



Influence of Yogic Training on Physiological Parameters of Disabled Students

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Abstract.

The purpose of the study was to investigate the effect of yoga training on physiological characteristics of disabled students of Aligarh Muslim University. Another purpose of the study was to improve the physiological level of the students. 40 participants with vision impairment and physically disabled were selected randomly. The age of the participants ranged between 16-22 years male were selected. Standard and progressive matrices organizational physiological variable (Lungs Capacity, Vital Capacity, Blood Pressure, and Pulse rate were measured for the assessment of yoga training programme. To find out significant effect of yoga training programme on physiological characteristics of students t test was used. The level of significant was set at 0.5. The result revealed that there was significant ($p < .05$) effect of yoga training on physiological characteristics of students with 38 degree of freedom. Practice of selected yoga training programme also helped to improve physiological characteristics of students.

Keywords: *Physiological Characteristics, Yoga Training, Lungs Capacity, Vital Capacity, Blood Pressure, Pulse Rate, Physically Disabled and Vision impairment.*

1. Introduction

Yoga is a science. It is an ancient system of exercises and personal development for the body mind and spirit and took birth in India over 5000 years ago. With its gentle movement, deep breathing and long stretches. It is an ideal method of relaxation and energising. There are also various forms of yoga and we can choose the one most suitable.

Yogic exercises or asanas strengthen the nervous system and help the mind and body to

optimise their potential. Through healing, strengthening, stretching and relaxing the skeletal, muscular, digestive, cardiovascular, glandular and nervous systems, the body is strengthened. Yoga helps the mind find a new calm and also prepares the body for meditation.

Yoga is replete with deep breathing exercises called pranayama, and nadisodhanas or alternate nostril breathing techniques, useful to relieving stress, depression and other mental and physical problems.

Now a days yoga is a way of life which can be practiced by any human being regardless of age, sex and condition of health, thus it is based on general physical and spiritual laws which operate all mankind alike.

Yogic exercises is a kind of bodily movement with mental concentration. Yogasanas can help a person to develop his health along with control at various emotions like lust, love, affection, anger, greediness and provide firm control over body and mind, especially to overcome most of dangerous disease.

For the reason at present scenario the importance of yoga is felt by a large number of persons in most of the nations. It is now being realize in all parts of the globe that yoga is not only for better development of mind, socio-control and spiritual, moral aspect but it is also a therapy.

Regardless of the testimony of celebrities of the documented physiological benefits of regular yoga or mind –body practices, even the most motivated individual find it challenging to find time to implement any of the worthwhile yoga techniques available to them. With various organized classes ranging from 45-90 minutes in length, It is often difficult to incorporate a daily or weekly yoga practice given the time already appropriate to regular cardiovascular or resistance training routines. Covering time for yoga or flexibility training with a schedule that is already full morning and to-night is nearly impossible for most people. In most cases, facilitating mind and body flexibility is easily put aside when it is probably needed the most.

Disability of the body is not a disease or infirmity, rather it is a condition of the body, anyone can achieve any time by the some chronic disease or accident. It is the obligatory responsibility of Physical education professionals to serving the persons with disabilities. The mission of the physical education teacher is to promote the development of motor skills and abilities so that people can live healthful and productive lives and engage in recreational and sports activities of their choosing. The Right of Persons with Disabilities Bill, 2011 of Indian Constitution, a successors of 'Persons with Disabilities (Equal Opportunities, Protection of

Rights and Full Participation), Act 1995' advised full rights to play and participate in sports on an equal basis with other children.

1.1 Delimitations

- The participants for the study were selected from the undergraduate students from A.M.U., Aligarh.
- The study was delimited to following
 - (a) Lungs Capacity
 - (b) Vital Capacity
 - (c) Blood Pressure
 - (d) Pulse Rate

1.2 Hypotheses

It was hypothesized that:

- (i) There will be significant difference of yoga training programme conducted on the college students.
- (ii) There will be significant improvement in selected physiological components of college students, due to yoga training.

2. Materials and Methods

40 male participants with vision impairment and physically disabled were selected randomly. The age of the participants ranged between 16 and 22 years. Tools and techniques selected following physiological variables i.e, lungs capacity, vital capacity, blood pressure, and pulse rate were used and measured in this study to know the effect of yoga trainings on them.

2.1 Variables and Instruments

The duration of modified yoga training programme was of 10 weeks in which disabled students received the training for six days per week and 50 minutes per day. Keeping in mind the objective of the study that yoga training programme was prepared in such a way which helps to improve the selected physiological variables. Every Asana was modified in execution especially for the physically disabled participants.

Modified Yoga Training Programme

S.No	Day	Yoga Asana
1	Monday	Tadasana, Dhyan, NadiShodhanPranayama and Shavasana
2	Tuesday	Vajarasana, Bhujangasana, Dhanurasana and Shavasana
3	Wednesday	Surya Namaskar and Shavasana
4	Thursday	Tadasana, Dhyan, NadiShodhanPranayama and Shavasana
5	Friday	Vajarasana, Bhujangasana, Dhanurasana and Shavasana
6	Saturday	Surya Namaskar and Shavasana

Physiological Variables

Name of the variables	Test	Unit
Lungs Capacity	Spiro Meter	Millilitres
Vital Capacity	Wet Spiro Meter	Millilitres
Blood Pressure	Sphygmomanometer	Millilitre of Mercury
Pulse Rate	Manual method	No. of pulse beat/minute

3. Procedure

On the selected participants a pre- test with respect to measure the physiological variables(lungs capacity, vital capacity, blood pressure and pulse rate) was conducted at very first stage of study than as far as experimental treatment is concern the 10 weeks yoga training programme was administrated as per scheduled and then post test was conduct to measure same physiological variables with the help of reliable tools of measurement to find out the significant difference and to find out the suitable yoga training programs for college students.

3.1 Statistical Technique

To find out the effect of yoga training in physiological characteristics of students, the t-test was used at 0.05 level of significance.

4. Results

Table-4.1

t-ratio of the means of physiological characteristics of students.

Characteristics	Group	N	Mean	S.D	Df	T
Lungs Capacity	Pre test	40	23.70	3.29	38	12.72*
	Post test	40	26.23	3.54		
Vital Capacity	Pre test	40	3434.54	255.45	38	4.54*
	Post test	40	3649.24	241.39		
Systolic Blood Pressure	Pre test	40	112.16	4.50	38	3.19*
	Post test	40	110.09	3.28		
Diastolic Blood Pressure	Pre test	40	69.63	2.54	38	4.86*
	Post test	40	67.59	2.67		
Resting Pulse Rate	Pre test	40	77	4.56	38	14.92*
	Post test	40	69	3.76		

Significant at 0.05 level.

Tab t 1.684

From above table 4.1 it is evident that t value of Lungs Capacity is 12.72, Vital Capacity 4.54, Systolic Blood Pressure 3.19, Diastolic Blood Pressure 4.86 and Resting Pulse Rate 14.92 which is significant at 0.05 level with 38 degree of freedom.

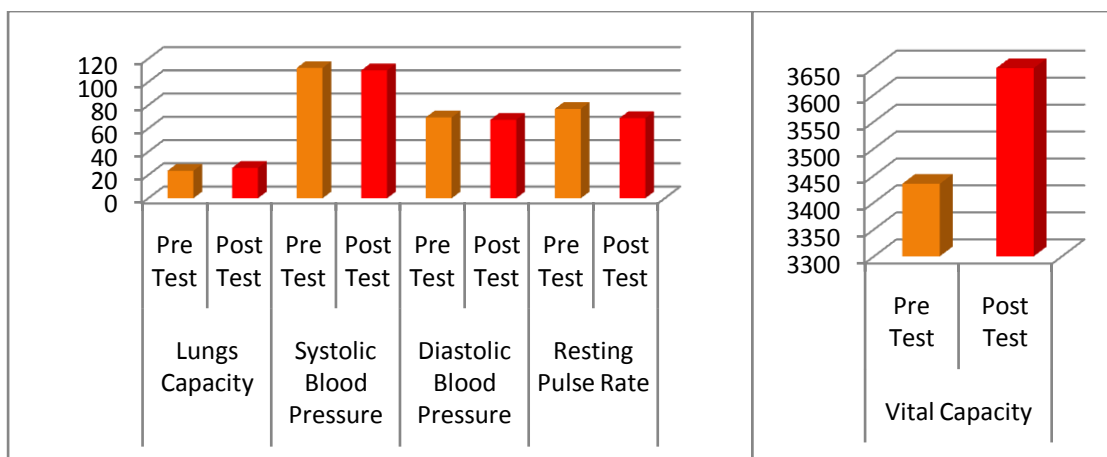


Figure 4.2: Graphical representation of comparison of means of the physiological variables.

5. Discussion

Significant differences were found in Lungs Capacity, Vital Capacity, Systolic Blood Pressure, Diastolic Blood Pressure and Resting Pulse Rate, which show that positive effect of modified yoga training on physiological characteristics of disabled students. The findings of the study are collaborated with the findings of Lohan and Rajesh (2002), Mohan (2003), Chaudhary and Ahsan (2012) who proved that physiological variables of adult could be improved through yogasanas and pranayama.

Conclusions

The results of the study were two folded as the physiological component data were computed for three different objectives. The first objective of the study was to find out a better modified yoga training program for the disabled participants. The result in the direction of Saroja (2010) studies, which have revealed that there is a better yoga training program on selected physical, physiological and biological and bio-chemical variables among aged people.

The second objective of the study was to find out significant differences on the effect of yoga training programs on physiological variables (lungs capacity, vital capacity, blood pressure, and pulse rate) of the participants. The result supported by the findings of Lega (2010) studies, which has revealed that there is a significant difference effects of yoga training on cardio respiratory functions of school children.

The third objective of the study was to improve the physiological level of the under graduate students by modified yoga training. The result with respect to effect of yoga practice and walking on selected physical, physiological, and bio-chemical variable among aged people was significant and this has been supported by the Saroj (2010) study.

SUGGESTIONS FOR FURTHER RESEARCH

Researches and explorations are not the end results but that always open the way for future investigation. Similarly, the present work is not the end in this area. In fact, all the variables can never be studied in a single research. So the present study was confined to study. "Influence of Yogic Training on Physiological Parameters of Disabled Students". The results of the present investigation led to certain possibilities for further researches.

It is suggested that further studies in this area may be compared on disabled persons with different games. This type of study may also be conducted in cross cultural context and larger sample would provide better results.

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