

EFFECT OF TRADITIONAL YOGA AND POWER YOGA PRACTICES ON SELECTED PHYSIOLOGICAL PARAMETER

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Abstract

The objective of the random group experimental study was to determine the effect of yoga, Power yoga practices on selected physiological parameter such as vital capacity. It was hypothesized that traditional yoga and power yoga practices would significantly differ from the control group on a physiological variable. In order to accomplish the study's goals, 60 college women who were between the ages of 17 and 21 were chosen from the area surrounding rural area of Namakkal District, Tamilnadu and randomly assigned to each experimental groups and control group, each of which included 20 participants. Only traditional yogic exercises were performed by Experimental Group 1 for a period of 12 weeks, five days each week, for a maximum of one hour to one and half hour. The same amount of time and effort was put into power yoga practices in Experimental Group 2. A time of active rest was maintained for the Control Group. For each of the three groups, a pre- and post-test was completed before and after the training. The levels of vital capacity were measured. Analysis of covariance (ANCOVA) was used to statistically analyze the gathered data, and Scheffe's post hoc test was used to ascertain whether there was a significant difference. This test was conducted at the 0.05 level of confidence. The study's findings demonstrated that compared to the control group, both experimental groups demonstrated a significant difference Vital capacity, which can be attributed to the combined benefits of yoga and power yoga practices. The hypothesis was accepted at a 0.05 level of confidence.

Key Words: Traditional Yoga Practices, Power Yoga Practices, Physiological Variables, Vital capacity

1. Introduction

Yoga an age-old philosophical and religious tradition, began in India around 1000 B.C. It alludes to a broad range of principles, dispositions, and methods with the ultimate goal of enlightenment or self-knowledge. The Sanskrit word "Yuj," which means to "unite" or "connect," is where the word yoga originated. At higher levels of the practice, this is frequently understood to signify the sense of unification of the individual self with the universal.

The yoga practices which are originated from India will be normally called as traditional yoga practices which involves Asanas, Pranayama, Meditation also generally called as Eastern Yoga. In western countries basis of hatha yoga practices many practices have been developed and one of the practice is called Power Yoga practices which involves different yogic postures in dynamic and faster way. Recent years have seen a significant growth in the scientific interest in different types of yoga, and several physiological impacts of the practice—such as the physical postures known as asanas, the controlled breathing techniques known as pranayama and meditation—have been investigated. Actually, according to multiple research, consistent yoga practice may improve participants' ability to perform well during physical activity.

Traditional yoga practices are based on the classical yoga texts written by great yogis, rishis and sages thousands of years ago in Eastern country specially in India. Traditional yoga practices consist of asanas, pranayama, Kriyas, Mudras and Bandhas. This is also called classical hatha yoga practices. Traditional yoga practices focuses both internal and external i.e physical and mental level. Traditional yoga practices performed in slow and steady manner rhythmically. Numerous health benefits can be achieved by doing traditional yoga practices regularly and continuously which will lead finally for spiritual elevation. It focuses all round development of a person. In other hand power yoga is developed in western countries specially in United states. Power yoga practices focuses on largely physical level. Power yoga practices performed in speedy manner and very intensely. Both forms of practices will benefit their own way. Many more research is needed to get and publish the benefits scientifically.

Nowadays, yoga is receiving more and more attention worldwide. Perhaps the greatest lifestyle change program ever devised in human history is this one. For many years, one of the main areas of research has been the impact of yoga on lung functions. Hence, this study was pertinently planned to evaluate the impact of 12 weeks of different yogic practices on vital capacity of lungs in college female students in order to sensitize and inspire them toward a healthier lifestyle. That is basically our present study mainly focuses on lung function improvement which is to see performance of vital capacity of lungs.

2. Purpose of Study

The purpose of the study was to find out the Effect of Traditional Yoga Practices and Power Yoga Practices on selected physiological variable which is vital capacity.

3. Hypothesis

It was hypothesized that there would be significant differences on physiological variable vital capacity among college woman students due to traditional yoga practices and power yoga practices of experimental groups than the control group. Also it is hypothesized that there would be significant difference on physiological variable Vital capacity among college woman students due to traditional yoga group than power yoga group.

4. Inclusion Criteria

- The study's focus was delimited to *female college students* aged 17 to 21 years
- The subjects were delimited to *college women in rural area* of Namakkal district only.

- The variant was Forced Vital Capacity only.
- The independent variable was traditional yoga practices for one experimental group and power yoga practices for another experimental group

5. Exclusion Criteria

- The weather, way of life, food, and medicine usage were not taken into account.
- The Socio-Economical status was excluded.
- Routine activities of subjects were not taken into account

6. Review of Related Literature

R.K.Yadav (2001) studied on Effect of yogic practice on pulmonary functions in young females. The goal of the current study is to evaluate how yoga practice affects specific lung functions. A group of sixty young, college female students, ranging in age from 17 to 21, were chosen. Every day, they had to dedicate around one hour to practicing yoga. After six and twelve weeks of their yoga practice, the observations were recorded by MEDSPIROR in the form of FVC, FEV-1, and PEFr on day 1. After 12 weeks, there was a noticeable increase in FVC, FEV-1, and PEFr.

Srimathi S (2022) studied on Effect of classical yoga on forced vital capacity among middle-aged women pneumoconiosis. In this study, 120 middle-aged patients with lung conditions were chosen at random using the random sampling method, screened, and then the number of patients was further lowered to 40 based on their chest X-ray. The patients were from a fireworks factory in Sivakasi, Tamil Nadu, and ranged in age from 35 to 50. Twenty women each were assigned to the experimental and control groups. It was determined that yoga practices would have a beneficial effect on Forced Vital Capacity in middle-aged women with pneumoconiosis. For a duration of 12 weeks, the Experimental Group received one hour of therapy every day. The control group was left to go about their lives as usual. Analysis of Variance (ANOVA) was used to statistically examine the group data that was collected. The study's findings demonstrated that consistent Yogic practices greatly increased Forced Vital Capacity. The hypothesis was accepted with a confidence level of 0.05.

7. Methodology

The samples for this random group experimental study were chosen using a random sampling methodology in order to achieve its objectives. 60 college women students between the ages of 17 and 21 were chosen from Gandhi Arts and Science College, Kanadampalayam, Namakkal District which is a rural area. The subjects were divided into two experimental groups with 20 each, and one control group with 20. Experiment Group 1 (EX1) were involved traditional yoga practices and Experimental Group 2 (EX2) were involved in power yoga practices, both were involved 12 weeks of training and the control group (CG) was kept in active rest for the full 12 weeks. Selected dependent variable vital capacity is measured pre- and post test for all three groups which are before and after the training.

Traditional yoga practices involved below practices of Suksuma viyayama, Asanas, Pranayama Practices, Yoga Nidra and Meditation.

Power Yoga practices given were Warm Up/Loosening Exercises, Dynamic Asana Practices and Deep relaxation

Every technique was taught with the proper adjustments and rest intervals based on the capabilities of the individual. During the training session, participants were operating within their comfort levels.

8. Criterion Measures

Vital capacity was measured with the help of Digital Spiro-meter and the score was recorded in Liters

9. Data Analysis

To find the significant differences between the experimental groups and the control group, the data related to the variable that were collected from the groups as pre- and post-tests were statistically evaluated using Analysis of Covariance (ANCOVA). Paired means were assessed using Sheffe's Post hoc test at the 0.05 level of confidence.

10. Results and Discussions

Vital Capacity levels pre- and post-test scores were measured and statistical analysis was performed. Table 1 presents the findings regarding the impact of practicing yoga both traditional and power yoga practices.

Table 1: Analysis of covariance of the pretest and post test means of the two experimental groups and the control group in Vital Capacity

TEST	EX1	EX2	CG	SV	SS	DF	MS	F
PRETEST	3.290	3.235	3.235	B	0.040	2	0.020	1.00*
				W	1.149	57	0.020	
POSTTEST	3.625	3.435	3.255	B	1.369	2	0.685	21.406*
				W	1.852	57	0.032	
ADJUSTED	3.593	3.451	3.271	B	1.015	2	0.507	29.559*
				W	0.961	56	0.017	

****Significant at 0.05 level of Confidence. (The Table Required For 0.05 Level of Significance which are 3.159 and 3.162 respectively for df 2,57 and 2,56)***

Table 1 illustrates that the pretest score's obtained f value of 1.000 is less than the necessary f value of 3.159. It demonstrates that the subjects' random assignment was successful, their pre-training scores were equal, and there were no discernible differences. The analysis of post test means proved that the obtained f value 21.406 was greater than the required f value of 3.159 to be significant at 0.05 levels taking into consideration of the pretest and post test means the adjusted post test means were done and the obtained f value of 29.559 was greater than the required f value

of 3.162. Therefore, it was acknowledged and accepted that the groups traditional yogic practices and power yogic practices had significant improvement in vital capacity than the control group. The results were treated to post hoc analysis using Scheff's confidence interval test because the significant differences were recorded. Table 2 presents the findings.

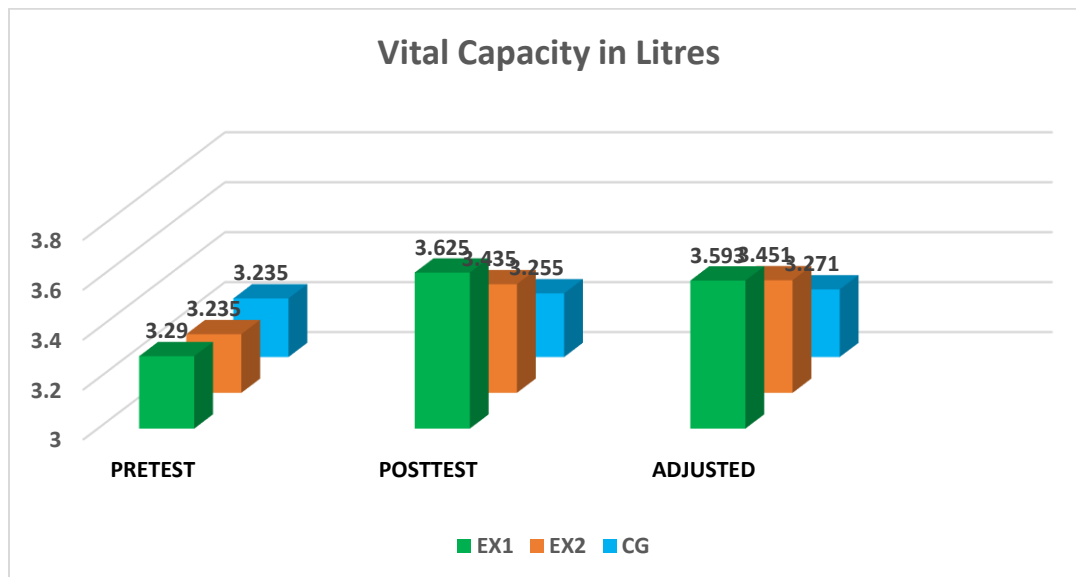
Table 2: Post hoc analysis using scheff's confidence interval test

CG	EX1	EX2	MD	CI
3.255	--	3.435	0.180	0.118
3.255	3.625	--	0.370	0.118
--	3.625	3.435	0.190	0.118

**Significant at 0.05 level of Confidence.*

According to Table 2, there was a statistically significant difference in vital capacity between EX1 and CG and between EX2 and CG, with adjusted post-test differences of 0.180 and 0.370, respectively, at the 0.05 level of confidence. The difference in vital capacity between EX1 and EX2 s adjusted post-test mean was 0.190, above the confidence interval value at the 0.05 levels. The mean values are presented in the diagram in Figure 1.

Figure 1: Pre, Post and adjusted post tests mean values of Experimental Groups and Control groups on vital capacity



11. Discussion on the findings of Vital Capacity

The result of the study on Vital capacity indicates that all the experimental groups namely EX 1 and EX 2 brought about significant changes after the training than the control group. The analysis of the data indicates that there was a significant difference on vital capacity between EX 1 and EX2. Based on the mean value, the traditional yogic practices EX 1 was found to be better in improving vital capacity than the power yogic practices group EX 2.

12. Discussion on findings and hypothesis

As compared to the control group, the study's results showed a significant difference in the selected physiological dependent variable as a result of traditional yoga practices and power yoga practices. As a result, the first hypothesis regarding vital capacity was fully accepted at the 0.05 level of confidence. Also study results revealed that physiological dependent variable Vital capacity significantly improved by Traditional yoga practices group (EX1) compared to Power yoga group (EX2). As a result, the second hypothesis regarding vital capacity was fully accepted at the 0.05 level of confidence.

13. Conclusion

The following conclusions were reached after the study's analysis and discussion:

- Traditional Yogic Practice Group (EX 1) and the Power Yogic Practice Group (Ex 2) were able to improve college women students vital capacity than the Control Group (Rest Group).
- Traditional yoga group (EX1) made significance difference in physiological parameter named vital capacity than Power yoga Practice group (EX2)

14. Conflict of interests

Author declares that there is no conflict of interest

15. References

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