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Influence of pranayama practice on physiological variable of adolescents

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Abstract

Pranayama is an in-depth science for expanding and channeling the life force, prana. “Pranayama” comes from two Sanskrit words: “prana”, meaning the fundamental life force, and “yama” meaning to control. Pranayama is, therefore channeling or controlling the life force. “Pranayama” can also be seen as the combination of “pran”, the life force, with “ayama”, meaning expansion. In this sense pranayama expands the life force through all levels of our being, physical, psychological and spiritual. The purpose of the study was to find out the Effect of Pranayama on Physiological variable of Adolescents. To achieve this purpose 80 female students studying in Alagappa Model Higher Secondary School, Karaikudi, were selected as subjects. They were divided into two equal groups Control and Experimental. The Experimental group underwent pranayama practice; the control group did not any type of Physical training for the period of 12 weeks. Physiological variable of vo2 max was measured with 12 minute run/walk test. Pre test and post test was conducted for both groups the collected data were analyzed using ‘t’ test. The Result shows that the 12 weeks of pranayama training develops VO2 max performance.

Keywords: pranayama, anulome vilome, vo2 max

Introduction

Pranayama is the perfect control of the life-currents through control of breath, and is the process by which we understand the secret of prana and manipulate it. We can hardly make any spiritual progress without the practice of pranayama. One who has grasped this prana has grasped the very core of cosmic life and activity. Through various exercise and training in pranayama the yogi tries to realize in this little body the whole of cosmic life, and attain perfection.

Breath is a physical aspect or external manifestation of prana, the vital force, and thus pranayama begins with the regulation of the breath. Breath, like electricity, is gross prana, while prana itself is subtle. By controlling the breath one can control the prana – just as one can control the other wheels by controlling or stopping the fly wheel of a diesel engine and just as we can control the hairspring, cog wheels and the main spring of a watch by controlling the minute hand. Control of breath is achieved through manipulation of the lungs and the breathing process.

Pranayama is derived from two Sanskrit words – prana (life force) and Ayama (control). Therefore, in its broadest description, pranayama would mean the control of the flow of life force. To most, control of breath is Pranayama. However, this is a result of wrong interpretation.

For a rightful interpretation, it must be understood that ‘prana’ is an energy or life force that is universal in nature- it is omnipresent. A portion of that prana is also present in the human body. It flows at a superficial level to maintain the body and its organs.

The goal of Pranayama is to increase the quantum of this life force (Prana) so that it can reach out to ‘hidden’ recesses of the brain. This helps in expanding the human faculties and retarding degeneration.

Benefits pranayama

Pranayama refers to the breathing technique in Yoga, which can work wonders in improving the overall health and the function of all the organs in the body.

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Pranayam is also closely linked to meditation, a crucial aspect of yoga. Several health experts also refer to Pranayama as the art of effective breath control. Practicing the proper techniques of breathing can help people become more aware of their breath and therefore pranayama benefits are physical, emotional as well as spiritual. Some of the most common pranayama benefits are:

- Improvement in the rate of breathing:
- Reduction in the heart rate as well as the wear and tear of the heart
- Helping the body get rid of excessive fat and weight
- Curing problems that are related to the digestive system
- Enhancing the functioning of several organs, which include the kidneys, pancreas, intestines, diaphragm, lungs and the heart
- Removing the toxins from within the body
- Preventing various diseases by strengthening the immune system
- Getting rid of negative emotions like depression, anger, arrogance, greed & so on
- Improving the circulation of blood throughout the body
- Reducing blood pressure, by relaxing the body and soothing the nerves

Methodology

The purpose of the study was to find out Effect of Pranayama on Physiological variable of Adolescents. To achieve this purpose sixty adolescent girls in the age group ranging 12- 16 years students studying in Alagappa Model Higher Secondary School Karaikudi were selected as subjects. The subjects were divided in to two equal groups (control and Experimental group) of forty each. Experimental group underwent Anuloma Viloma, Sheetal, Sheetkari Pranayama for the period of 12 weeks. Control group did not involve any kind of physical training. The selected Physiological variable of vo2 max was measured by using 12minute run/walk test. The pre and post test was measured for both Experimental and Control groups. Pre and post test scores were statistically examined by applying 't' ratio. The level of confidence was fixed at 0.05 level to test the significance.

Analysis of data

Table 1: Computation of 'T' Ratio on Experimental and Control Group on VO2Max

Group	Test	Mean	Std deviation	t ratio
Experimental Group	Pre test	28.12	2.35	12.921
	Post test	34.10	3.49	
Control Group	Pre test	28.12	1.82	1.849
	Post test	28.11	1.83	

Significance at 0.05 level of confidence , t- value=2.00

Table –1 reveals that the means of the experimental group pre and post test on VO2 max were 28.18, 34.10 respectively. The calculated t-value 34.10 is greater than the required table value of 2.00 at 0.05 level. So it was found to be significant. It means that there is a significant mean difference between the experimental group pre and post test on VO2 max. The calculated t-value 1.849 is lesser than the required table value of 2.00 at 0.05 level. So it was found to be not significant. It means that there is a not significant mean difference between the control group pre and post test on VO2 max.

Conclusion

On the basis of the study and with the limitations, it was

concluded that, after 12 weeks of pranayama training significant improvement was found in vo2 max performance of experimental group.

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