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EFFECT OF SIX WEEK PRANAYAMA PRACTICES ON CARDIO-RESPIRATORY ENDURANCE OF KHO-KHO PLAYERS

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ABSTRACT

The purpose of the study was to see the effect of six week pranayama practices on cardio-respiratory endurance of kho-kho players. For this researcher has selected forty (40) male Kho Kho Players from various clubs or mandals of Amravati, who has at least participated in State Level or Inter Collegiate Level Tournaments. Subjects were selected with purposive random sampling methods, the design followed in this study was parallel group design, classifying the subjects in to experimental and controlled groups. 20 players in experimental group and 20 players in control group. The age of the subjects were ranged between 20 to 28 years. Dependent variable: 12 minute run walk test for endurance. Independent variable: kapalbhati and anulom-vilom. Every early morning before practice both the pranayam were practiced five days per week, earlier it was practiced for 10 minutes and after three weeks it was increased to 20 minutes. Result shows that the Mean and SD of control group of pre-test is 2240.5 ± 140.5 and post-test is 2310 ± 135.4 the calculated 't' value was found 1.592 is lesser than the tabulated 't' value i.e. 2.024 which shows that the differences is insignificant. Whereas, the Mean and SD of experimental group of pre-test is 2320 ± 130.8 and post-test is 2650 ± 152.2 the calculated 't' value was found 7.353 is greater than the tabulated 't' value i.e. 2.024 which shows that the differences is significant. Concluding we can say that the mean of pre and post-test of control group shows difference, to see this differences is significant or not researcher further calculate 't' test. Which shows that the differences is insignificant. The difference of mean may be attributed that due to regular practice of kho-kho players. Whereas, the mean of experimental group of pre and post-test shows difference, to see this differences is significant or not researcher further calculate 't' test. Which shows that the differences is significant it may be attributed that pranayama practices has significant effect on cardio respiratory endurance of kho-kho players.

Keywords: Pranayama: kapalbhati and anulom-vilom, Cardio respiratory endurance.

INTRODUCTION

Cardio-respiratory endurance can be defined as the ability of the individual to perform prolonged, large-muscle, dynamic exercise at moderate-to-high levels of intensity, it is a key to health-related component of fitness. As a healthy cardio-respiratory system is essential to every individual for high levels of fitness and wellness. A fundamental understanding of the body processes involved in cardio-respiratory endurance exercise can help you design a safe and effective fitness program.

The cardio-respiratory system consists of heart, blood vessels, and respiratory system. The cardio-respiratory system transports oxygen, nutrients, and other key nutrients to the organs

and tissues that need them; it also carries desecrate products to where they can be used or expelled. The heart is combination of four chambered, fist-sized muscle located just beneath the sternum. It pumps oxygen-deoxygenated blood to the lungs and oxygenated blood to the rest of the body. Blood actually flows through two separate circulatory systems: The right side of the heart from where the blood pumps to the lungs in is called as pulmonary circulation, and the left side where the blood pumps through the rest of the body in systemic circulation.

Cardio-respiratory endurance helps to improve movement efficiency. Superior cardio-respiratory endurance means that your body can work at higher intensities for longer time without fatigue. This means that the performance of athletic will improve as a result of their high levels of cardio-respiratory endurance. In order to have better cardio-respiratory endurance you must have an efficient cardio-respiratory system delivering oxygen to the working muscles or to the body. Furthermore, we can say that the lack of fatigue also means that the athlete's technique will be maintained and allow for greater consistency in the execution of their skills.

The word 'Yoga' is derived from the *Sanskrit* root verb 'Yuj' meaning - to find, to join, to unite, to control, etc. It is allied to English word 'Yoke' the German 'Joch' and the Latin 'Jungo' means (to join). In simple word we can say that Yoga is 'Union' and 'Control'. It signify the Union of man with God or an individual with the Universal realism. It means combination of mortal with eternal that is indeed. But yoga also means control of oneself, that is to say, appropriate self-discipline. It is the mobilization of the inner resources of personality with a view to attain that self-integration which leads to self-realization. In other word we can say, Yoga is the coordination, the programme of the psycho-physical, moral and spiritual training through one can fulfill the ultimate destiny of life. The word 'Yoga' thus implies both the goal of life and the path leading to that goal.

With regard to the cardio-respiratory system, the yoga and pranayama practices led to better cardiac parameters in terms of orthostatic tolerance, heart rate, and blood pressure compared to exercise. Practices of Sethu Bandha Sarvangasana, Viparita Dandasana and Supta Virasana which have backward-bending ob body are good relievers of angina in Ischemic heart disease. Yoga practices do not consume much energy and many of them accompany isometric contractions. The ability to move smoothly depends on flexibility of an individual, an attribute that enhances both the safety and the optimal physical activity. The daily practice of yoga can enhance health and overall fitness, regulate all the body functions in a balanced manner and help to maintain the sustainable health. Through yoga practiced individual can reduce the common barriers to physical activity such as time conflicts, poor weather, etc.

METHODOLOGY

Subjects

Forty (40) male Kho Kho Players were selected from various clubs or mandals of Amravati, who has at least participated in State Level or Inter Collegiate Level Tournaments. Subjects were selected with purposive random sampling methods, the design followed in this study was parallel group design, classifying the subjects in to experimental and controlled groups. 20 players in experimental group and 20 players in control group. The age of the subjects were ranged between 20 to 28 years. Subjects did not use any ergogenic aids or supplementations and also they were all free from any injuries during the collection of data.

Selection of the Variables

• *Dependent variable:* 12 minute run walk test for endurance. The score was recorded in distance covered in meters.

• *Independent variable:* kapalbhati and anulom-vilom, breathing exercise were selected as independent variables.

Every early morning before practice both the pranayam were practiced five days per week. earlier it was practiced for 10 minutes and after three weeks it was increased to 20 minutes.

STATISTICAL ANALYSIS

For compare the effects the pranayama practices paired sample t test was used. Mean and SD were used as descriptive statistics. level of significance was kept at 0.05 level.

Table
Comparison of Cardio-respiratory endurance between Pre-test and Post-test of both group of Kho-Kho Players

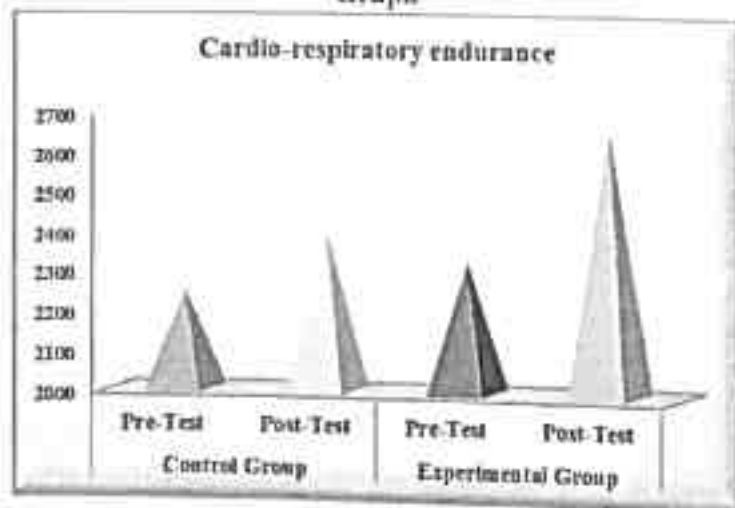
Group	Test	Mean	S.D.	t - test
Control	Pre-Test	2240.5	140.5	1.5929
	Post-Test	2310	135.4	
Experimental	Pre-Test	2320	130.8	7.3539
	Post-Test	2650	152.2	

*Significant at 0.05 level tab

tabulated 't' = 2.024

Above table shows that the Mean and SD of control group of pre-test is 2240.5 ± 140.5 and post-test is 2310 ± 135.4 by seeing the mean of pre and post-test of control group we can observe that there is difference, to see this differences is significant or not researcher further calculate 't' test. The calculated 't' value 1.592 is lesser than the tabulated 't' value i.e. 2.024 which shows that the differences is insignificant. Whereas, the Mean and SD of experimental group of pre-test is 2320 ± 130.8 and post-test is 2650 ± 152.2 by seeing the mean of pre and post-test of experimental group we can observe that there is difference, to see this differences is significant or not researcher further calculate 't' test. The calculated 't' value 7.353 is greater than the tabulated 't' value i.e. 2.024 which shows that the differences is significant.

Graph



Comparison of mean of pre & post test of control and experimental group

CONCLUSION

From the above study we revealed that the mean of pre and post-test of control group shows difference, to see this differences is significant or not researcher further calculate 't' test. Which shows that the differences is insignificant. The difference of mean may be attributed that due to regular practice of kho-kho players. Whereas, the mean of experimental group of pre and post-test shows difference, to see this differences is significant or not researcher further calculate 't' test. Which shows that the differences is significant it may be attributed that pranayama practices has significant effect on cardio respiratory endurance of kho-kho players.

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This is to certify that

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days International Conference organized by Mahajan College of Technology Collaboration with

Smt. Nankhbai Wadhvani Kala Mahavidyalaya, Yamnath on "Recent Trends in commerce and

Humanities". He/She has presented / published a paper on Effect of six week

PlayWayama practices on Cardio-Respiratory Endurance of Kho-Kho players.

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