

Effect of Yogic Breathing Practices on Vital Capacity of Handball Players

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Abstract- The purpose of this study, was to assess the vital capacity of handball players. For this 30 male handball players were randomly selected as subjects from ACPE Mastuana Sahib, Sangrur (Punjab). The age group ranged from 18 to 25 years. The selected participants were randomly divided into two groups such as group 'A' yogic breathing practices (n=15) and group 'B' acted as control group (n=15). Group 'A' underwent yogic breathing practices for six days per week and each session lasted for an hour for eight weeks. Control group was not exposed to any specific training but they were participated in regular activities. The pre and post tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test scores were statistically examined by the dependent 't' test was used. The level of significant was fixed at 0.05 level. It was concluded that the yogic breathing practices group had shown significantly improved in vital capacity while the control group had not shown any significant improvement on vital capacity.

Kew Words: *Yogic Exercises, Vital Capacity, Handball Players etc.*

I. INTRODUCTION

Yoga, as an ancient discipline that applies a combination of practices including asana, breath work, and meditation, has recently shown potential as an intervention targeting a number of consequences related with lifestyle-related health conditions Marshall, L. (1978). Yoga is the science of physical and mental health. It synchronizes the functions of the muscle and the mind. It is the only path that can lead to holistic health Charles Batch, (1987).

Asanas are special patterns of postures that stabilize the mind and the body through static stretching. Regular practice of sun salutation regulates pingala nadi (right nostril), whether it is underactive or overactive, thus leading to a balanced energy system at both the mental and physical levels.

Vital capacity, the maximum amount of air that can be exhaled after a deep inhalation, is a key indicator of lung efficiency. Handball requires high levels of cardiovascular endurance, making lung function a critical component of athletic performance. Yogic breathing techniques, particularly Pranayama, have been reported to enhance lung capacity by strengthening respiratory muscles, improving oxygen uptake, and reducing stress-induced breathlessness. The objective of this study is to assess the impact of yogic breathing practices on the vital capacity of handball players.

Handball is a sport played between two teams normally consisting of seven or more players. Each team has seven players on the handball court at any given time. The objective is to score more points than the other team, with points being scored by shooting a ball through a goal post. The purpose of the present study was to find out the effect of yogic practices on selected physiological variables among handball players.

The practice of Yoga is the best way of self-realization of human. Yoga is the science of life of man and the art of human living. Yoga arose in the time of the Vedas and Upanishads. Indian Philosophy is a word that refers to schools of philosophical thought that originated in the Indian subcontinent and there has been continuity in enlarge this field of philosophical enquiry, which as lead to a wide range of scriptures and systems of philosophy. All the system of Indian philosophy insists on the practice of Yoga as the practical side of a philosophy of life. Mainly Pat Anjali is the traditional founder of Yoga system. He says that, liberation is to be attained through the direct knowledge of the self's direction from the physical world including our body, mind and the Ego. The Yoga system is a practical path of self-realization for the religious man.

The Yoga, on the other hand, emphasizes the importance of the practical methods of purification and concentration for realizing the self's distinction from the body and the mind, and thereby attaining liberation. The practice of Yoga is the best way of self-purification that is purification of the body and the intellect. Man is in a constant pursuit for health, happiness and peace, since ages. Even then attainment of ultimate bliss is very difficult task, which is the key to health, success and salvation. Body, mind and the soul are like pillars of the human being. Soul is an object of quest since the ancient Upanishads era to the present era, but only few are blessed with the boon of enlightenment. Yoga is not only a form of exercise for the body; it is a primordial wisdom-for a healthier, happier and more peaceful technique of living which ultimately leads to combination with the self. It is an intrinsic desire in man to be happy

II. MATERIALS AND METHODOLOGY

To achieve the purpose of this study, 30 men handball players were randomly selected as subjects from the ACPE Mastuana Sahib, Sangrur (Punjab). Their age ranged from 18 to 25 years. The selected participants were randomly divided into two groups such as group 'A' yogic breathing practices (n=15) and group 'B' acted as control group (n=15). Group 'A' underwent yogic breathing practices for six days per week and each session lasted for an hour for eight week. Control group was not exposed to any specific training but they were participated in regular activities. The "vital capacity" in liters was used to measure spirometer were selected as variables. The pre-test and post-tests data were collected on selected criterion variables prior and immediately after the training program. The pre and post-test scores were statistically examined by the dependent 't' test was used. The level of significance was fixed at .05 level of confidence, which was considered as appropriate

III. RESULTS AND DISCUSSIONS

TABLE NO-1

MEANS AND DEPENDENT 'T' TEST FOR THE PRE AND POST TESTS ON VITAL CAPACITY OF EXPERIMENTAL AND CONTROL GROUP

Variable	Test	Experimental Group Mean	Control Group Mean
VITAL CAPACITY	Pre test	27.11	23.37
	Post test	32.03	22.14
	't' test	10.62*	1.34

*Significant at .05 level.

The table-1 shows that the pre-test mean value of experimental and control groups on vital capacity are 27.11 and 23.37 respectively and the post test means are 32.03 and 22.14 respectively. The obtained dependent 't'-ratio values between the pre-test and post-test means of yogic practices and control groups are 10.62 and 1.34 respectively. It was concluded that the experimental group had significant improvement in the vital capacity when compared to control group. The present study demonstrates a statistically significant improvement in vital capacity among male handball players who engaged in yogic breathing practices. Handball is an aerobic-intensive sport that requires players to sustain high levels of endurance, rapid bursts of movement, and effective oxygen utilization. Improved vital capacity—the maximum amount of air that can be exhaled after a deep inhalation—is crucial for enhancing cardiovascular endurance and reducing fatigue during intense gameplay. The significant improvement observed in this study suggests that yogic breathing practices (Pranayama) contribute to optimizing pulmonary function, leading to better oxygen intake and utilization. Yogic breathing techniques such as Anulom Vilom (alternate nostril breathing), Bhastrika (bellows breath), Kapalabhati (cleansing breath), and Bhramari (humming bee breath) likely played a major role in strengthening respiratory muscles, improving lung elasticity, and increasing overall lung capacity.

These techniques facilitate enhanced diaphragmatic movement, reduced airway resistance, and improved alveolar ventilation, all of which contribute to better endurance and performance in handball players.

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CONCLUSION

Within the limitations and delimitations of this study the following conclusions were drawn from the result:-

There was significant improvement on vital capacity due to the effect of yogic breathing practices among basketball players. The control group had not shown any significant improvement on any of the selected variables.

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