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Effect of yogic practice on selected physiological variables among inter-university male badminton players of the University of Lucknow

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Abstract

The objective of this study was to explore the impact of Iyengar yogic practices on specific physiological variables among inter university male badminton players. Thirty participants were selected from The University of Lucknow, with ages ranging from 18 to 24 years. The chosen individuals were evenly distributed into two groups: the experimental group and the control group, each comprising 15 male students. The experimental group engaged in a 6-week Iyengar yogic practice program, while the control group did not undergo any specific training during the study period. Cardio respiratory endurance served as the criterion variable for this investigation. To assess this variable, the selected subjects underwent the Cooper 12-minute run and walk test on a 400-meter standard track. Pre-tests were conducted before the training period, with post-tests administered immediately after the 6-week training regimen. The statistical technique "t" ratio was employed to analyze the means of the pre-test and post-test data for both the experimental and control groups. The findings indicated a significant difference in the criterion variable, specifically in cardio respiratory endurance. This disparity was attributed to the Iyengar yogic practice administered to the experimental group, showcasing a notable improvement compared to the control group.

Keywords: Yoga, badminton, physiological

Introduction

Engaging in physical activity is widely acknowledged to enhance overall health by reducing the risk of chronic diseases, preventing the loss of muscle mass, promoting functional strength, and significantly contributing to successful weight maintenance. The scientific discourse surrounding the benefits of exercise has been ongoing for decades, with rigorous research efforts initiated in the 1950s to understand its role in mortality and morbidity.

Recent data highlight the positive effects of regular Iyengar yogic practices on cardiovascular health, suggesting a noteworthy reduction in the risk of heart diseases and an extension of life expectancy. These points to the profound impact that specific yogic techniques can have on physiological variables, especially among college men students who are often at a crucial stage in their physical and mental development. Delving deeper into the realm of Iyengar yogic practices, we aim to explore the intricate connections between these exercises and physiological well-being. By examining key variables such as cardiovascular health, muscular integrity, and overall life expectancy, we endeavor to provide a comprehensive understanding of how incorporating Iyengar yogic practices into a routine can positively influence the health trajectory of college men students. This study seeks to contribute valuable insights into the holistic benefits of yogic practices, shedding light on the potential for improved health outcomes and a prolonged, healthier life for those who integrate these exercises into their daily lives.

Asana serve as the physical practices that intricately tone and invigorate the internal organs of the body. Beyond the external facade of muscles and skeletal structure lies the essence of our health, dependent on the well-being of these concealed vital organs. The human body, seemingly robust from the outside, is essentially a framework enveloped by muscles, shaping its visible form. Central to the philosophy of yoga is the understanding that true health emanates from the vitality of our internal organs.

The heart, a tireless performer, operates ceaselessly for 24 hours, emphasizing the critical role of ensuring unimpeded circulation through the nerves that transport blood to and from this vital organ. Even the slightest obstruction in these pathways can lead to significant disorders, underscoring the need for a holistic approach to health.

The lungs, another integral component, play a pivotal role in purifying the blood by efficiently extracting oxygen. Simultaneously, optimal functioning of internal processes, such as the digestion of food through the generation of juices, is crucial for sustaining the body's nutritional balance. From the formation of essential elements like blood, muscles, fats, bones, to the delicate intricacies of reproductive health, the body's systems must harmonize in accordance with its unique requirements.

Beyond physical well-being, yoga contributes to fortifying the nervous system, enhancing the body's ability to execute movements with precision and grace. The prevention of impurities from accumulating within the body is a key objective, ensuring the preservation and augmentation of muscle power. In essence, yoga offer a holistic approach to health by promoting the optimal functioning of internal organs, harmonizing bodily processes, and cultivating strength within the nervous system. Through these practices, we embark on a journey towards comprehensive well-being, where the external and internal aspects of health seamlessly intertwine for a balanced and flourishing life.

Table 1: Analysis of t-ratio for the pre- and post-tests of the experimental and control group on cardio respiratory endurance scores in meters

Variable	Group	Mean		S.D.		S.D. Error		d.f.	t ratio
		Pre	Post	Pre	Post	Pre	Post		
cardio respiratory endurance	control	1787.33	1790.33	62.61	60.84	16.17	15.72	14	.33
	experimental	1776.00	1883.33	54.22	72.77	14.02	18.67		8.73*

Analysis of the Data

The significance of differences among the means of the experimental group was determined through a pre-test. The data underwent analysis utilizing a dependent "t"-test, setting a confidence level of 0.05. As depicted in Table 1, the mean values of the control group's pre-test and post-test for cardio respiratory endurance were 1787.33 and 1790.33, respectively. The calculated "t" ratio was 0.33, falling below the required table value of 2.14 for significance at the 0.05 level with 14 degrees of freedom, rendering it statistically insignificant. Contrastingly, the experimental group exhibited mean values of 1776.00 and 1883.33 for pre-test and post-test cardio respiratory endurance, respectively. The computed "t" ratio stood at 8.73*, surpassing the necessary table value of 2.14 for significance at the 0.05 level with 14 degrees of freedom, signifying statistical significance. The study's outcome indicated a notable disparity in cardio respiratory endurance between the control and experimental groups.

In conclusion, the study suggests that the experimental group experienced improvements in cardio respiratory endurance attributed to six weeks of Iyengar yogic practice.

Discussion on Findings

The study's findings reveal a significant enhancement in the selected dependent variable, cardio respiratory endurance, within the experimental group, specifically the Iyengar yogic practice group, as opposed to the control group. The observed improvement attributed to Iyengar yogic practice is notably higher when compared to the control group.

Methodology: This study aimed to explore the influence of Iyengar yogic practice on specific physiological variables within the demographic of inter university male players of University of Lucknow. A total of 30 randomly selected players, aged between 18 and 24 years, participated in this research endeavor. To facilitate the study's objectives, the participants were divided into two equal groups, comprising a yogic practice group (experimental) and a control group.

The experimental group engaged in Iyengar yogic practice sessions three days a week for a duration of six weeks. In contrast, the control group adhered to their regular physical activities as outlined in their curriculum, without undergoing any specialized training program. The chosen criterion variable for this investigation was cardio respiratory endurance.

Assessment of cardio respiratory endurance was conducted using the Cooper 12-minute run and walk test. Pre and post-training program measurements were taken for all subjects in both groups. The ensuing data were subjected to statistical analysis using the "t"-test to discern any significant differences between the experimental and control groups. A confidence level of 0.05 was set as the threshold for determining the statistical significance, ensuring a robust evaluation of the study outcomes. This research contributes to the growing body of knowledge on the potential physiological benefits of Iyengar yogic practices, particularly concerning cardio respiratory endurance among college men students.

Conclusion

1. A notable distinction in cardio respiratory endurance emerged between the experimental and control groups following the training period.
2. Significantly enhanced cardio respiratory endurance was observed; nonetheless, the improvement was particularly pronounced in favor of the experimental group, attributable to six weeks of Iyengar yogic practice.

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