EFFECT OF SURYANAMASKAR ON OBESE FEMALES OF 30 - 40 YEARS OF AGE GROUP

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ABSTRACT

It was an experimental cross-sectional study designed to check effect of yogic practices i.e. Suryanamaskar in reduction of obesity. Pre and Post results were compared and checked for whether there is statistical difference in mean values or not.For the present study total 30 females ranging in age group 30-40 were selected. These subjects were selected from Sewak and Delight Colony Patiala. All the subjects were informed about the purpose of study and involved in study after their consent and told them that they have right to withdraw any time during the study. Subject after knowing all details voluntarily participated in the study.

Key words Suryanamaskar, Obesity

INTRODUCTION

Obesity is generally of two types : android obesity and gynoid obesity. This categorization of obesity is based on localization of excess body fat in the body i.e. in the upper or lower body, respectively. Android obesity(apple shaped) is more typical of males whereas gynoid obesity(pear shaped) is more typical in females. However some males do possess gynoid obesity females possess android obesity. Android obesity is simply called upper body obesity and gynoid obesity is lower body obesity,(heyward,2002). Now a days , obesity is the worrying factor due to sedentary life style and wrong eating habits. Diet and lifestyle practices are key factors in obesity. Main reasons for obesity are the foods we eat every day contribute to our well- being. Foods provide us with the nutrients we need for healthy bodies and the calories we need for energy. If we take in more calories than we burn, the extra food turns to fat and is stored in our bodies. If we overeat regularly, we gain weight, and if we continue to gain weight, we may become obese. Thus most common Couse is imbalance between the energy intake and energy output.

PROCEDURE -

It was an experimental cross-sectional study designed to check effect of yogic practices i.e. Suryanamaskar in reduction of obesity. Pre and Post results were compared and checked for whether there is statistical difference in mean values or not.For the present study total 30 females ranging in age group 30-40 were selected. These subjects were selected from Sewak and Delight Colony Patiala. All the subjects were informed about the purpose of study and involved in study after their consent and told them that they have right to withdraw any time during the study. Subject after knowing all details voluntarily participated in the study.

Table-1: Mean And S.D. Values Of Height (Cm), Weight (Kg),BMI, Sum Of Four Skinfolds (Mm) And % Body Fat Of Control Group (Day-1)

	VARIABLES	MEAN	S.D.
CONTROL GROUP	Height (Cm)	159.266	4.216
	Weight (Kg)	72.607	6.554
	BMI	28.491	2.366
	Sum Of Four Skinfolds (mm)	84.626	5.377
	% Body Fat	35.042	0.816

Table 1 shows mean and S.D. values of Height , weight, BMI,sum of four skin folds and % body fat of control group (N=15) before the administration of experiment.Mean and S.D. for Height is 159.266 and 4.216 respectively.Similarly Mean and S.D. for weight and BMI is 72.607 ± 6.554 and 28.491 ± 2.366 respectively. Similarly mean and S.D. for sum of four skin folds were 84.626 ± 5.337 and 35.042 ± 0.816, respectively.

Table-2: Mean And S.D. Values Of Height (Cm), Weight (Kg),BMI, Sum Of Four Skinfolds (Mm) And % Body Fat Of Experimental Group (Day-1)

	VARIABLES	MEAN	S.D.
Experimental Group	Height (Cm)	159.933	3.555
	Weight (Kg)	73.8	6.896
	BMI	28.882	2.139
	Sum Of Four Skinfolds (Mm)	84.05	8.639
	% Body Fat	34.798	1.356

Table-2 shows mean and S.D. values of Height, weight, BMI,sum of four skinfolds and % body fat of experimental group before the administration of test.

Mean values of Height and weight for experimental group is 159.933 ± 3.555 and 73.8 ± 6.896 respectively. BMI i.e. Body Mass Index calculated for experimental group on Day-1 is 28.822 ± 2.139. These values for sum of four skinfolds and % body fat were 84.05 ± 8.639, 34.798 ± 1356 respectively.

Table –3:Test Of Significance Value For Height(Cm)For Experimental Group And Control Group (Day-1)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	159.933	3.555	0.268*
CONTROL	159.266	4.162	

*Non-Significant

Table-3 explained Mean SD and t-test values of height(cm) for both the groups i.e. experimental group and control group. Mean and S.D. for height for experimental group is 159.933 ± 3.555 whereas for control group its value is 159.266 ± 4.162.When t-test was applied it showed Non-Significant differences in mean values of height of both groups. Non-Significantdifference are genuine as height is a non-changeable factor.

Table –4: Test Of Significance Value For Weight(Kg) For Experimental Group And Control Group (Day-1)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	73.8	6.896	0.252*
CONTROL	72.607	6.554	

*Non-Significant

Table-4 revealed Mean SD and t-test values for weight for both the groups i.e. experimental group and control group. Mean and S.D. for weight for experimental group is 73.8 ± 6.896 whereas for control group its value is 72.607 kg ± 6.554.When t-test was applied it showed Non-Significant differences in mean values of weight of both groups. Non-Significantdifference are genuine as before start of test .Both groups were sedentary house wives not empvalued in any kind of physical activity.

Table –5: Test Of Significance Value For BMI For Experimental Group And Control Group (Day -1)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	28.822	2.139	0.354*
CONTROL	28.491	2.366	

*NON-SIGNIFICANT

Above Table and fig. reveals mean, S.D. and t-Test values for BMI i.e. Body Mass Index for both the groups i.e. Experimental group showed 28.822 ± 2.139 mean value for BMI i.e. Body

Mass Index whereas for control group 28.491 ± 2.366 is mean value for BMI.When both means compared for test of significance results showed Non-Significant values (0.354)(TABLE-5 & fig.2)

Table –6: Test Of Significance Value For Sum Of 4 Skin Folds For Experimental Group And Control Group (Day 1)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	84.626	5.377	0.309*
CONTROL	84.05	8.639	

*NON-SIGNIFICANT

Table 6 shows Mean, S.D. and t-value for sum of four skin folds (i.e. biceps skin fold, triceps skinfold, subscapular skinfold and suprailiac skinfold) in experimental and control group.Mean and S.D. sum of four skinfolds for experimental group is 84.626 ± 5.377 mm and for control group 84.05 ± 8.639 mm.When means of both groups compared to check significant difference t-value showed non-significant differences.

Table –7: Test Of Significance Values For % Body Fat For Experimental Group And Control Group (Day 1)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	35.042	0.816	0.277*
CONTROL	34.798	1.356	

*NON-SIGNIFICANT

Above table reveals results of mean and S.D. for % body fat in experimental and control group.Mean and S.D. for experimental and control groups are 35.042 ± 0.816 and 34.798 ± 1.356 respectively.When compared for t-value results showsNon-Significant values.This shows that both the means are not statistically different from each other.(TABLE-7 & fig.5)

From Table 1-7 all the results were before the start of test and Non-Significant results in the variables of both experimental and control group bodies were because all subjects were of same socio economic status nature of job was same (as all were house wives) and leading sedentary life sty

Table-8: Mean And S.D. Values Of Height (Cm), Weight (Kg),BMI, Sum Of Four Skinfolds (Mm) And % Body Fat Of Control Group (Day- 30)

	VARIABLES	**MEAN**	**S.D.**
CONTROL GROUP	Height (Cm)	159.266	4.216
	Weight (Kg)	72.266	6.554
	BMI	28.491	2.366
	Sum Of Four Skinfolds (mm)	83.2	8.695
	% Body Fat	34.345	2.495

Table-8 shows mean and S.D. for all the five variables of control group after 30 days of yogic session i.e. Suryanamaskar S.D. for height, weight and BMI are 159.266 ± 4.216 (cm), 72.266 ± 6.554 (kg) and 28.491 ± 2.366 respectively whereas for sum of four skin folds and% body fat is 83.2 ± 8.695 and 34.345 ± 2.495 respectively.

Table-9: Mean And S.D. Values Of Height(Cm), Weight (Kg),BMI, Sum Of Four Skinfolds (Mm) And % Body Fat Of Experimental Group (After Experiment)

	VARIABLES	**MEAN**	**S.D.**
EXPERIMENTAL GROUP	Height (Cm)	159.933	3.553
	Weight (Kg)	70.479	6.586
	BMI	27.025	2.043
	Sum Of Four	50.776	3.22

	Skinfolds mm		
	% Body Fat	28.468	0.794

Table-9 shows mean and S.D. values for all the five variables (i.e. height, weight, BMI, Sum of four skin folds and % body fat for experimental group after 30 days of yogic session i.e. Suryanamaskar.For height, weight and BMI Mean and S.D. values are 159.933 ± 3.555 (cm), 70.479 ± 6.586 (kg), BMI 27.025 ± 2.043 respectively.In case of sum of four skinfolds and % body fat mean and S.D. values are 50.776 ± 3.22 (mm) and 28.468 ± 0.794 respectively.

Table –10: Test Of Significance Value For Height (Cm) For Experimental Group And Control Group (After Experiment)

GROUP	**MEAN**	**S.D.**	**T-VALUE**
EXPERIMENTAL	159.933	3.555	0.268*
CONTROL	159.266	4.216	

*Non-Significant

Table No. 10 & FIG.6 explains about t-value of height of experimental and control group. This is non-significant as height is not a changing variable.

Table –11: Test Of Significance Value For Weight(Kg) For Experimental Group And Control Group (After Experiment)

GROUP	**MEAN**	**S.D.**	**T-VALUE**
EXPERIMENTAL	70.470	6.586	**1.235***
CONTROL	72.267	6.554	

*Significant at 5 % level

Above table explains about difference in mean of weight (kg) of experimental and control group after given 30 days yogic session to the subjects. Though there is difference of approximately 2 kg in weight of control and experimental groups. When both means compared t-test value shows significant difference in means of both groups. This shows Suryanamaskar has positive effect on reducing weight in experimental group.(TABLE-11 & FIG 7)

Table –12: Test Of Significance Value For BMI For Experimental Group and Control Group (Day 30)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	27.525	2.043	0.137*
CONTROL	28.491	2.366	

*Non-significant

When means of BMI were compared for both the groups i.e. experimental and control group results obtained showed non-significant differences in t-values (0.137).It is because height is a non-changeable variable and similarly though there is difference in means of weight of both groups but t-value is non-significant and BMI obtained by dividing weight and height.Thus resultant is also non-significant.(table-12 & fig.8) These results of BMI shows that BMI is not a true indicator of obesity. However it tells about whether a person is normal, overweight or underweight.

Table –13: Test Of Significance Value For Sum Of 4 Skinfolds For Experimental Group And Control Group (After Experiment)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	50.776	3.220	7.828*

CONTROL	83.2	8.695	

*Significant at 1% level.

Table-13 Fig.9 reveals about the results of t-value of sum of four skin folds of both groups i.e. experimental and control group after 30 days of yogic session of Suryanamaskar .When both the means(i.e. of experimental and control group) were compared to check that (50.776) whether differences are significant results showed significant difference at 1% level.From these results it is evident that though there is less reduction in weight but significant reduction in body fat. It is also clear from the above results that during yogic sessions muscles gets strengthened and there is gain in muscle mass.Thus weight reduction in fat mass is compensated with weight gain in muscle mass.Thus net weight reduction is less (i.e. by ½ - 2 kg) (Table-12). It is also proved that BMI is not a true indicator of analyzing weight reduction due to fat loss.

Table –14: Test Of Significance Value For % Body Fat For Experimental Group And Control Group (After Experiment)

GROUP	MEAN	S.D.	T-VALUE
EXPERIMENTAL	28.468	0.794	2.613*
CONTROL	34.345	2.495	

*Significant at 1% level

Table-14 shows t-test value of % body fat of experimental group and control group after 30 days of yogic session.After comparing both means results obtained for test of significance shows significant differences in % body fat.There is significant reduction in % body fat of experimental group as compared to control group whereas there is no change in % body fat of control group after test (Table 17 and 14).

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