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Effect of Six Weeks Yoga Training Program on Physical Fitness, Breath Holding Time and Bmi of College Men

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ABSTRACT

To conduct this study, thirty (N=30) male students from the Swami Akandananda Hostel, Sri Ramakrishna Mission Vidyalaya in Coimbatore, Tamil Nadu, were chosen. Their ages ranged from 18 to 23 years. The participants underwent a six week of yoga training, with sessions held daily from 6: 00 am to 7: 00 am. The physical fitness variables assessed included balance, flexibility, breath - holding time, and BMI, balance was assessed with the stork stand test, flexibility was tested using the sit - and - reach test, and breath - holding time was measured using a nose clip. Pre - and post - training data were analyzed using the dependent t - test, with a significance level set at 0.05. The results indicated significant improvements in balance, flexibility, and breath - holding time, along with a notable reduction in BMI after the six week yoga training.

Keywords: Yoga, BMI and Physical Fitness

Introduction:

The conceptual background of yoga has its origins in ancient Indian philosophy. There are numerous modern schools or types of yoga (i. e., Iyengar, Viniyoga, Sivananda, etc.), each having its own distinct emphasis regarding the relative content of physical postures and exercises (asanas), breathing techniques (pranayama), deep relaxation, and meditation practices that cultivate awareness and ultimately more profound states of consciousness. The application of yoga as a therapeutic intervention, which began early in the twentieth century, takes advantage of the various psychophysiological benefits of the component practices.

The physical exercises (asanas) may increase patient's physical flexibility, coordination, and strength, while the breathing practices and meditation may calm and focus the mind to develop greater awareness and diminish anxiety (**G. Kirkwood, H. Rampes,V. Tuffrey, J. Richardson, and K.Pilkington, 2005),** and thus result in higher quality of life. Other beneficial effects might involve a reduction of distress, blood pressure, and improvements in resilience, mood, and metabolic regulation (**K. Yang, 2007).** Khalsa stated that a majority of the research on yoga as a therapeutic intervention was conducted in India and a significant fraction of these were published in Indian journals, some of which are difficult to acquire for Western clinicians and researchers (**S. B. S. Khalsa, 2004).**

In their bibliometric analysis from 2004, they found that 48% of the enrolled studies were uncontrolled, while 40% were randomized clinical trials (RCT), and 12% non - RCT (N - RCT). Main categories which were 2 Evidence - Based Complementary and Alternative Medicine addressed were psychiatric, cardiovascular, and respiratory disorders (**S. B S. Khalsa, 2004).**

Despite a growing body of clinical research studies and some systematic reviews on the therapeutic effects of yoga, there is still a lack of solid evidence regarding its clinical relevance for many symptoms and medical conditions. For many specific indications and conditions, there is inconsistent evidence with several studies reporting positive effects of the yoga interventions, but other studies are less conclusive. In some instances, these discrepancies may result from differences between the study populations (e. g., age, gender, and health status), the details of the yoga interventions, and follow - up rates. include a heterogeneous set of studies with varying effect sizes, heterogeneous diagnoses and outcome variables, often limited methodological quality, small sample sizes, varying control interventions, different yoga styles, and strongly divergent duration of interventions.

Methodology:

To conduct this study, thirty(N=30) male students from the Swami Akandananda Hostel, Sri Ramakrishna Mission Vidyalaya in Coimbatore, Tamil Nadu, were chosen. Their ages ranged from 18 to 23 years. The participants underwent a six week of yoga training, with sessions held daily from 6: 00 am to 7: 00 am. The physical fitness variables assessed included balance, flexibility, breath - holding time, and BMI, balance was assessed with the stork

stand test, flexibility was tested using the sit - and - reach test, and breath - holding time was measured using a nose clip. Pre - and post - training data were analyzed using the dependent t- test, with a significance level set at 0.05.

Training Programme :

S. no	Asana	Week	Repetition	Rest between asana	Rest between Rep	Total Duration
1	Praiasana	1 - 2	3	30 sec	2 min	45in
2	Padhaastha asana					
3	Pachimottasana					
4	Bhujangaasana	3 - 4	5			50 min
5	Suryanamaskar					
6	Halaasana					
7	Dhanurasana	5 - 6	7			60 min

RESULTS

TABLE I

COMPUTATION WITH 'T' TEST OF BALANCE ON 6 WEEKS YOGA TRAINING OF BOARDING MALE STUDENTS

Variable	Test	Mean	S.D	DM	σDM	't'
Balance	Pre test	11.42	9.42	8.54	1.56	5.69*
	Post test	20.31	14.01			

*Significant Level of significant was fixed at 0.05 with df 29 Table value of 2.04

Table I shows the mean and standard deviation for balance in male boarding students following a six week of yoga training. The pre - test and post - test mean values for the group are 11.42 and 20.31, respectively, with corresponding standard deviations of 9.42 and 14.01. The t - value obtained is 5.69, which exceeds the critical table value of 2.04 at df = 29. These results indicate a significant improvement in balance among male boarding students after completing the six week yoga training program.

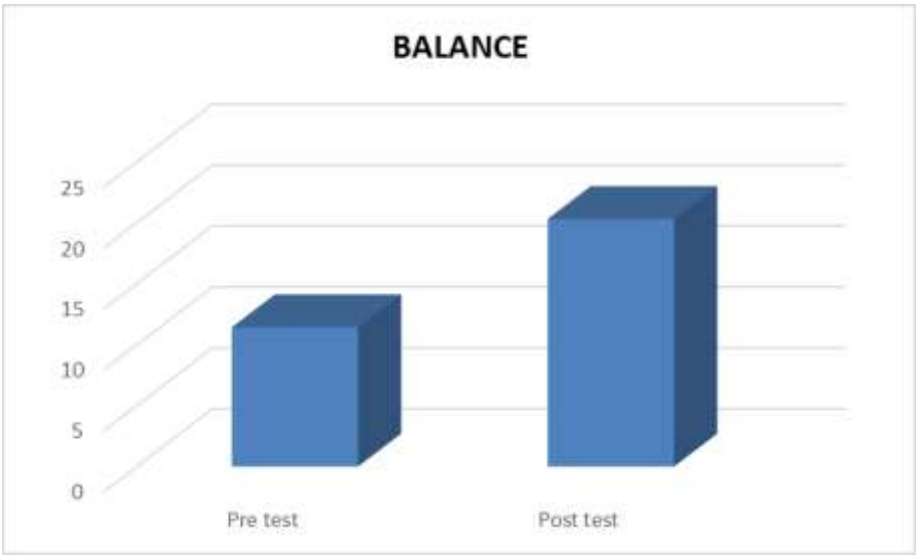

FIGURE 1

THE MEAN VALUES ARE SIX WEEK YOGA TRAINING GROUP OF PRE AND POST TEST OF BALANCE ON BOARDING MALE STUDENTS

TABLE II

COMPUTATION WITH 'T' TEST OF FLEXIBILITY ON 6 WEEKS YOGA TRAINING OF BOARDING MALE STUDENTS

Variable	Test	Mean	S.D	DM	σDM	't'
Flexibility	Pre test	29.60	9.70	3.26	0.59	8.95*
	Post test	34.94	9.37			

*Significant Level of significant was fixed at 0.05 with df 29 Table value of 2.04

Table II shows the mean and standard deviation for Flexibility in male boarding students following a six week of yoga training. The pre - test and post - test mean values for the group are 29.60 and 34.94, respectively, with corresponding standard deviations of 9.70 and 9.37. The t - value obtained is 8.95,which exceeds the critical table value of 2.04 at df = 29. These results indicate a significant improvement in Flexibility among male boarding students after completing the six week yoga training program

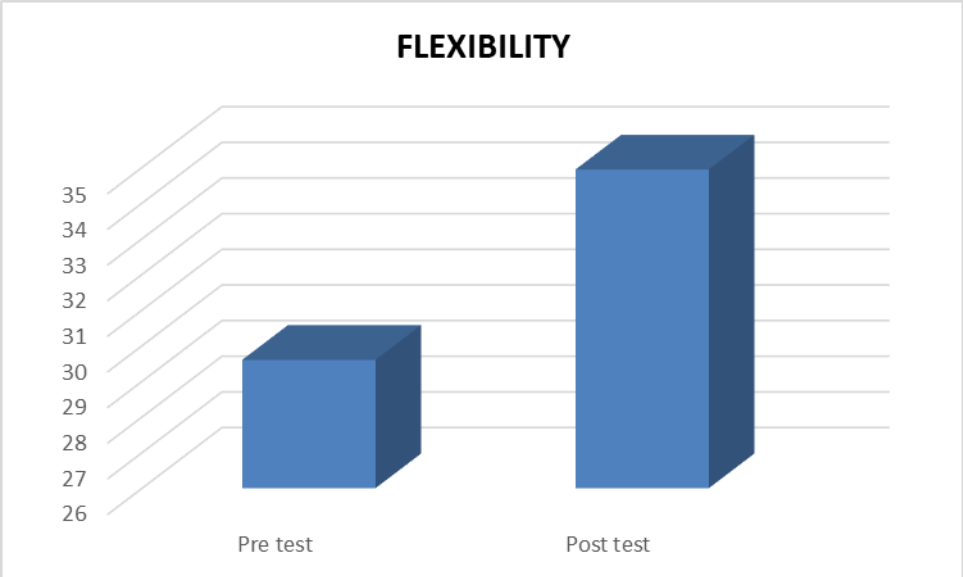

FIGURE 2

THE MEAN VALUES ARE SIX WEEK YOGA TRAINING GROUP OF PRE AND POST TEST OF FLEXIBILITY ON BOARDING MALE STUDENTS

TABLE III

COMPUTATION WITH 'T' TEST OF BREATH HOLDING TIME ON 6 WEEKS YOGA TRAINING OF BOARDING MALE STUDENT

*Significant Level of significant was fixed at 0.05 with df 29 Table value of 2.04

Variable	Test	Mean	S.D	DM	σ DM	't'
Breath- Holding Time	Pre test	36.18	14.45	4.83	0.88	6.60*
	Post test	42.02	15.99			

Table III shows the mean and standard deviation for breath holding time in male boarding students following a six week of yoga training. The pre - test and post - test mean values for the group are 36.18 and 42.02., respectively, with corresponding standard deviations of 14.45 and 15.99. The t - value obtained is 6.60 ,which exceeds the critical table value of 2.04 at df = 29. These results indicate a significant improvement in breath holding time among male boarding students after completing the six week yoga training program

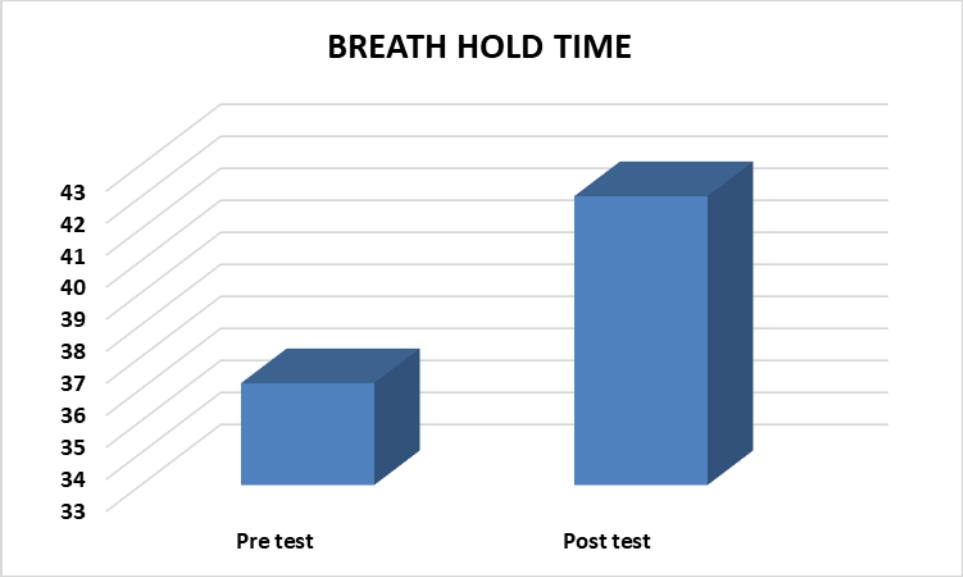

FIGURE 3

THE MEAN VALUES ARE SIX WEEK YOGA TRAINING GROUP OF PRE AND POST TEST OF BREATH HOLD TIME ON BOARDING MALE STUDENTS

TABLE IV

COMPUTATION WITH 'T' TEST OF BMI ON 6 WEEKS YOGA TRAINING OF BOARDING MALE STUDENTS

*Significant Level of significant was fixed at 0.05 with df 29 Table value 0f 2.04

Variable	Test	Mean	S.D	DM	σDM	't'
BMI	Pre test	19.77	4.23	0.21	0.03	3.92*
	Post test	19.61	4.18			

Table IV shows the mean and standard deviation for BMI in male boarding students following a six week of yoga training. The pre - test and post - test mean values for the group are 19.77 and 19.61, respectively, with corresponding standard deviations of 4.23 and 4.18. The t - value obtained is 3.92, which exceeds the critical table value of 2.04 at df = 29. These results indicate a significant improvement in BMI among male boarding students after completing the six week yoga training program.

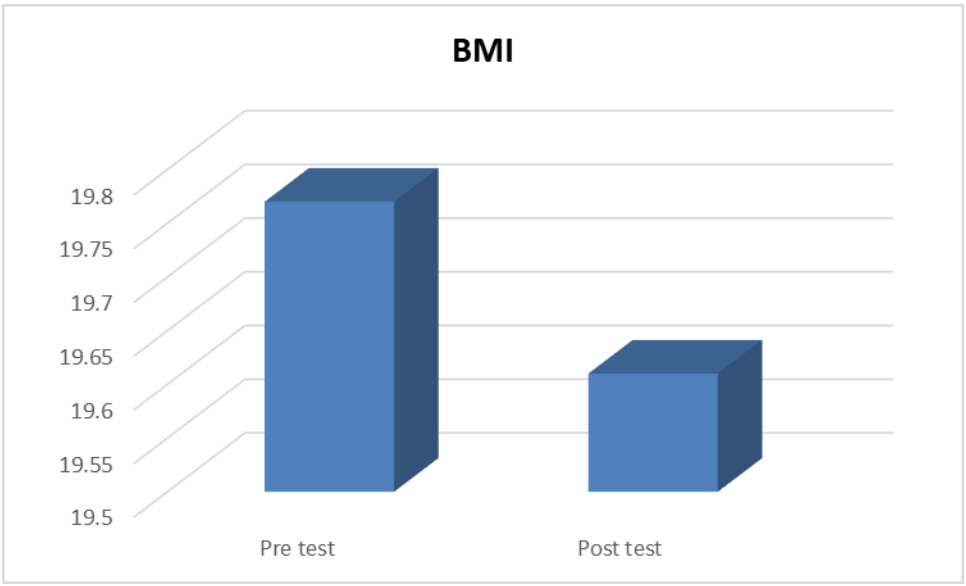

FIGURE 4

THE MEAN VALUES ARE SIX WEEK YOGA TRAINING GROUP OF PRE AND POST TEST OF BMI ON BOARDING MALE STUDENTS

Discussion on Findings

The study results reveal a significant improvement in physical fitness and breath - holding time among boarding male students due to a six week yoga training program, along with a notable reduction in body mass index. These findings align with previous research, which includes training involving yoga asanas, concentration exercises, and pranayama. Studies by **Ramesh (2016**) and **Bandopadhyay (2012**) demonstrate significant changes in fitness components due to the effects of yogic practices, aerobic exercise, and interval training. Additionally, research by **Madanmohan (2008)** and **Jivan W. Mohod and Dr. A. M. Asanare** (2019) highlights the impact of six weeks of yoga training on weight loss, respiratory pressures, in young, healthy subjects."

Conclusions

1. The six week yoga training program for male students led to enhanced physical fitness across various areas, such as balance, flexibility and breath - holding capacity.
2. The six-week yoga training program for male boarding students brought about a notable decrease in body mass index

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