of the practice, Puraka being only supplementary. Rechaka and Puraka are performed in a quick succession, no time being allowed to go by in between any two acts till a round is completed. Puraka follows Rechaka and Rechaka follows Puraka without breaks in practice kapalbhathi appears to be an exercise so successive and sudden explosions only. Each expulsion is accompanied by a sudden and vigorous inward stroke of it. The incessant blowing at the nose accompanied by the alternate rise and fall of the abdomen gives the exercise an appearance of the bellows of a village ironsmith. i.e. Hurried exhalation and inhalations after the fashion of an ironsmith's bellows, constitute the famous exercise of kapalbhathi.

**Statistical procedure:** In order to compare the effectiveness of the Training program on the performance of concentration of the target games players t- test was employed. Also to determine the improvement pattern in both groups as a result of administration of different methods their performance was also checked after every second week i.e the initial test, after second week, after fourth week, after sixth week, after eighth week, after tenth week and finally after twelfth week. The significant difference between control group and experimental group was checked again by using t-test for this purpose also.

## RESULTS OF THE STUDY

Table -1

### T-TEST FOR THE DATA ON CONCENTRATION IN EXPERIMENTAL GROUP AND CONTROL GROUP IN ALL THE SEVEN DURATIONS.

Frequency of Testing	Mean		Mean difference	Standard Error	t-value
	Experimental	Control			
Start	67.42	60.06	7.36	4.43	1.66
After 2 <sup>nd</sup> week	63.56	61.38	2.18	4.33	0.50
After 4 <sup>th</sup> week	57.56	61.38	3.82	4.22	0.91
After 6 <sup>th</sup> week	52.74	61.36	8.62	4.02	2.15*
After 8 <sup>th</sup> week	48.64	60.96	12.32	3.81	4.47*
After 10 <sup>th</sup> week	43.68	60.74	17.06	3.81	4.47*
After 12 <sup>th</sup> week	38.9	60.24	21.3	3.72	4.77*

\* Significant at .05 level

Tabulated "t" (98) is 1.98

In the analysis of table-2 shows that the experimental group exhibited insignificant difference in concentration in the initial stage, after the expiry of second week and also after the expiry of fourth week. But as the training program progressed it showed the significant improvement in the concentration from the expiry of sixth week upto the end of twelfth week i.e. 6<sup>th</sup> (t=2.15),

8<sup>th</sup> week(t=3.08), 10<sup>th</sup> week(t=4.47) and 12<sup>th</sup> week(t=4.77) respectively. This was hypothesised that there may not be any significant effect of Kapalbhathi on the performance of concentration of the target games players. On the basis of above finding the hypothesis of the study was rejected as the training program which included the Kapalbhathi was effective in bringing about significant improvement in the dependent variable i.e. concentration of the experimental group.

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