

EFFECT OF STRUCTURED YOGIC PROTOCOL INTERVENTION ON BODY COMPOSITION OF OBESE SCHOOL CHILDREN

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ABSTRACT

Yoga is a cultural heritage of India. It is the path of systematic life style. Yoga has its origin in India during the pre-historic era. Yoga is based on its spiritual philosophy and it has a wide range of positive impact on health and wellness of an individual. During the ancient day, practice of yoga was somehow religious in nature. With the evolution of humankind, the concept of yoga got modified and become much more applied as well as therapeutic in nature. Modern yoga focuses towards health and wellness of an individual. It helps in attaining amiable harmony between human body and mind. In this world of globalization, people are getting more and more vulnerable to diseases and susceptibilities; even if the children are no exception and getting prey to numerous health problems in their tender ages. Yoga is the best mode of practice which can give human being a holistic health. Among the health problems obesity is a serious issue which is curbing the children. Keeping in view the problems of obesity in children, the scholars have conducted this study. For the purpose of the study, the author randomly selected 60 boys (30 control and 30 experimental) from the high schools of West Bengal as subjects of his study and recorded their personal data like are height and weight and involved them in a 12 weeks' yogic intervention. He estimates selected skin folds like biceps, triceps, suprailiac and subscapularis and thereafter calculated their body composition before and after the treatment. With the help of data analysis, the scholar arrived at the conclusion that the yogic intervention improved the body composition status of the obese school children.

Key words: Yogic, Protocol, Intervention.

INTRODUCTION

Yoga is a traditional art of India. It is a cultural heritage of our nation. Yoga has been disseminating the premise of wellbeing and blissful living. Regular and systematic practice of yoga can lead human being to a state of ultimate self-realization. The therapeutic yoga more prevalent in the present society has wide range of positive impact on holistic health of an individual. Following

the laws and principles of yoga and application of those in day to day life can help human being in overcoming all distress. Yoga is for all – People of any age, gender, caste, sect and religious belief can take part in yogic practices and derive wholesome health benefits.

BACKGROUND

In this era of globalization men are involved in a vibrant life full of stress strain and anxiety. Unwarranted stress and frenetic life style is making human beings prone to numerous diseases. In this world of hi-tech technology, the children are also getting affected by numerous psychosomatic and hypo kinetic diseases. Obesity among school children is a challenge before the developed as well as developing nations. Considering the therapeutic and wellness benefits of Yoga and to manage the problem of childhood obesity, the scholar made up his mind to conduct a research study to assess an expert designed yogic protocol intervention on the body composition of school boys.

METHODOLOGY

To accomplish the study, the author randomly selected 60 boys (30 control and 30 experimental) from the high schools of West Bengal as subjects of his study. He adopted pre test and post test random design. The variables age, height weight as personal data are taken into consideration and selected skin folds like biceps, triceps, suprailiac and subscapularis from which the body composition variables % body fat, Lean mass and fat mass were estimated. The experimental group boys were involved in a 12 weeks' yogic protocol intervention and changes with respect body composition were analyzed for comparison with the control group students.

THE TRAINING PROTOCOL DEVELOPED IS AS FOLLOWS

Prior to the intervention of training program, a medical check-up of the subjects was made by the medical practitioner. The following yogic practices were performed by the subjects of the experimental group for one and half hour four days (per week) for a period of twelve weeks. Consents of the head of the institute were taken for the intervention of training program. The training is as follows....

Table - 1
List of Asanas & Pranayama

Sl. No.	POSITION	NAME OF THE ASANAS
1.	Standing	Prayer & Omkar Recitation Stretching & Surya Namaskar Tadasana Trikonasana Utkatasana
2.	Long Sitting	Paschimottanasana Ardha Matsyendrasana
3.	Kneeling	Ustrasana
4.	Prone	Bhujangasana Dhanurasana Shalabhasana
5.	Supine	Halasana Naukasana Shavasana
6.	Pranayama	Kapalavhati Anulumbilum Bhastrika Bhramari

Table - 2

Asanas Prescribed for Yogic Practice for 1st to 4th Week

Asanas Position	Repetition	Rest between Asanas	Weekly
Prayer & Omkar Recitation	5 Minutes		4 Days
Stretching & Surya Namaskar	15 Minutes		
Standing	2	1 Minute	
Long Sitting	2	1 Minute	
Kneeling	2	1 Minute	
Prone	2	1 Minute	
Supine	2	1 Minute	
Pranayama		5-15 Minutes	

Table - 3

Asanas Prescribed for Yogic Practice for 5th to 8th Weeks

Asanas Position	Repetition	Rest between Asanas	Weekly
Prayer & Omkar Recitation	5 Minutes		4 Days
Stretching & Surya Namaskar	15 Minutes		
Standing	3	30 Seconds	
Long Sitting	3	30 Seconds	
Kneeling	3	30 Seconds	
Prone	3	30 Seconds	
Supine	3	30 Seconds	
Pranayama	5-20 Minutes		

Table - 4
Asanas Prescribed for Yogic Practice for 9th to 12th Weeks

Asanas Position	Repetition	Rest between Asanas	Weekly
Prayer & Omkar Recitation	5 Minutes		4 Days
Stretching & Surya Namaskar	15 Minutes		
Standing	4	15 Seconds	
Long Sitting	4	15 Seconds	
Kneeling	4	15 Seconds	
Prone	4	15 Seconds	
Supine	4	15 Seconds	
Pranayama	5-20 Minutes		

RESULT AND DISCUSSION

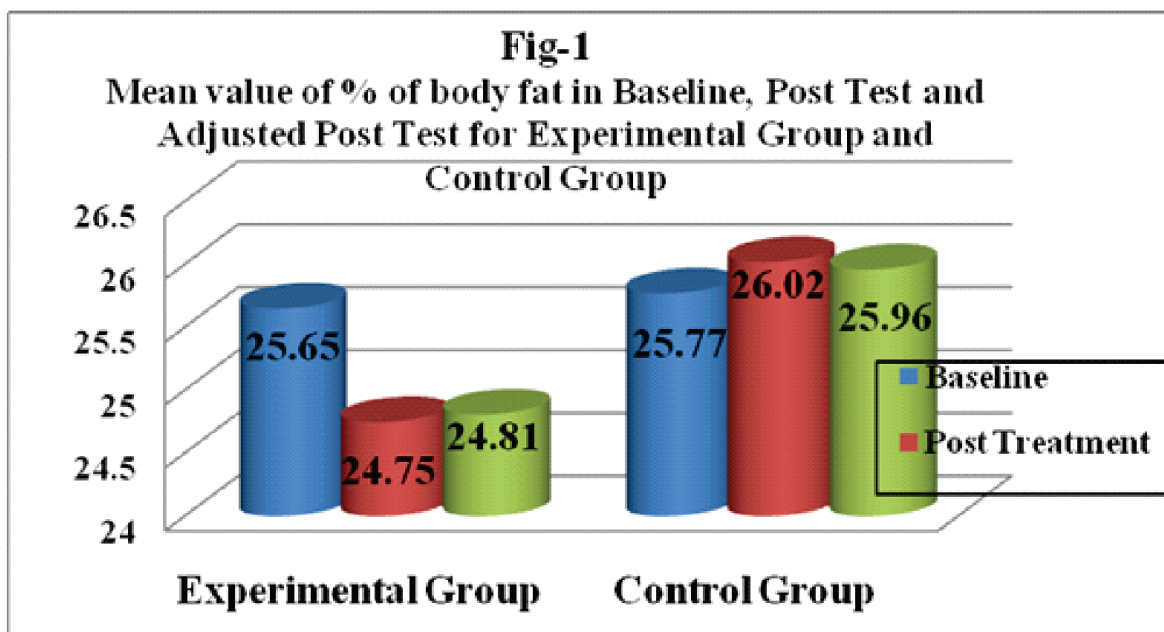
For data analysis ANCOVA were computed, the results are presented as follows:

Table-5

Analysis of Covariance of % of Body Fat for Experimental Group and Control Group

Name of the variables	Test		Experimental Group	Control Group	Source of variance	Sum of squares	Df	Mean squares	'F' Ratio
% OF Body Fat	Baseline	Mean	25.65	25.77	Between	0.20	1	0.20	0.036
		±	±	±					
		SD	2.50	2.21	Within	322	58	5.56	
	Post Treatment	Mean	24.75	26.02	Between	23.99	1	23.99	4.176
		±	±	±					
		SD	2.38	2.41	Within	333.244	58	5.75	
	Adjusted post test	Mean	24.81	25.96	Between	19.77	1	19.77	86.393
					Within	13.04	57	0.23	

$F(0.05) (1, 58 \text{ and } 1, 57) = 4.01$, *Significant at 0.05 level of confidence.



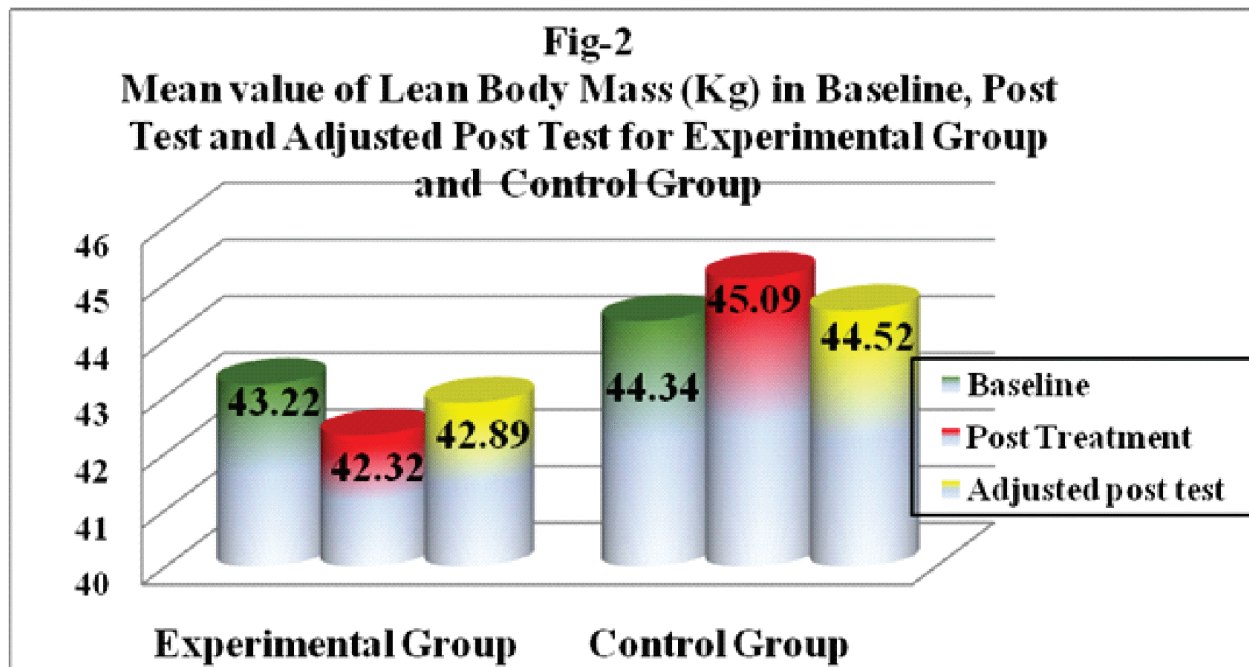
From the data analysis presented in Table 5 and cylindrical bar diagram presented in Fig 1 it is clear that % body fat reduced significantly due to the yogic intervention.

Table -6

Analysis of Covariance of Lean Body Mass for Experimental Group and Control Group

Name the variables	Test		Experimental at Group	Control Group	Source of variance	Sum of squares	Df	Mean squares	'F' Ratio
Lean Body Mass (Kg)	Baseline	Mean	43.22	44.34	Between	18.70	1	18.70	0.487
		±	±	±	Within	2224	58	38.34	
	Post Treatment	Mean	42.32	45.09	Between	114.77	1	114.77	2.869
		±	±	±	Within	2320.27	58	40.00	
Adjusted post test	Mean		42.89	44.52	Between	39.74	1	39.74	64.089
					Within	35.34	57	0.62	

$F(0.05) (1, 58 \text{ and } 1, 57) = 4.01$, *Significant at 0.05 level of confidence.



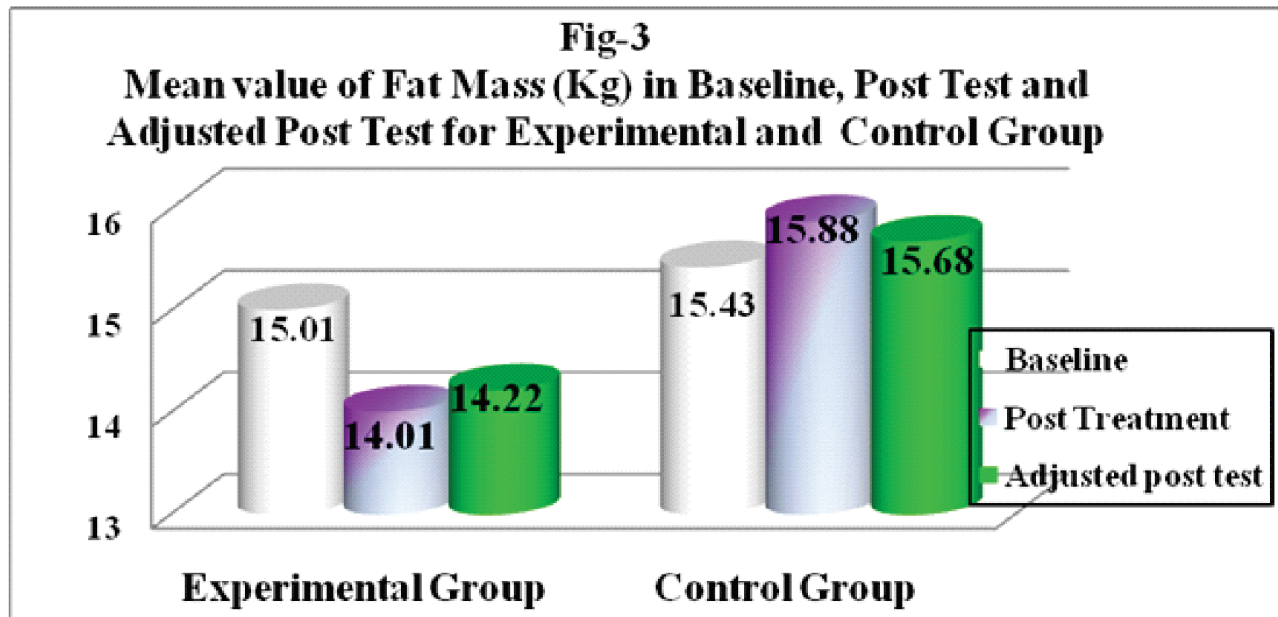
From the data analysis presented in Table 6 and cylindrical bar diagram presented in Fig 2, it is clear that lean body mass reduced significantly due to the yogic intervention.

Table-7

Analysis of Covariance of Fat Mass for Experimental Group and Control Group

Name of the variables	Test		Experimental Group	Control Group	Source of variance	Sum of squares	df	Mean square	'F' Ratio
Fat Mass (Kg)	Baseline	Mean	15.01	15.43	Between	2.61	1	2.61	0.295
		±	±	±	Within	512	58	8.82	
	Post Treatment	Mean	14.01	15.88	Between	52.29	1	52.29	6.079
		±	±	±	Within	498.94	58	8.60	
	Adjusted post test	Mean	14.22	15.68	Between	31.76	1	31.76	229.918
					Within	7.87	57	0.14	

$F(0.05) (1, 58 \text{ and } 1, 57) = 4.01$, *Significant at 0.05 level of confidence.



From the data analysis presented in Table 7 and cylindrical bar diagram presented in Fig 3, it is clear that fat mass reduced significantly due to the yogic intervention.

CONCLUSION

From the findings of the present study, it is clear that Yogic Intervention as employed in the study helped in reduction of the body composition variables % Body Fat and Fat Mass which is a pro health perspective and may benefit human folk with respect to health and wellness. The findings of the present study will also help children to overcome the problem of obesity through participation in regular systematic yogic program.

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