CHAPTER 6

6.0 RESULTS

6.1 DEMOGRAPHIC CHARACTERISTICS Table 2

Sl#	Particulars	Characteristic	Yoga (n=151)	Control (n=153)	P value
1	Age	Age years	53.0 ± 11.14	53.16 ± 9.11	0.946
		Duration on DM years	49.66 ± 11.15	48.25 ± 8.89	0.289
2	Time since diabetes diagnosis, year	1 – 5	113(74.8%)	96(62.7%)	0.163
		6-10	27(17.9%)	40(26.1%)	
		11-15	9(6.0%)	12(7.8%)	
		16-20	2(1.3%)	3(2.0%)	
		21-25	0	2(1.3%)	
3	Gender	Male	79(52.32%)	60 (39.22%)	5.257 (0.022)
		Female	72(47.68%)	93 (60.78%)	
4	Employment status (%)	Self employed	106(70.20%)	113(73.86%)	0.213
		Government Service	27(17.88%)	17(11.11%)	
		Unemployed	18(11.92%)	23(15.03%)	
5	Total annual income in rupees (%)	Low (Rs.24000-49999)	32(21.2%)	59(38.6%)	0.001
		Medium (Rs.50000-99999)	60((39.7%)	41(26.8%)	
		High (Rs.100000 and above)	52((34.4%)	39(25.5%)	
		No income	7(4.6%)	14(9.2%)	
6	Educational qualification (%)	High School	95(62.91%)	96(62.7%)	0.001 (0.975)
		Graduate/Post Graduate	56(37.1%)	57(37.3%)	
7	Marital Status (%)	Married	150(99.34%)	152(99.35%)	0.000 (1.0)
		Unmarried	1(0.7%)	1(0.7%)	
8	Smoking	No	129(85.4%)	130(85.0%)	0.013 (0.91)
		Yes	22(14.6%)	23(15.0%)	
9	Alcohol Consumption	No	121(80.1%)	132(86.3%)	2.053 (0.151)
		Yes	30(19.9%)	21(13.7%)	
10	Family History of diabetes	No diabetes	143(94.70%)	143(93.46%)	0.209 (0.647)
		Yes	8(5.29%)	10(6.54%)	
11	Current Diabetes treatment	Oral Anti-glycaemic agent only	137(90.73%)	128(83.66%)	3.395 (0.065)
		Oral Hypoglycaemic agent + insulin	14(9.27%)	25(1634%)	

Note: Demographic characteristics age, duration of diabetes, time since diabetes diagnosed, year (p> 0.05, Independent 't' test), educational status, employment status, smoking behaviour, alcohol consumption, family history of diabetes, current diabetes treatment except gender and annual income status of between groups were matched (p> 0.05, Chi-square test). Pre-intervention outcome measures were also found matched between experimental and control groups (p> 0.05, Independent 't' test).

Table 6.1 Baseline demographic characteristics for each group

The baseline displays in Table 2 summarizes demographic characteristics of age, duration diabetes, time since diabetes diagnosed, year (p> 0.05, Independent 't' test), educational status, employment status, smoking behaviour, alcohol consumption, family history of diabetes, current diabetes treatment except gender and annual income status of between groups were matched (p> 0.05, Chi-square test). Pre-intervention outcome measures were also found matched between experimental and control groups (p> 0.05, Independent 't' test).

6.1 DEMOGRAPHIC CHARACTERISTICS

6.1.1 AGE

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had Age score (M = 53.0, SD = 11.14) over the control group (M = 53.16, SD = 9.11, t (302) = 0.072, p = 0.946). Before intervention, the yoga group had duration of T2DM (year) score (M=49.66, SD=11.15) over the control (M=48.25, SD=8.89, t (302) = -1.199, p= 0.289).

Table 6.1.1 Age

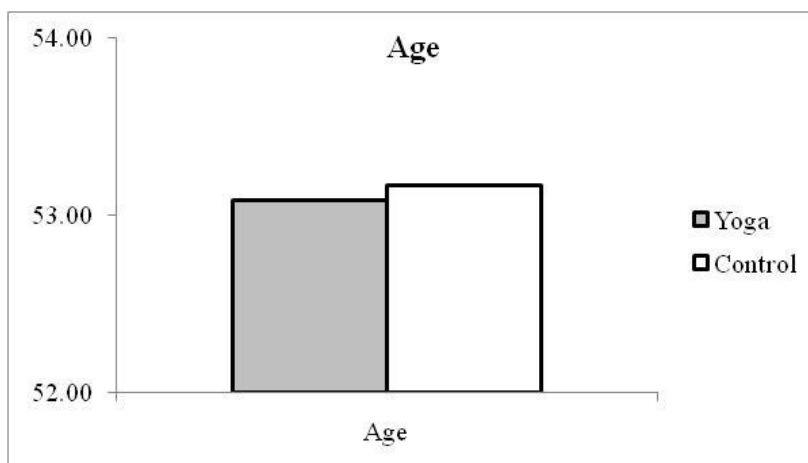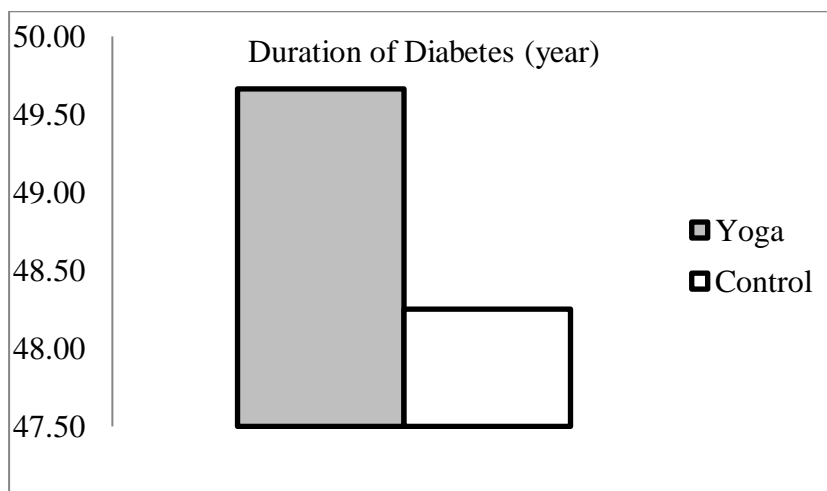| Sl#	Particulars	Characteristic	Yoga (n=151)	Control (n=153)	P value
1	Age	Age years	53.0 ± 11.14	53.16 ± 9.11	0.946
		Duration of T2 DM years	49.66 ± 11.15	48.25 ± 8.89	0.289

Figure 6.1.1a Age comparison

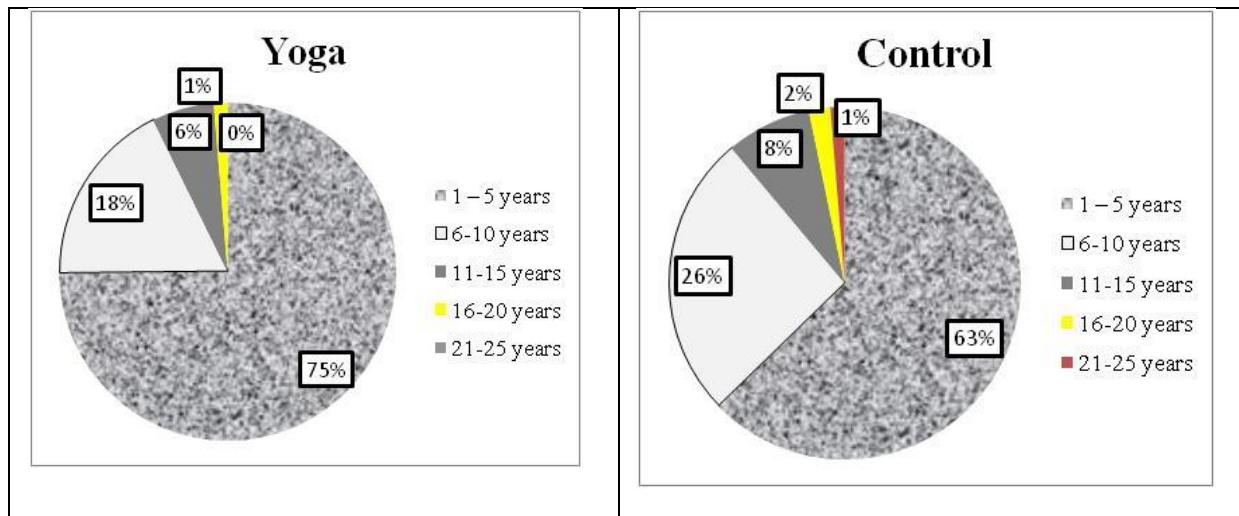**Figure 6.1.1b Duration of Diabetes(year)**

6.1.2 SINCE WHEN DIABETES DIAGNOSED (YEAR)

Chi-square test: A chi-square test of independence was performed to examine the relation between groups and since when diabetes diagnosed distribution. The relation between these variables was non-significant, $\chi^2(4, N = 304) = 6.521$, $p > .05$.

Table 6.1.2 Since when diabetes diagnosed(year)				
Test	**Result**	**Group**		**χ^2(_p_-values)**
		Yoga	**Control**	
Since when diabetes diagnosed	**1-5 years**	113(73.8%)	96(62.7%)	6.521 (0.163)
	6-10 years	27(17.9%)	40(26.1%)	
	11-15 years	9(6.0%)	12(7.8%)	
	16-20 years	2(1.3%)	3(2.0%)	
	21-25 years	0	2(1.3%)	

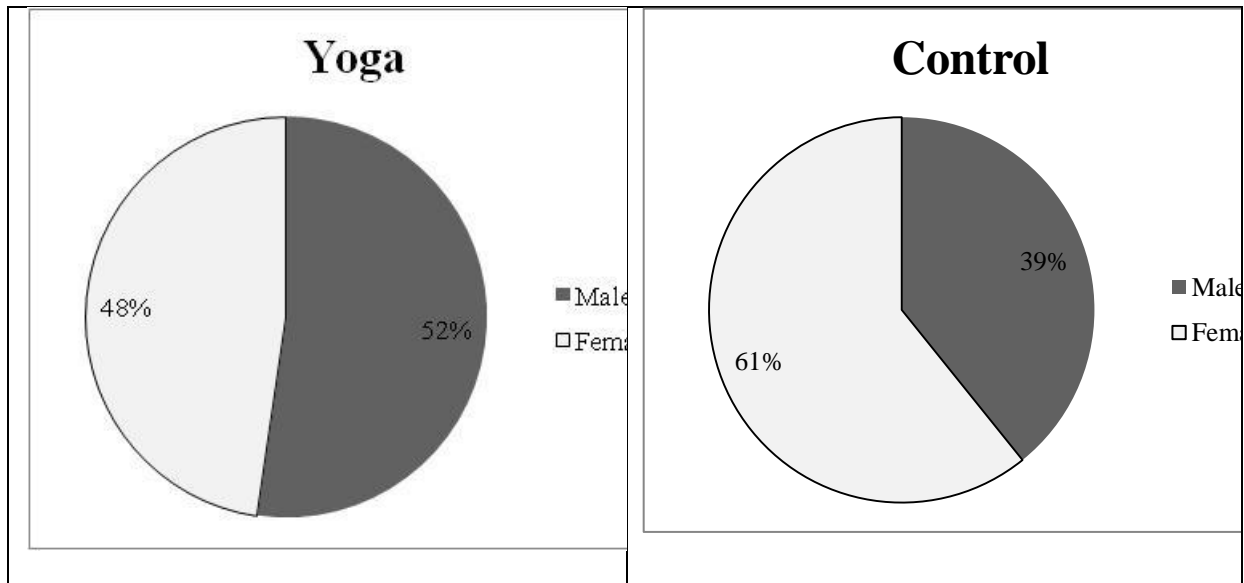**Figure 6.1.2 Since when diabetes diagnosed comparison**

6.1.3 GENDER *GROUPS

Chi-square test: A chi-square test of independence was performed to examine the relation between group and gender distribution. The relation between these variables was non-significant, $\chi^2(1, N = 304) = 5.257$, $p < .05$. Gender was equally distributed between groups.

Table: 6.1.3 Gender				
Test	**Result**	**Group**		χ^2(**p-values**)
		Yoga	**Control**	
Gender	**Male**	79 (52.32%)	60 (39.22%)	5.257 (0.021)
	Female	72 (47.68%)	93 (60.78%)	

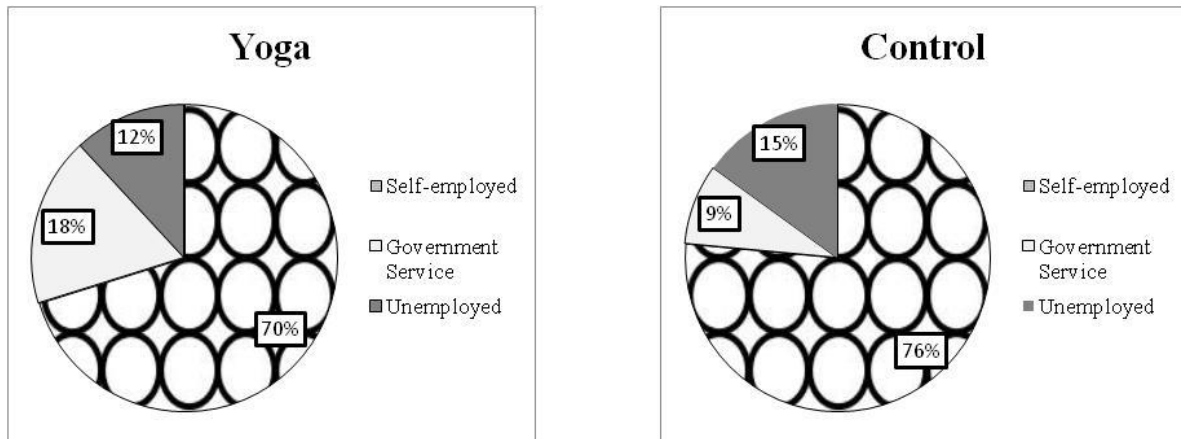**Figure 6.1.3 Gender between groups comparison**

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6.1.4 EMPLOYMENT STATUS

Chi-square test: A chi-square test of independence was performed to examine the relation

between group and employment status. The relation between these variables was non-

significant, $\chi^2(2, N = 304) = 3.09, p < .05$.

6.1.4 Table Employment Status				
Test	**Result**	**Group**		χ^2(*p*-values)
		Yoga	**Control**	
Employme nt status	**Self employment**	106(70.20%)	113(73.86%)	3.09 (0.213)
	Govt service	27(17.88%)	17(11.11%)	
	Unemployed	18(11.92%)	23(15.03%)	

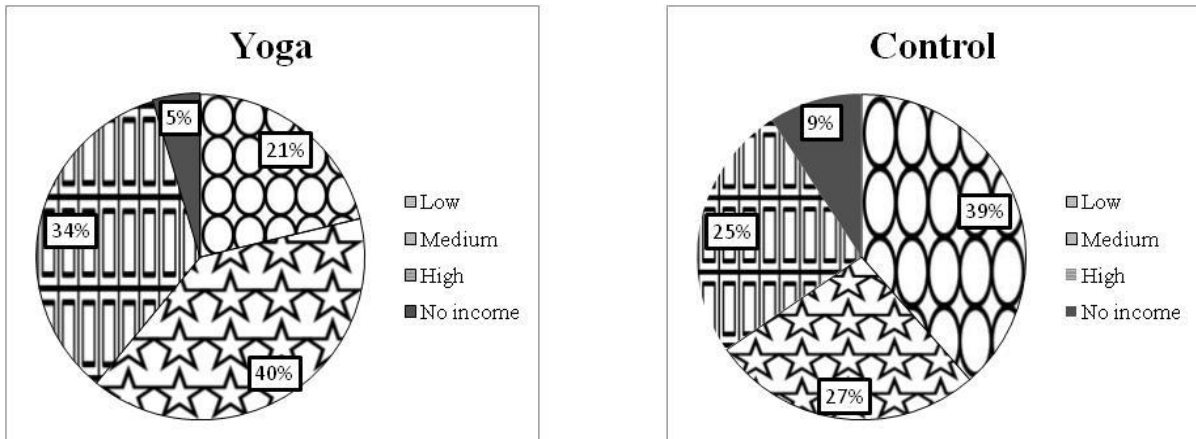### Figure: 6.1.4. Employment Status comparison

6.1.5 ANNUAL INCOME

Chi-square test: A chi-square test of independence was performed to examine the relation between group and annual income . The relation between these variables was non-significant, χ^2(3, $N = 304$) =98.44, $p < .05$.

Test	Result	Group		χ^2(p-values)
		Yoga	Control	
Annual income	**Low** (Rs 24000- 49999)	32(21.2%)	59(38.6%)	98.44 (0.001)
	Medium (50000-99999)	60(39.7%)	41(26.8%)	
	High(100000 and above)	52(34.4%)	39(25.5%)	
	No income	7(4.6%)	14(9.2%)	

Table: 6.1.5 Annual Income

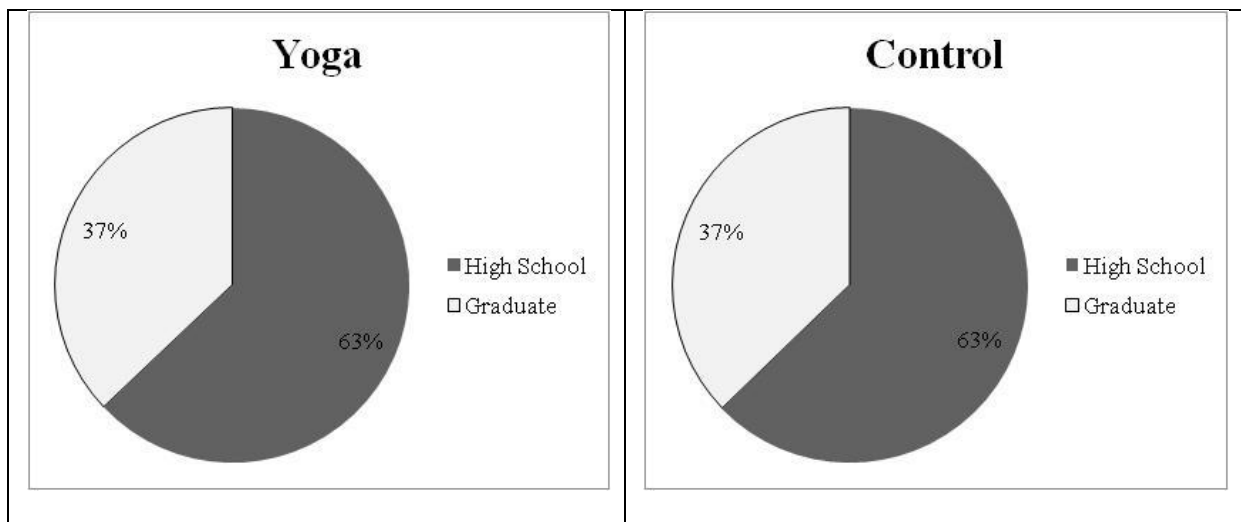**Figure: 6.1.5 Annual income comparison**

6.1.6. EDUCATIONAL QUALIFICATION

Chi-square test: A chi-square test of independence was performed to examine the relation between group and educational qualification distribution. The relation between these variables was non-significant, χ^2 (1, $N = 304$) =0.001, $p > .05$.

Table: 6.1.6 Educational Qualification				
Test	**Result**	**Group**		χ^2(p-values)
		Yoga	**Control**	
Educational Qualification	**High school**	95(62.91%)	96(62.7%)	0.001 (0.98)
	Graduate/post graduate	56(37.1%)	57(37.3%)	

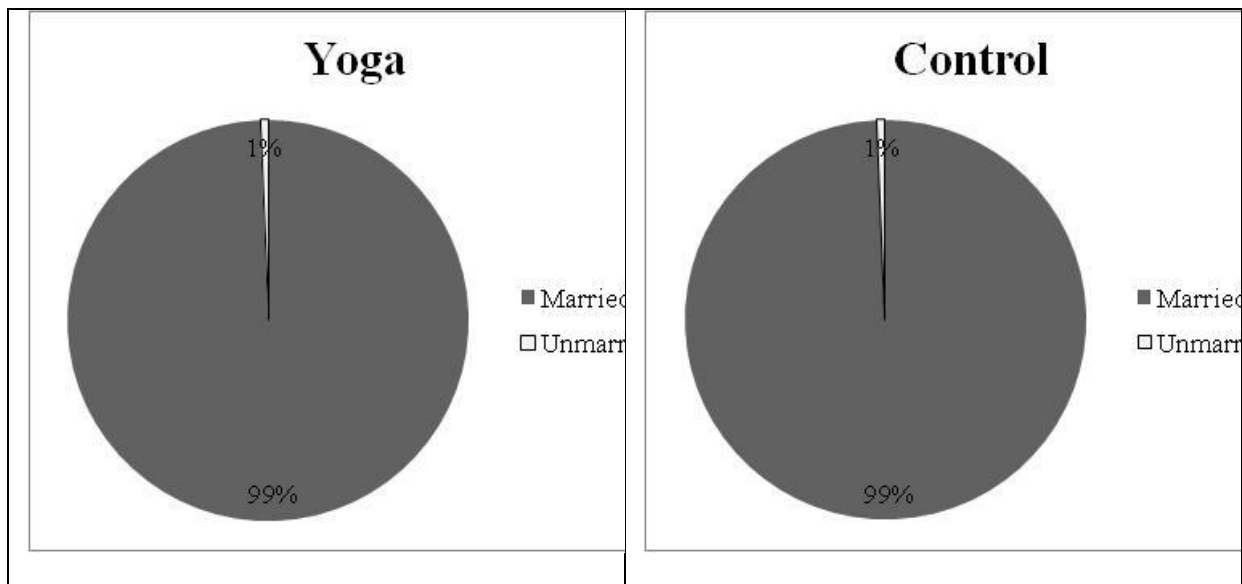**Figure: 6.1.6. Educational Qualification comparison**

6.1.7. MARITAL STATUS

Chi-square test: A chi-square test of independence was performed to examine the relation between group and marital status distribution. The relation between these variables was non-significant, χ^2 (1, N = 304) =0.000, p > .05.

<table>
<tr><th colspan="5">Table 6.1.7 Marital status</th></tr>
<tr><th rowspan="2">Test</th><th rowspan="2">Result</th><th colspan="2">Group</th><th rowspan="2">χ^2(p-values)</th></tr>
<tr><th>Yoga</th><th>Control</th></tr>
<tr><td rowspan="2">Marital status</td><td>Married</td><td>150(99.34%)</td><td>152(99.35%)</td><td rowspan="2">0.000 (1.0)</td></tr>
<tr><td>Unmarried</td><td>1(0.7%)</td><td>1(0.7%)</td></tr>
</table>

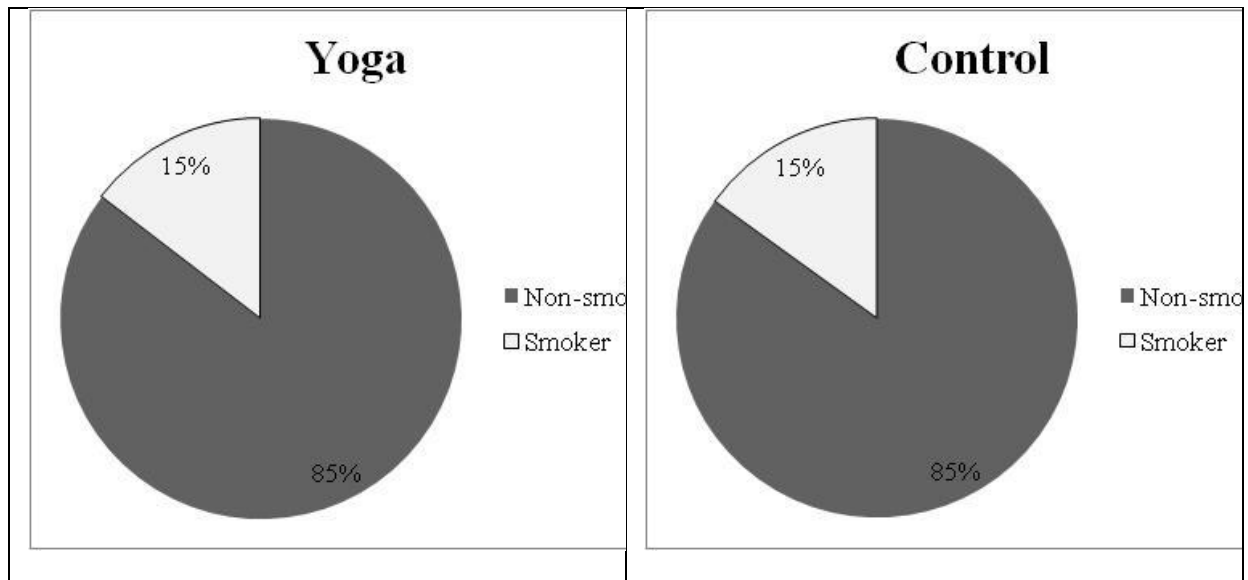**Figure: 6.1.7. Marital Status comparison**

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6.1.8. SMOKING

Chi-square test: A chi-square test of independence was performed to examine the relation between group and smoking distribution. The relation between these variables was non-significant, χ^2 (1, $N = 304$) $= 0.013$, $p > .05$.

Test	Result	Group		χ^2(p-values)
		Yoga	**Control**	
Smoking	**Non-smoker**	129(85.4%)	130(85%)	0.013 (0.91)
	Smoker	22(14.6%)	23(15%)	

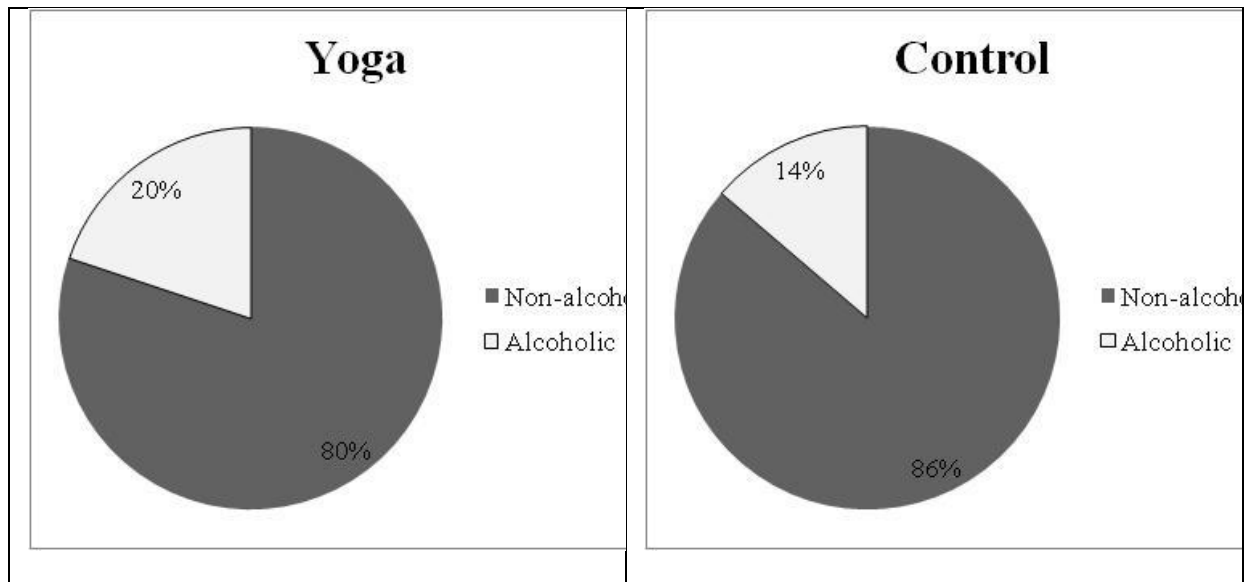*Table: 6.1.8 Smoking*

Figure 6.1.8: Smoking comparison

6.1.9. ALCOHOL CONSUMPTION

Chi-square test: A chi-square test of independence was performed to examine the relation between group and alcohol consumption distribution. The relation between these variables was non-significant, χ^2 (1, $N = 304$) $= 2.053$, $p > .05$.

Table 6.1.9 Alcoholic				
Test	**Result**	**Group**		χ^2(**p-values**)
		Yoga	**Control**	
Alcoholic	**Non-alcoholic**	121(80.1%)	132(86.3%)	2.053 (0.15)
	Alcoholic	30(19.9%)	21(13.7%)	

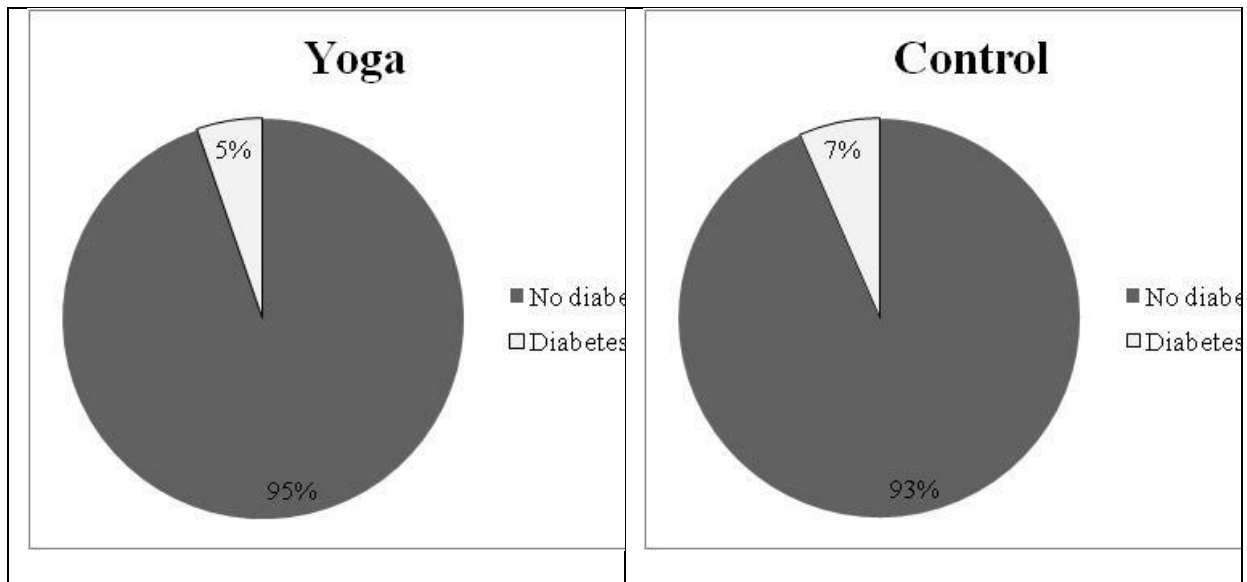**Figure: 6.1.9 Alcoholic comparison**

6.1.10. FAMILY HISTORY OF DIABETES

Chi-square test: A chi-square test of independence was performed to examine the relation between group and family history of diabetes distribution. The relation between these variables was non-significant, χ^2 (1, N = 304) = 0.209, p > .05.

Table 6.1.10 Family History of Diabetes				
Test	Result	Group		χ^2(*p*-values)
		Yoga	Control	
Family history of diabetes	No diabetes	143(94.7%)	143(93.46%)	0.209 (0.647)
	Diabetes	8(5.29 %)	10(6.54%)	

**Figure: 6.1.10 Family History of Diabetes comparison**

6.1.11. CURRENT DIABETES TREATMENT

Chi-square test: A chi-square test of independence was performed to examine the relation between group and current diabetes treatment distribution. The relation between these variables was non-significant, χ^2 (1, $N = 304$) = 3.40, $p > .05$.

Table 6.1.11 Current Diabetes treatment				
Test	**Result**	**Group**		χ^2(**p-values**)
		Yoga	**Control**	
Current diabetes treatment	**Oral Anti-glycemic agent**	137(90.73%)	128(83.66%)	3.40 (0.065)
	Oral + insulin	14(9.27%)	25(16.34%)	

Figure: 6.1.11 Current diabetes treatment comparison
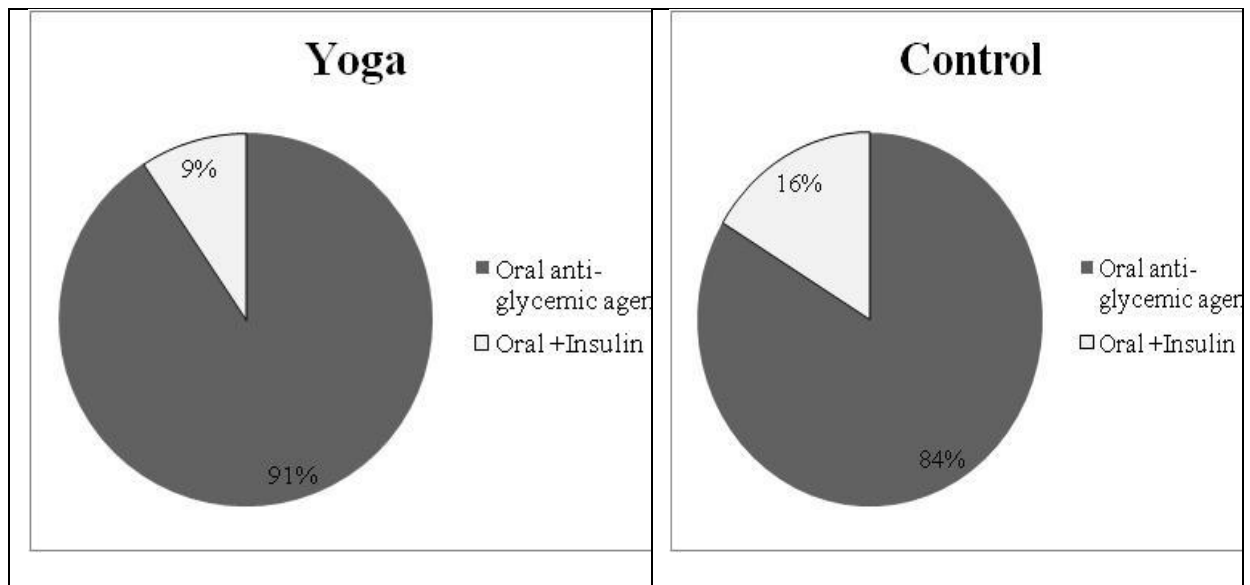
6.2.1 BODY WEIGHT (BW)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had Body Weight score (M =63.31, SD =8.94) over the control group (61.48, SD= 10.69, $t(302)$ = - 1.612, p = 0.108. Over four months of intervention, participants of the yoga group significantly differ in Body Weight score (M =61.54, SD = 7.81) than those in the control group (M =61.91, $SD=10.54t(302)$ = 0.360, p = 0.719). With regard to yoga intervention group, results indicate a significant reduction for Body Weight after yoga Intervention (M=61.54, SD=7.81) over Body Weight before yoga intervention (M=63.31, SD=8.94), $t(151)$ = 10.82, (p<.001). In the case control group, the results indicate a increase of Body weight after conservative treatment (M=61.91, SD=10.34) over Body Weight before treatment which is significant (M= 61.48, SD= 10.69, t(153)= - 6.54, (p <.001). Group X Time interaction also showed significant reduction in BW [F(1,302)= 157.44, p < 0.001, ,η2 = 0.343]. Table 6.2.1 and Figure 6.2.1 show the changes within the Intervention group and control group.

Table 6.2.1 Results of Body Weight

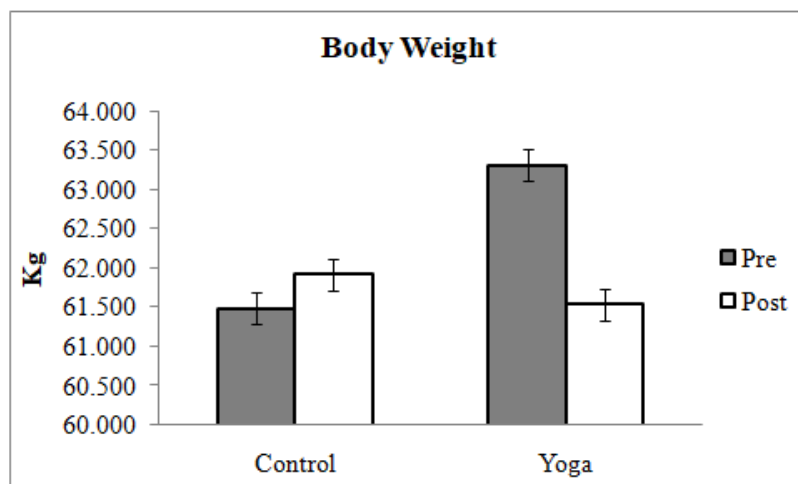| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
Body Weight	Y (n=151)	63.31 ±8.94	61.54 ±7.81***	0.88	1.77	**p >0.001**
	C (n=153)	61.48 ±10.69	61.91 ±10.34***	0.53	-0.43	
Legend: Yoga group shows significant improvement on VLDL						
*** *p*<0.001within group comparisons.						

Figure 6.2.1 Pre-post changes in Body Weight

6.2.2 BODY MASS INDEX (BMI)

Before intervention, the Yoga group had BMI(M=25.34, SD= 3.09) over the control group(M= 25.10, SD=3.75, t(302)= -.626, p=0.532). After 4 month yoga intervention, the subjects of Yoga group significantly differ in BMI score (M=24.59, SD=2.43) than those of the control group (M=25.25, SD= 3.60, t(302)=1.786, p=0.075). With regard to yoga intervention group, results indicate a significant improvement for BMI after yoga Intervention (M = 24.59, SD = 2.437) over BMI before yoga intervention (M=25.34, SD=3.098),t (151) = 9.606, (p<.001). In the case control group, the results indicate a significantly increase BMI after conservative treatment (M=25.25, SD=3.60) over BMI before treatment which is negative on BMI (M = 25.10, SD= 3.75, t(153)= - 6.599) (p < .001). Group X Time interaction also showed significant reduction in BMI [F(1,302) = 129.32, p < 0.001,, $\eta2$ = 0.300. Table 6.2.2 and Figure 6.2.2 show the changes within the Intervention group and control group.

Table 6.2.2 Result of Body Mass Index

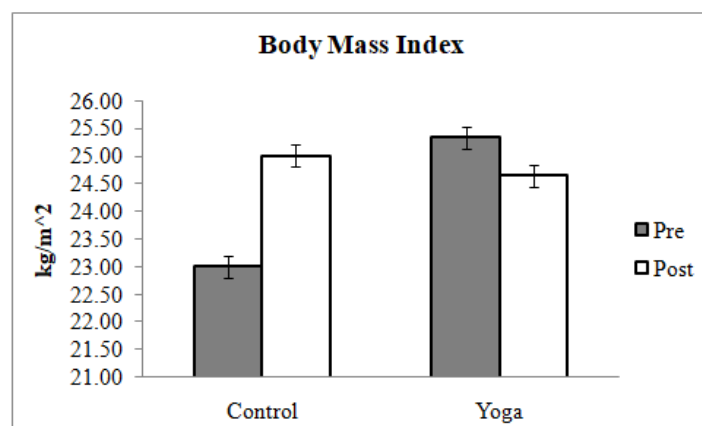| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	change score of mean	Group* Time
BMI	Y (n=151)	25.34 ±3.09	24.59 ±2.43***	0.78	0.75	p< 0.001
	C (n=153)	25.10 ±3.75	25.25 ±3.60***	0.53	- 0.15	
Legend: Yoga group shows significant improvement on BMI. ES= Effect size *** *p<0.001*within group comparisons.						

Figure 6.2.2 Pre-Post Changes on BMI

6.2.3 GLYCOSYLATED HAEMOGLOBIN (HbA1c)

Before intervention, the subjects of Yoga group had HbA1c score (M=8.42, SD=1.85) over the control group (M= 8.87, SD=2.02, t(302)= 2.048, p=0.041). Over a period of 4-month yoga intervention, the yoga group significantly differ in HbA1c score over the control group (M=6.73, SD=0.78, t(302)= 10.142, p=0.001).The Diabetes Type2 patients given yoga intervention along with conservative treatment show positively significant decrease of glycaleted haemoglobin (HbA1c) after 4 months of yoga intervention along with conservative treatment (M=6.73, SD= 0.78) over HbA1c before yoga intervention (M=8.42,SD=1.85), t(151)=15.53, p<.001. The control group of diabetic patients given only conservative treatment also shows significant decrease in HbA1c (M=8.21, SD=1.60) over HbA1c before conservative treatment (M=8.87, SD=2.02), t(153)=10.38, p<.001. However, the HbA1c score in case of post control is still higher than the normal range i.e., 5- 6.Group X Time interaction showed significant reduction in HbA1c [$F_{(1,302)}$= 65.73, p < 0.001, $\eta2$ = 0.179]. Table 6.2.3 and Figure 6.2.3 show the changes within the Intervention group and control group.

Table 1.2.3 Results on HbA1c

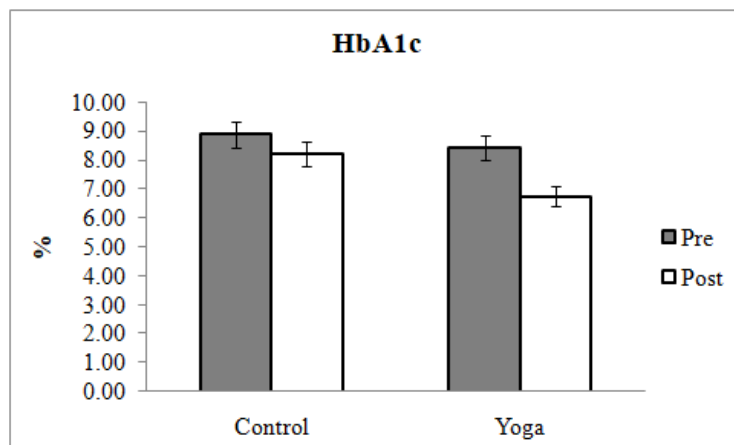| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
HbA1c	Y (n=151)	8.42 ±1.85	6.73 ±0.78***	1.26	1.69	p< 0.001
	C (n=153)	8.87 ±2.02	8.21 ±1.60***	0.84	0.66	
Legend: Yoga group shows significant improvement on HbA1c, ES= Effect size *** *p*<0.001within group comparisons.						

Figure 6.2.3 Pre-Post Changes on HbA1c

6.2.4 SYSTOLIC BLOOD PRESSURE (SBP)

Before intervention, the Yoga group had SBP score (M= 131.85, SD=18.60) over the control group (M=130.95, SD=16.49, t(302)= -0.443, p= 0.658). After yoga intervention for 4 months, the yoga group significantly differ in SBP score (M=127.36, SD=11.59) than the SBP of control group (M=130.14, SD=13.16, t(302)=1.952, p= 0.052).The results of yoga intervention group on Blood pressure indicated positively significant improvement (M =127.36, SD =11.59) over systolic blood pressure before yoga intervention (M = 131.85, SD= 18.60), t(151)=5.92, p < .001. The results of control group also indicated positively significant improvement of Blood pressure (systolic) (M=130.14, SD=13.16) over blood pressure (systolic)before conservative treatment starts (M = 130.95, SD=16.49), t(153) = 2.25, p<.001. Group X Time interaction also showed significant positive reduction in SBP [F(1,302) = 19.40, p< 0.001, ,η2 = 0.060]. Table 6.2.4 and Figure 6.2.4 show the changes within the Intervention group and control group.

Table 6.2.4   Results on Systolic Blood pressure (SBP)

Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
Blood pressure (systolic)	Y (n=151)	131.85 ±18.60	127.36 ±11.59***	0.48	4.49	< 0.001
	C (n=153)	130.95 ±16.49	130.14 ±13.16***	0.18	0.81	

Legend: Yoga group shows significant improvement on   systolic blood pressure ES= Effect size, *** *p*<0.001within group comparisons.
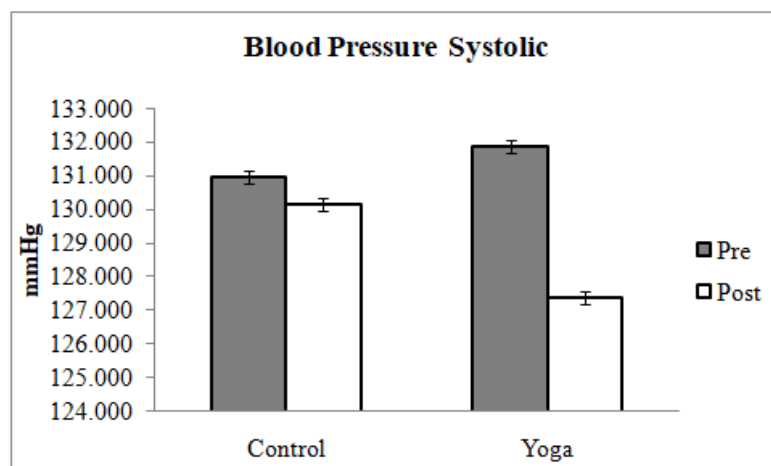

Figure 1.2.4 Pre-Post Changes on Systolic Blood pressure

6.2.5 DIASTOLIC BLOOD PRESSURE (DBP)

Before intervention, the Yoga group had DBP score (M = 85.60, SD= 10.47) over the control group (M= 84.73, SD = 9.35, t(302) = - .765, p= .445). After intervention, Yoga group differ in DBP score (M = 82.31, SD = 6.45) over the control group (M= 83.28, SD= 7.10, t(302) = 1.246, p = .214)

Results indicated a significant positive improvement of diastolic blood pressure after yoga intervention (M= 82.31, SD= 6.45) over blood pressure (diastolic) before yoga intervention (M= 85.60, SD=10.47, t(151)=7.106, p<.001. Results of control group with conservative treatment (M= 83.28, SD= 7.10) also showed a significant improvement of BP(diastolic) positively (M = 84.73, SD = 9.35), t(153) = 4.44, p < .001. Group X Time interaction also showed significant reduction in DBP [F(1,302) = 10.59, p< 0.001, $\eta2$ = 0.034]. Table 6.2.5 and Figure 6.2.5 show the changes within the Intervention group and control group.

Table 6.2.5   Results on DBP

Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
DBP	Y (n=151)	85.60 ±10.47	82.31 ±6.45***	0.58	3.29	< 0.001
	C (n=153)	84.73 ±9.35	83.28 ±7.10***	0.36	1.45	

Legend: Yoga group shows significant improvement on Blood pressure(diastolic).
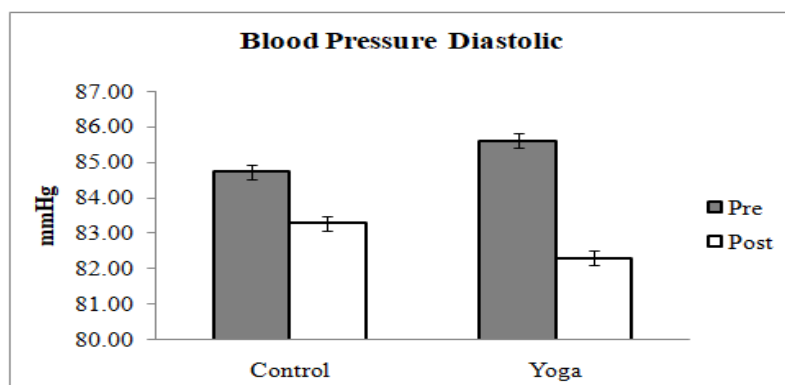*** *p*<0.001within group comparisons.

FIGURE 6.2.5 PRE-POST CHANGES IN DBP

6.2.6 FASTING BLOOD GLUCOSE (FBG)

Before intervention, the subjects of yoga group had FBG(M= 181.87,SD= 86.86)over the control group (M= 185.05,SD=76.77, t(302)= .338, p= .736). After four months yoga intervention, the subjects of yoga group showed significant score of FBG (M=117.74, SD=36.98) than those of the control group (M= 155.78, SD= 60.98, t(302)= 6.57, p=. 001). Results indicate a significant positive improvement of Fasting Blood Glucose after yoga intervention (M= 117.74, SD= 36.98) over fasting blood sugar before yoga intervention (M=181.87 , SD=86.86, t(151)=9.92, p<.001. Results of control group with conservative treatment for 4 months also show a significant improvement of Fasting Blood Sugar (M=155.78, SD= 60.77) over the baseline control group (M = 185.05, SD = 76.77), t(153) = 5.37, p < .001. Group X Time interaction also showed significant reduction FBG[F(1,302)= 17.07, p<0.001,η2 =0.054]. Table 6.2.6 and Figure 6.2.6 show the changes within the Intervention group and control group.

Table 6.2.6 Results on Fasting Blood Glucose

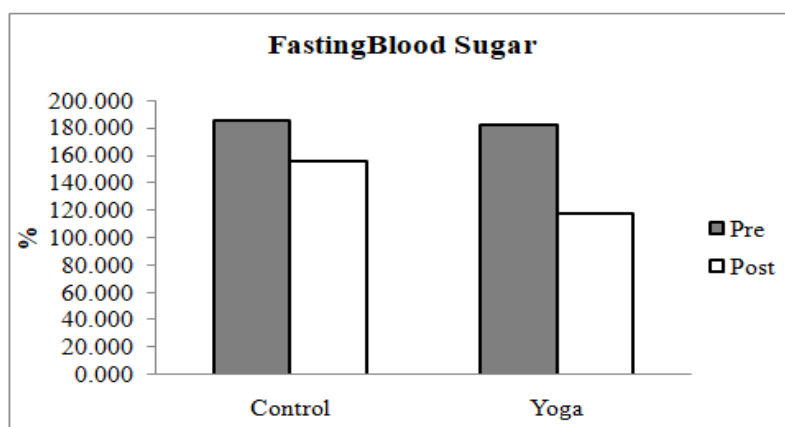| Variables	Group	Pre (M ±SD)	Post (M±SD)	ES	Change score of mean	Group*Time
FBG	Y (n=151)	181.87 ±86.86	117.74 ±36.98***	0.81	64.13	< 0.001
	C (n=153)	185.05 ±76.77	155.78 ±60.98***c	0.44	29.27	
Legend: Yoga group shows significant improvement on FBG *** *p*<0.001within group comparisons. c p<0.001 between the group's comparison.						

Figure 6.2.6 Pre-Post Changes on FBG

6.2.7 POST PRANDIAL BLOOD GLUCOSE (PPBG)

Before intervention, the subjects of yoga group had Post Prandial Blood Glucose (M=292.97, SD=132.19)over the control group (M= 313.63,SD=127.82, t(302)= 1.385, p= .167). After four months yoga intervention, the subjects of yoga group showed significant score of Post Prandial Blood Glucose (M=185.37, SD=61.77) than those of the control group (M= 245.16, SD= 93.59, t(302)= 6.56, p=. 001).

Results indicated a significant positive improvement of PPBG after yoga intervention (M= 185.37, SD= 61.77) over Post Prandial blood sugar before yoga intervention (M=292.97, SD=132.19, t(151)=11.22, p<.001. Results of control group with conservative treatment also showed a significant improvement of PPBG (M=245.16, SD =93.59) over the control group (M = 313.63, SD= 127.82, t(153) = 7.68, p < .001 over a period of four months. Group X Time interaction also showed significant reduction in PPBG [F(1,302)= 8.94, p <0.001, η2 = 0.029]. Table 6.2.7 and Figure 6.2.7 show the changes within the Intervention group and control group.

Table 6.2.7 Results on PPBG

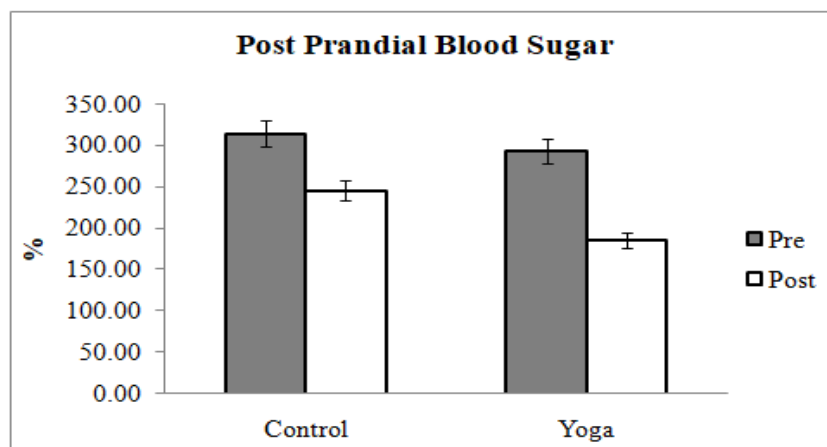| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
PPBG	Y (n=151)	292.97 ±132.19	185.37 ±61.77***	0.91	107.6	**< 0.003**
	C (n=153)	313.63 ±127.82	245.16 ±93.59*** c	0.62	68.47	
Legend: Yoga group shows significant improvement on PPBG. *** *p*<0.001within group comparisons. c p<0.001 between the groups comparison.							

Figure 6.2.7   Pre-Post Changes on Post Prandial Blood Sugar

6.2.8 TOTAL CHOLESTEROL (TC)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had Total Cholesterol score (M = 188.16, SD =37.95) over the control group (M=194.09, SD= 41.85, t(302) = 1.294, p = 0.197. Over four months of intervention, participants of the yoga group significantly differ in TC score (M =178,29, SD = 29.64) than those in the control group (M =190.91, SD=38.92, t(302) = 3..177, p = .002. With regard to yoga intervention group, results indicate a significant improvement for total cholesterol after yoga Intervention (M =178.29, SD = 29.64) over TC before yoga intervention (M=188.16, SD=37.95),t (151) =7.71, (p<.001). In the case control group, the results indicate a significantly decrease total cholesterol after conservative treatment (M=190.91, SD=38.92) over Total cholesterol before treatment which is positive on Total cholesterol (M = 194.09, SD= 41.85, t(153)= 3.99) (p < .001). There was a significant reduction in Group X Time interaction for TC [F(1,302) = 19.79, p < 0.001, η2 = 0.061]. Table 6.2.8 and Figure 6.2.8 show the changes within the Intervention group and control group.

Table 6.2.8 Results of Total cholesterol

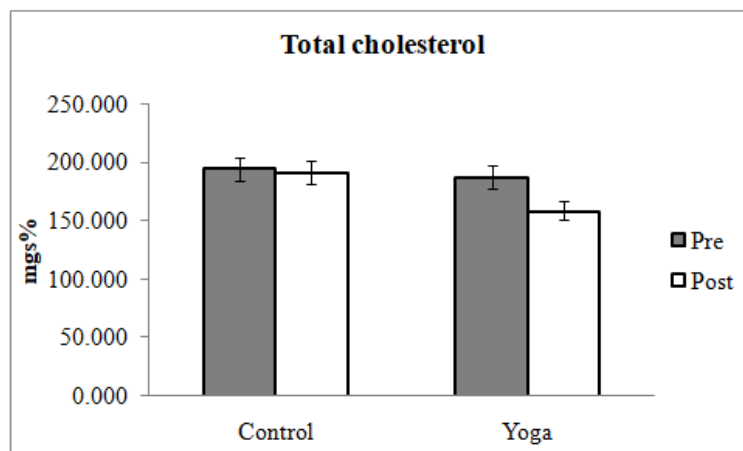| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
Cholesterol	Y (n=151)	188.16 ±37.95	178.29 ±29.64***	0.63	9.87	< 0.001
	C (n=153)	194.09 ±41.85	190.91 ±38.92***	0.32	3.18	
Legend: Yoga group shows significant improvement on Total Cholesterol *** *p*<0.001within group comparisons.						

Figure 6.2.8 Pre- Post Changes in Total Cholesterol

6.2.9 TRIGLYCERIDES (TG)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had Triglycerides score (M =187.10, SD =85.19) over the control group (M=193.87, SD= 94.32, t(302) = 0.657, p = 0.512. Over four months of intervention, participants of the yoga group significantly differ in Triglycerides score (M =158.06, SD = 56.85) than those in the control group (M =188.28, SD=84.31, t(302) = 3.66, p = .001.With regard to yoga intervention group, results indicated a significant improvement for Triglycerides after yoga Intervention (M = 158.06, SD = 56.85) over Triglycerides before yoga intervention (M=187.10, SD=85.19),t (151) = 7.27, (p<.001). In the case control group, the results indicated a significant decrease after conservative treatment (M=188.28, SD=84.31) over TG score on baseline (M = 197.87, SD= 94.32, t(153)= 5.26) (p < .001). There was a significant reduction in Group X Time interaction for TG [F (1,302) = 32.52, p < 0.001, $\eta2$ = 0.097]. Table 6.2.9 and Figure 6.2.9 show the changes within the Intervention group and control group.

Table 6.2.9 Results of Triglycerides

Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
Triglycerides	Y (n=151)	187.10 ±85.19	158.06 ±56.85***	0.59	29.04	p< 0.001
	C (n=153)	193.87 ±94.32	188.28 ±84.31***	0.43	5.59	

Legend: Yoga group shows significant improvement on Triglycerides
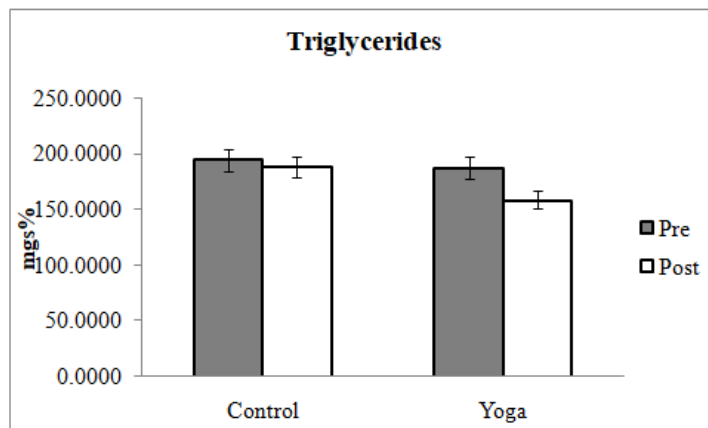
*** *p<0.001*within group comparisons.

Figure 6.2.9 Pre-Post changes in Triglycerides

6.2.10 LOW DENSITY LIPOPROTEIN (LDL)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had LDL score (M = 109.047, SD =33.148) over the control group (M=114.635, SD= 32.955, t(302) = 1.474, p = 0.142. Over four months of intervention, participants of the yoga group significantly differ in LDL score (M =98.344, SD = 24.099) than those in the control group (M =111.124, SD=27.744, t(302) = 4.285, p = .001With regard to yoga intervention group, results indicate a significant improvement for LDL after yoga Intervention (M =98.344, SD = 24.099) over LDL before yoga intervention (M=109.047, SD=33.148), t(151) = 7.511, (p<.001). In the case control group, the results indicate a decrease of LDL after conservative treatment (M=111.124, SD=27.744) over LDL before treatment which is positive (M=114.635, SD= 32.455, t(153)= 5.736 (p < .001).). There was a significant reduction in Group X Time interaction for LDL [F(1,302) = 21.70, p <0.001, η2 = 0.067]. Table 6.2.10 and Figure 6.2.10 show the changes within the Intervention group and control group.

Table 6.2.10 Results of Low Density Lipoprotein(LDL)

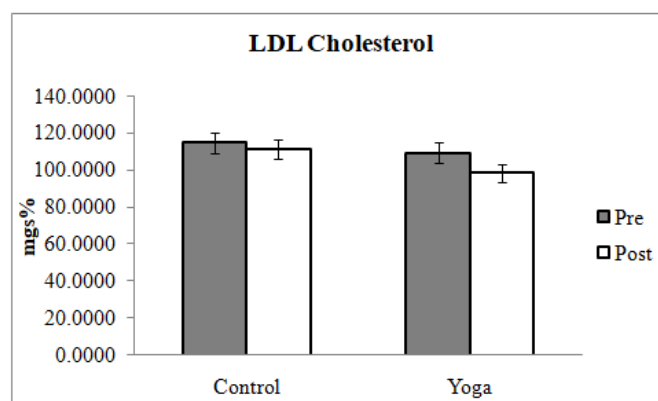| Variables	Group	Pre M ±SD	Post M± SD	ES	Change score of mean	Group*Time
LDL	Y (n=151)	109.047 ±33.148	98.344 ±24.099***	0.61	10.703	< 0.001
	C (n=153)	114.635 ±32.955	111.124 ±27.744***	0.47	3.511	
Legend: Yoga group shows significant improvement on LDL *** *p<0.001*within group comparisons.						

Figure 6.2.10 Pre-post changes in LDL

6.2.11 HIGH DENSITY LIPOPROTEIN (HDL)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had HDL score (M =40.907, SD =7.685) over the control group (M=40.664, SD= 7.932, t(302) = - 2.424, p = .016.Over four months of intervention, participants of the yoga group significantly differ in HDL score (M =44..024, SD = 15.177) than those in the control group (M =40.915, SD=7.546, t(302) = .009, p = 0.993. With regard to yoga intervention group, results indicate a significant improvement for HDL after yoga Intervention (M =44.024, SD =15.177) over HDL before yoga intervention (M=40.907, SD=7.685), t(151) = 3.400, p=.001). In the case control group, the results indicate an insignificant increase of HDL after conservative treatment (M=40.915, SD=7.546) over HDL before treatment (M=40.664, SD=7.932, t(153)= - 2.297, (p =0.023). Table 9.shows the changes within the Intervention group and control group. There was a significant reduction in Group X Time interaction for HDL [F(1,302) =74.63, p < 0.001, η2 = 0.198]. Table 6.2.11 and Figure 6.2.11show the changes within the Intervention group and control group.

Table 6.2.11 Results of High-Density Lipoprotein (HDL)

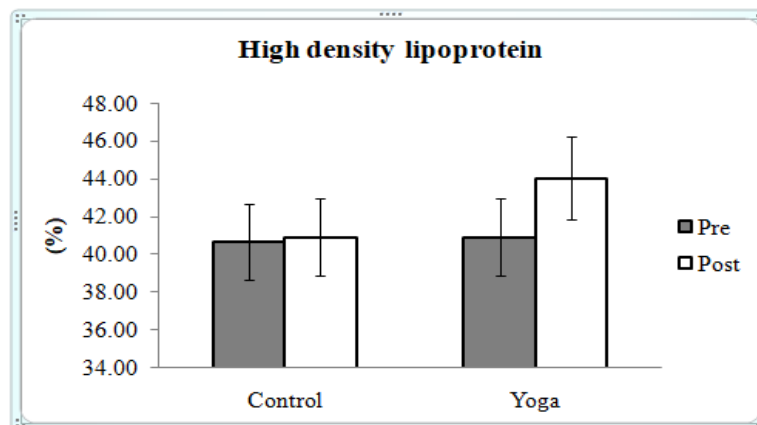| Variables	Group	Pre- (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
HDL	Y (n=151)	40.907 ±7,685	44.024 ±15.177***	0.28	- 3.117	p <0.001
	C (n=153)	40.664 ±7.932	40.915 ±7.546***	0.19	-0.251	
Legend: Yoga group shows significant improvement on HDL						
*** *p<0.001*within group comparisons.						

Figure 6.2.11 Pre-post Changes in HDL

6.2.12. VERY LOW-DENSITY LIPOPROTEIN (VLDL)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had VLDL score (M =39.90, SD =20.54) over the control group (M=40.84, SD= 38.59, t(302) = 0.362, p = 0.718. Over four months of intervention, participants of the yoga group significantly differ in VLDL score (M =33.51, SD = 10.60) than those in the control group (M =28.27, SD=25.86, t(302) = 2.232, p = 0.026). With regard to yoga intervention group, results indicate a significant improvement for VLDL after yoga Intervention (M =33.51, SD =10.60) over VLDL before yoga intervention (M=39.90, SD=20.54), t(151) = 5.49, (p<.001). In the case control group, the results indicate a decrease of VLDL after conservative treatment (M=28.27, SD=25.86) over HDL before treatment which is significant (M=40.84, SD=38.59, t(153)=7.39 (p <.001). Table 11shows the changes within the Intervention group and control group. . There was a significant reduction in Group X Time interaction for VLDL [F(1,302) = 11.91, η2 = 0.038]. Table 6.2.12 and Figure 6.2.12 show the changes within the Intervention group and control group.

Table 6.2.12 Results of Very Low-Density Lipoprotein (VLDL)

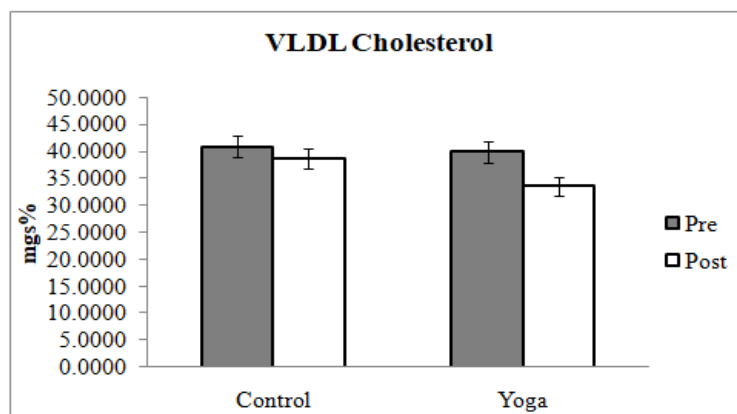| Variables	Group	Pre (M±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
VLDL	Y (n=151)	39.90 ±20.54	33.51 ±10.60***	0.45	6.39	p <0.001
	C (n=153)	40.84 ±38.59	28.27 ±25.86***	0.60	12.57	
Legend: Yoga group shows significant improvement on VLDL *** *p*<0.001within group comparisons.						

Fig.6.2.12 Pre-Post changes in VLDL

6.3 CURRENT HEALTH SATISFACTION

6.3.1 SATISFACTION WITH CURRENT BODY WEIGHT (SCBW)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCBW score (M =4.03, SD =1.07) over the control group (M=3.68, SD=0.93 , t(306 = - 3.117, p = .002).Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCBW score (M =5.48, SD = 0.70) than those in the control group (M =4.02, SD=0.98 t(304) = - 14.994, p = .000).With regard to yoga intervention group, results indicate a significant improvement for SCBW after yoga Intervention (M=5.48, SD=0.70) over SCBW before yoga intervention (M=4.03, SD=1.07, t(151) = -25.73, p<.001). In the case control group, the results indicate improvement of SCBW after conservative treatment (M=4.02, SD=0.98) over SCBW before treatment which is significant (M= 3.68, SD= 0.93, t(153)= -6.260, (p <.000). There was significant improvement in Group X Time interaction for SCBW [F(1,302) =19.43, p< 0.001,η2 = 0.06], Table 6.3.1 Fig. 6.3.1 show the changes within the Intervention group and control group.

Table 6.3.1 Results of satisfaction with current body weight (SCBW)

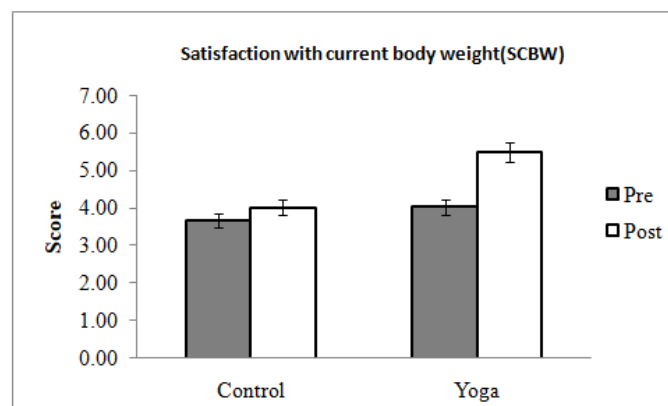| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
SCBW	Y (n=151)	4.03 ±1.07	5.48 ±0.70***	2.1	- 1.45	**p<0.001**
	C (n=155)	3.68 ±0.93	4.02 ±0.98***	0.51	- 0.34	
Legend: Yoga group shows significant improvement on SCBW *** *p<0.001*within group comparisons.						

Figure 6.3.1 Pre- Post changes in current body weight (SCBW)

6.3.2 SATISFACTION ON CURRENT LEVEL OF ENERGY (SCLE)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCLE score (M =3.29, SD =0.81) over the control group (M=3.42, SD=0.51 , t(304) =1.656 -, p = .099). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCLE score (M =4.99, SD = 0.37) than those in the control group (M =3.56, SD=0.50, t(304) = -28.49 , p = .000).With regard to yoga intervention group, results indicate a significant improvement for SCLE after yoga Intervention (M=4.99, SD=0.37) over SCLE before yoga intervention (M=3.29, SD=0.81, t(151) = -26.47, p<.000). In the case control group, the results indicate improvement of SCLE after conservative treatment (M=3.56, SD=0.50) over SCLE before treatment which is less significant (M= 3.42, SD= 0.51, t(153)= -2.46, (p <.015). There was significant improvement in Group X Time interaction for SCLE [F(1,302)= 1.80, p < 0.001,η2 = 0.01]. Table 6.3.2 and Figure 6.3.2 show the changes within the Intervention group and control group.

Table 6.3.2 Results of satisfaction with current Level of Energy(SCLE)

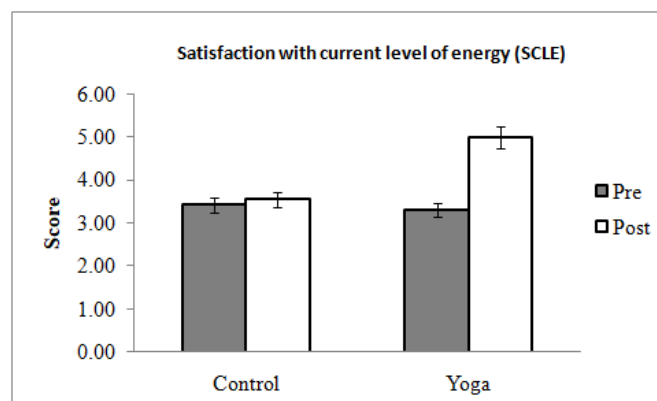| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
SCLE	Y (n=151)	3.29 ±0.81	4.99 ±0.37***	2.15	- 1.7	*p*<0.001
	C (n=153)	3.42 ±0.51	3.56 ±0.50***	0.2	- 0.14	
Legend: Yoga group shows significant improvement on SCBW *** *p*<0.001within group comparisons.						

Figure 6.3.2.: Pre- post changes in current Level of Energy (SCLE)

6.3.3. SATISFACTION ON CURRENT APPETITE (SCA)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCA score (M =2.99, SD =0.23) over the control group (M=3.16, SD=0.36 , t(306 = 4.822, p = .000).Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCA score (M =4.93, SD = 0.27) than those in the control group (M =3.58, SD=0.50, t(304) = - 29.452, p = .000). With regard to yoga intervention group, results indicate a significant improvement for SCA after yoga Intervention (M=4.93, SD=0.27) over SCA before yoga intervention (M=2.99, SD=0.23, t(151) =70.002, p<.000). In the case control group, the results indicate improvement of SCA after conservative treatment (M=3.58, SD=0.50) over SCA before treatment which is significant (M= 3.16, SD= 0.36, t(153)= 11.43, (p <.000). Table 7.2.3. shows the changes within the Intervention group and control group. There was significant improvement in Group X Time interaction for SCA [F(1,302)=32.33, p < 0.001, $\eta2 = 0.10$]. Table 6.3.3 and Figure 6.3.3 show the changes within the Intervention group and control group.

Table 6.3.3 Results of satisfaction with current appetite (SCA)

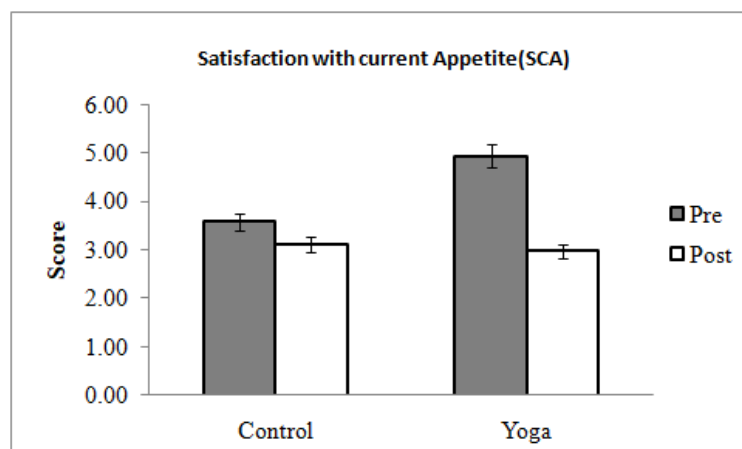| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
SCA	Y (n=151)	2.99 ±0.23	4.93 ±0.27***	6.05	1.94	*p<0.001*
	C (n=153)	3.16 ±0.36	3.58 ±0.50***	0.71	0.42	
Legend: Yoga group shows significant improvement on SCA *** *p<0.001*within group comparisons.						

Figure 6.3.3 Pre-Post changes in satisfaction with current appetite(SCA)

6.3.4. SATISFACTION ON CURRENT ABILITY TO SLEEP THROUGH THE NIGHT (SCAS)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCAS score (M =2.97, SD =0.28) over the control group (M=3.10, SD=0.30 , t(306) = 3.726, p = .000). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCAS score (M =4.96, SD = 0.34) than those in the control group (M =3.44, SD=0.50, t(304) = -30.701, p = .000). With regard to yoga intervention group, results indicate a significant improvement for SCAS after yoga Intervention (M=4.96, SD=0.34) over SCAS before yoga intervention (M=2.97, SD=0.28, t(151) = -61.068, p<.000). In the case control group, the results indicate improvement of SCAS after conservative treatment (M=3.44, SD=0.50) over SCAS before treatment which is significant (M= 3.10, SD= 0.30, t (153)= -8.129, (p <.000). Table 4.shows the changes within the Intervention group and control group. There was significant improvement in Group X Time interaction for SCAS [F (1,302)=1.20, p < 0.001, η2 = 0.003]. Table 6.3.4 and Figure 6.3.4 show the changes within the Intervention group and control group.

Table 6.3.4 Results of satisfaction with current ability to sleep (SCAS)

Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
SCAS	Y (n=151)	2.97 ±0.28	4.96 ±0.34***	4.97	- 1.99	*p<0.001*
	C (n=153)	3.10 ±0.30	3.44 ±0.50***	0.64	- 0.35	

Legend: Yoga group shows significant improvement on SCAS

*** *p<0.001*within group comparisons.

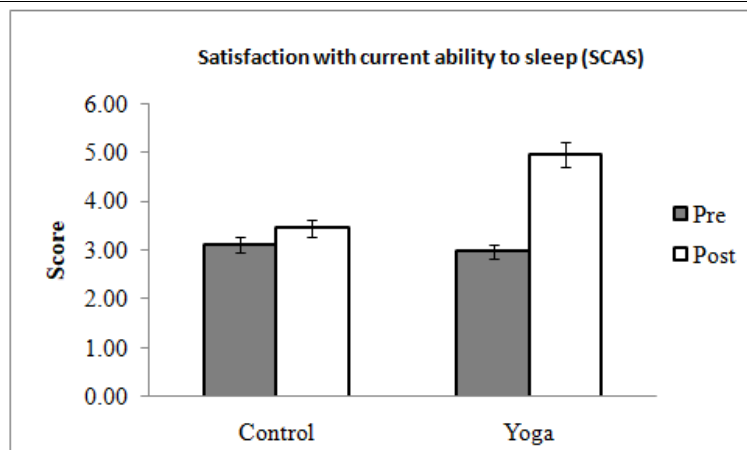Satisfaction with current ability to sleep (SCAS)

Figure 6.3.4 Changes in Satisfaction with current ability to sleep

6.3.5. SATISFACTION ON CURRENT ABILITY TO DO PHYSICAL ACTIVITY (SCPA)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCPA score (M =4.51, SD =0.82) over the control group (M=4.92, SD=0.29 , t(304) = 5.924, p = .000). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCPA score (M =5.87, SD = 0.35) than those in the control group (M =5.19, SD=0.48, t(304) = -14.02 p = .000).With regard to yoga intervention group, results indicate a significant improvement for SCPA after yoga Intervention (M=5.87, SD=0.35) over SCPA before yoga intervention (M=4.51, SD=0.82, t(151) = -21.06, p<.000). In the case control group, the results indicate improvement of SCPA after conservative treatment (M=5.19, SD=0.48) over SCPA before treatment which is significant (M= 4.92, SD= 0.29, t(153)= -6.41, (p <.000). Table 5shows the changes within the Intervention group and control group. There was significant improvement in Group X Time interaction for SCPA [F(1,302)=85.25, p< 0.001, η^2 = 0.22]. Table 6.3.5 and Figure 6.3.5 show the changes within the Intervention group and control group.

Table 6.3.5 Results of satisfaction with current ability to sleep (SCPA)

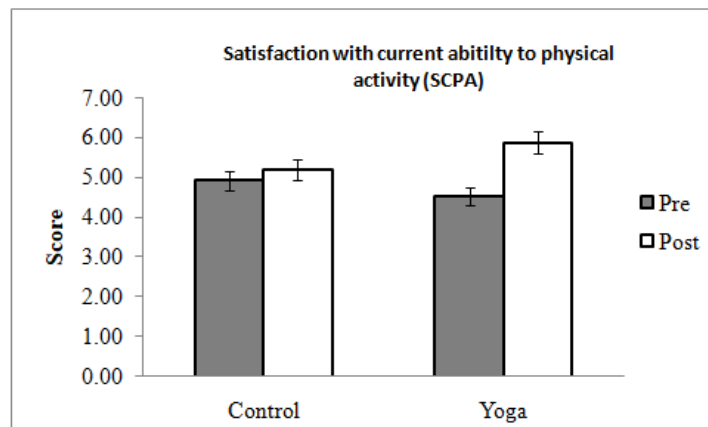| Table 6.3.5 Results of satisfaction with current physical activity (SCPA)						
Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group* Time
SCPA	Y (n=151)	4.51 ±0.82	5.87 ±0.35***	1.71	- 1.36	*p< .001*
	C (n=153)	4.92 ±0.29	5.19 ±0.48***	0.51	- 0.27	
Legend: Yoga group shows significant improvement on SCPA *** *p<0.001*within group comparisons.						

Figure . 6.3.5 Changes in current ability to Physical Activity

6.3.6 SATISFACTION ON CURRENT ABILITY TO SOCIAL INTERACTION (SCSI)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCSI score (M =4.90, SD =0.43) over the control group (M=4.96, SD=0.23, t(306) = 1.557, p = .121). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCSI score (M =5.91, SD = 0.35) than those in the control group (M =5.25, SD=0.43, t(304) = -14.720, p = .000). With regard to yoga intervention group, results indicate a significant improvement for SCSI after yoga Intervention (M=5.91, SD=0.35) over SCSI before yoga intervention (M=4.90, SD=0.43,t(151) = -26.96, p<.000). In the case control group, the results indicate improvement of SCSI after conservative treatment (M=5.25, SD=0.43) over SCSI before treatment which is significant (M= 4.96, SD= 0.23, t(153)= - 7.281, (p <.000). Table 6shows the changes within the Intervention group and control group. There was significant improvement in Group X Time interaction for SCSI [F (1,302)= 26.90, p < 0.001, η2 = 0.08]. Table 6.3.6 and Figure 6.3.6 show the changes within the Intervention group and control group.

Table.6.3.6 Results of satisfaction with current social interaction (SCSI)

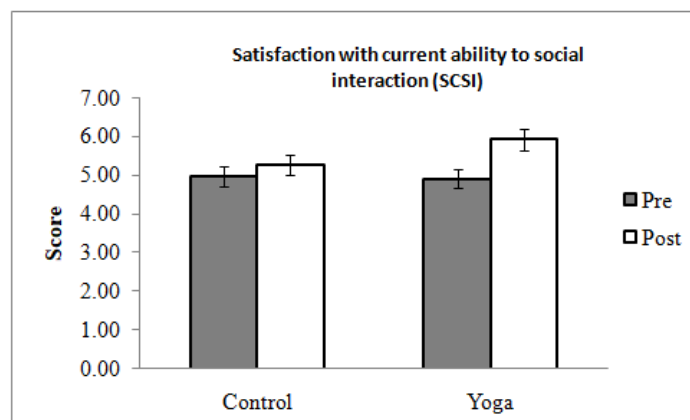| Variables	Group	Pre (M ±SD)	Post (M± SD)	SE	Change score of mean	Group*Time
SCSI	Y (n=151)	4.90 ±0.43	5.91 ±0.35***	2.19	- 1.01	**p<0.001**
	C (n=153)	4.96 ±0.23	5.25 ±0.43***	0.58	- 0.29	
Legend: Yoga group shows significant improvement on SCSI *** *p*<0.001within group comparisons.						

Figure 6.3.6 Changes in Satisfaction with current ability to Social Interaction

6.3.7 SATISFACTION ON CURRENT ATTITUDE TOWARDS DIABETES(SCAD)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCAD score (M =2.97, SD =0.31) over the control group (M=3.01, SD=0.14 , t(304) = 1.429, p = .154). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCAD score (M =4.97, SD = 0.18) than those in the control group (M =3.45, SD=0.50, t(304) = -34.960, p = .000). With regard to yoga intervention group, results indicate a significant improvement for SCAD after yoga Intervention (M=4.97, SD=0.18) over SCAD before yoga intervention (M=2.97, SD=0.31,t(151) = -86.89, p<.000). In the case control group, the results indicate improvement of SCAD after conservative treatment (M=3.45, SD=0.50) over SCAD before treatment which is significant (M= 3.01, SD= 0.14, t(153)= - 10.97, (p <.000). Table 7shows the changes within the Intervention group and control group. There was significant improvement in Group X Time interaction for SCAD [F(1,302)=15.79, p < 0.001,η2]. Table 6.3.7 and Figure 6.3.7 show the changes within the Intervention group and control group.

Table. 6.3.7 Results of satisfaction with current social interaction (SCAD)

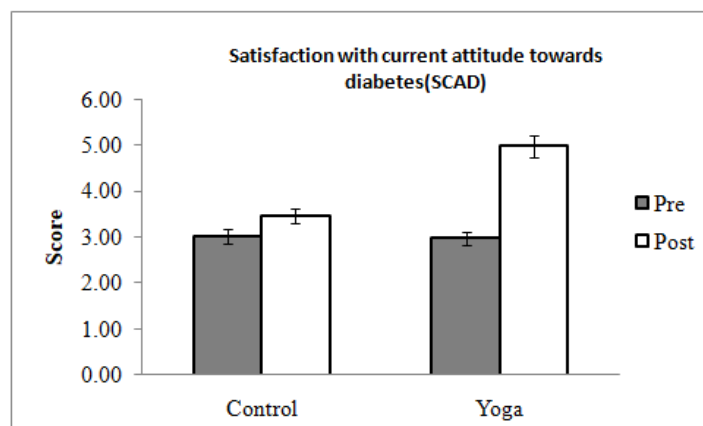| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
SCAD	Y (n=151)	2.97 ±0.31	4.97 ±0.18***	7.07	- 2.00	*p*<0.001
	C (n=153)	3.01 ±0.14	3.45 ±0.50***	0.87	- 0.45	
Legend: Yoga group shows significant improvement on SCAD *** *p*<0.001within group comparisons.						

Figure. 6.3.7 Changes in Satisfaction with current attitude towards Diabetes

6.3.8 SATISFACTION ON CURRENT MOOD (SCM)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCM score (M =2.94, SD =0.31) over the control group (M=3.02, SD=0.18 , t(306) = 1.267, p = .210). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCM score (M =5.03, SD = 0.30) than those in the control group (M =3.76, SD=0.43, t(304) = -29.783, p = .000).With regard to yoga intervention group, results indicate a significant improvement for SCM after yoga Intervention (M=5.03, SD=0.30) over SCM before yoga intervention (M=2.94, SD=0.31, t(151) = -79.44, p<.000). In the case control group, the results indicate improvement of SCM after conservative treatment (M=3.76, SD=0.43) over SCM before treatment which is significant (M= 3.02, SD= 0.18, t(153)= -20.07, p <.000). There was significant improvement in Group X Time interaction for SCM [F (1,302)=0.05, p < 0.001, $\eta2$ = 0.00002]. Table 6.3.8 and Figure 6.3.8 show the changes within the Intervention group and control group.

Table.6.3.8 Results of satisfaction with current mood (SCM)

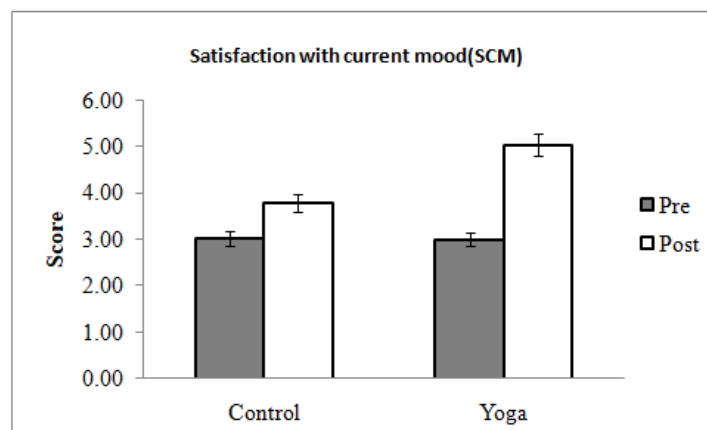| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
SCM	Y (n=151)	2.94 ±0.31	5.03 ±0.30***	5.23	- 2.04	*p*<0.001
	C (n=153)	3.02 ±0.18	3.76 ±0.43***	1.6	- 0.75	
Legend: Yoga group shows significant improvement on SCM *** *p*<0.001within group comparisons.						

Figure.6.3.8 Changes in Satisfaction with current Mood

6.3.9 KNOWLEDGE OF CURRENT BLOOD SUGAR LEVEL (CKBS)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had CKBS score (M =2.80, SD =0.43) over the control group (M=2.13, SD=0.34 , t(304) = -23.158, p = .000).Over a period of four months of yoga intervention, participants of the yoga group significantly differ in CKBS score (M =3.19, SD = 0.47) than those in the control group (M =2.13, SD=0.34, t(304) = - 21.123, p = .000). With regard to yoga intervention group, results indicate a significant improvement for CKBS after yoga Intervention (M=3.19, SD=0.47) over CKBS before yoga intervention (M=2.80, SD=0.43, t(151) = -3.433, p<.001). In the case control group, the results indicate improvement of CKBS after conservative treatment (M=2.44, SD=0.59) over CKBS before treatment which is significant (M= 2.13, SD= 0.34, t(153)= - 3.127, p <.002). Table 6.3.9.shows the changes within the Intervention group and control group. There was significant improvement in Group X Time interaction for CKBS [F (1,302) =20.79 p <0.001, $\eta 2$ = 0.06]. Table 6.3.9 and Figure 6.3.9 show the changes within the Intervention group and control group.

Table.6.3.9 Results of current knowledge of blood sugar (CKBS)

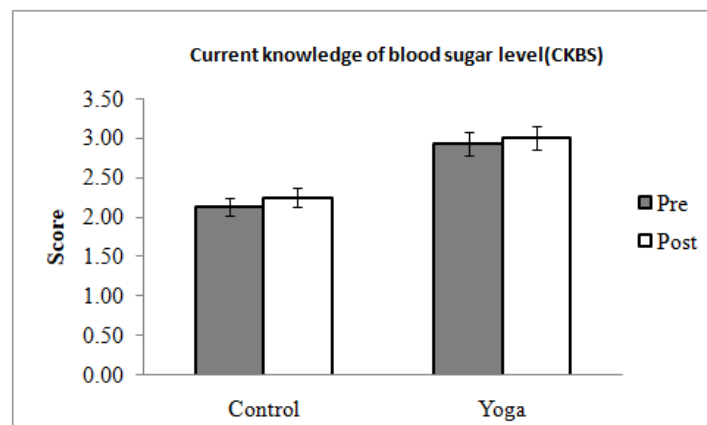| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
CKBS	Y (n=151)	2.80 ±0.43	3.19 ±0.47***	0.6	- 0.07	*p*>0.05
	C (n=153)	2.13 ±0.34	2.44 ±0.59***	0.5	- 0.12	
Legend: Yoga group shows significant improvement on CKBS *** *p*<0.001within group comparisons.						

Figure.6.3.9 Changes in Current knowledge of Blood Sugar Level

6.3.10 SATISFACTION OF CURRENT BLOOD SUGAR LEVEL (SCBS)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCBS score (M =2.72, SD =0.467) over the control group (M=2.70, SD=0.499 , t(306) = -0.217, p = .828).

Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCBS score (M =5.17, SD = 0.500) than those in the control group (M =3.55, SD=0.635, t(306) = - 24.685, p = .000).

With regard to yoga intervention group, results indicate a significant improvement for SCBS after yoga Intervention (M=5.17, SD=0.500) over SCBS before yoga intervention (M=2.72, SD=0.467, t(151) = -44.364, p<.000). In the case control group, the results indicate improvement of SCBS after conservative treatment (M=3.55, SD=0.635) over SCBS before treatment which is significant (M= 2.70, SD= 0.499, t(153)= - 15.338, p <.000). There was significant improvement in Group X Time interaction for SCBS [F(1,302)=0.52, p< 0.001,η2 = 0.002]. Table 6.3.10 and Figure 6.3.10 show the changes within the Intervention group and control

Table 6.3.10 Results of Satisfaction of current of blood sugar (SCBS)

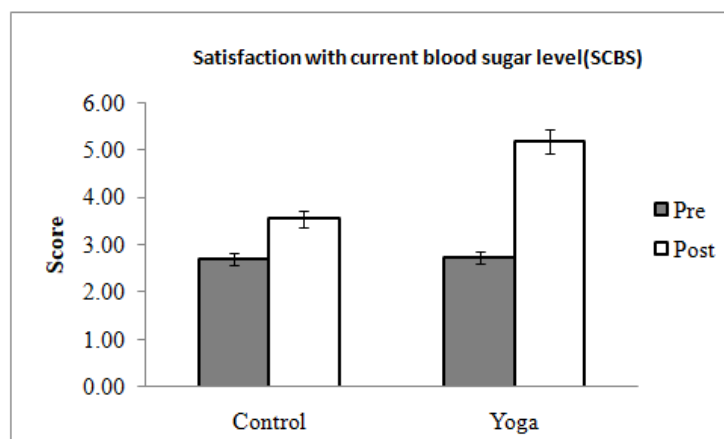| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
SCBS	Y (n=151)	2.72 ±0.499	5.17 ±0.50***	3.61	- 2.45	*p*<0.001
	C (n=153)	2.70 ±0.179	3.55 ±0.64***	1.22	- 0.85	
Legend: Yoga group shows significant improvement on SCBS *** *p*<0.001within group comparisons.						

Figure 6.3.10 Changes in satisfaction with Current Blood Sugar Level

6.3.11 KNOWLEDGE OF CURRENT BLOOD PRESSURE (KCBP)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had KCBP score (M =2.98, SD =0.74) over the control group (M=2.14, SD=0.35 , t(304) = -12.667, p = .000). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in KCBP score (M =3.16, SD = 0.37) than those in the control group (M =2,39, SD=0.54, t(304) = 21.491, p = .000).With regard to yoga intervention group, results indicate a non significant for KCBP after yoga Intervention (M=3.16, SD=0.37) over KCBP before yoga intervention (M=2.98, SD=0.74, t(151) = - 0.328, p<.743). In the case control group, the results indicate improvement of KCBP after conservative treatment (M=2.39, SD=0.54) over KCBP before treatment which is significant (M= 2.14, SD= 0.35, t(153)= - 2.895, p <.004).. There was significant improvement in Group X Time interaction for KCBP [F(1,302) =32.64, p < 0.001, $\eta2$ = 0.10] . Table 6.3.11 and Figure 6.3.11show the changes within the Intervention group and control.

Table 6.3.11 Results of Knowledge on current blood pressure (KCBP)

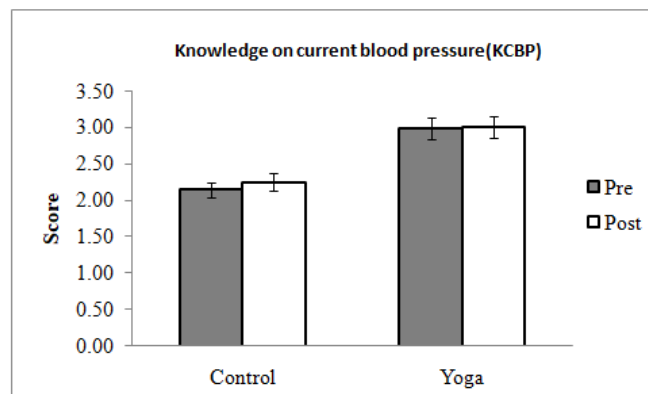| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
KCBP	Y (n=151)	2.98 ±0.74	3.16 ±0.37***	0.22	- 0.02	*p*>0.05
	C (n=153)	2.14 ±0.35	2.39 ±0.54***	0.41	- 0.11	
Legend: Yoga group shows significant improvement on KCBP *** *p*<0.001within group comparisons.						

Figure 6.3.11 Changes in Knowledge of Current Blood Pressure

6.3.12 SATISFACTION WITH CURRENT BLOOD PRESSURE (SCBP)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCBP score (M =4.01, SD =1.05) over the control group (M=3.77, SD=0.865 , t(304) = - 2.174, p = .030)Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCBP score (M =5.68, SD = 0.582) than those in the control group (M =4.14, SD=0.822, t(304) = - 18.949, p = .000).With regard to yoga intervention group, results indicate a significant improvement for SCBP after yoga Intervention (M=5.68, SD=0.582) over SCBP before yoga intervention (M=4.01, SD= 1.05, t(151) = - 22.79, p<.000). In the case control group, the results indicate improvement of SCBP after conservative treatment (M=4.14, SD=0.822) over SCBP before treatment which is significant (M= 3.77, SD= 0.865, t(153)= - 7.102, p <.000). There was significant improvement in Group X Time interaction for SCBS [F(1,302)=0.52, p< 0.001,η2 = 0.002]. Table 6.3.12 and Figure 6.3.12.show the changes within the Intervention group and control.

Table 6.3.12 Results of Satisfaction of current blood pressure.

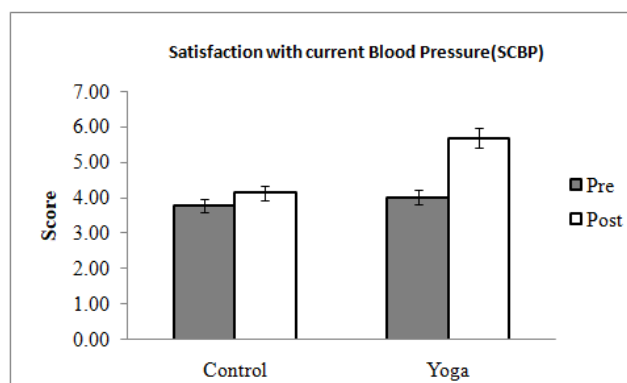| Variables	Group	Pre M ±SD	Post M± SD	ES	Change score of mean	Group*Time
SCBP	Y (n=151)	4.01 ±1.05	5.68 ±0.582***	1.85	- 1.67	*p<0.001*
	C (n=153)	3.77 ±0.865	4.14 ±0.822***	0.57	- 0.37	
Legend: Yoga group shows significant improvement on SCBP *** *p<0.001*within group comparisons.						

Figure 6.312 Changes in Satisfaction with Current Blood Pressure

6.3.13 SATISFACTION WITH CURRENT HEALTH (SCH)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SCH score (M =3.10, SD =0.500) over the control group (M=3.18, SD=0.386 , t(304) = 1.595, p = .112)Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SCH score (M =4.94, SD = 0.331) than those in the control group (M =3.58, SD=0.508, t(304) = - 27.657, p < .001).With regard to yoga intervention group, results indicate a significant improvement for SCH after yoga Intervention (M=4.94, SD=0.331) over SCH before yoga intervention (M=3.10, SD= 0.500, t(151) = - 44.839, p<.000). In the case control group, the results indicate improvement of SCH after conservative treatment (M=3.58, SD=0.508) over SCH before treatment which is significant (M= 3.18, SD= 0.386, t(153)= - 8.995, p <.000). Table 13shows the changes within the Intervention group and control group.). There was significant improvement in Group X Time interaction for SCH [F (1, 302)= 66.27, p < 0.001, $\eta 2 = 0.18$]. Table 6.3.13 and Figure 6.3.13 show the changes within the Intervention group and control.

Table. 6.3.13. Results of Satisfaction with current health (SCH)

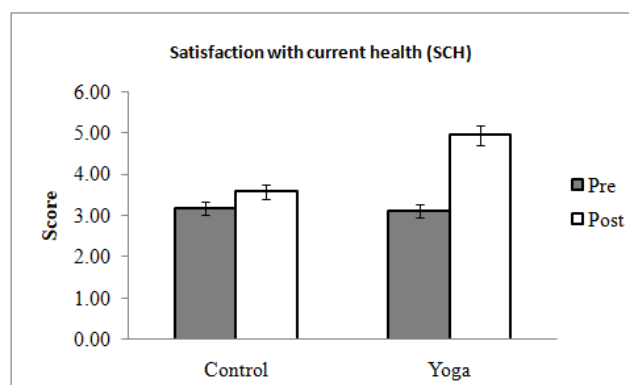| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
SCH	Y (n=151)	3.10 ±0.500	4.94 ±0.331***	3.65	- 1.84	**p<0.001**
	C (n=153)	3.18 ±0.386	3.58 ±0.508***	0.72	- 0.4	
Legend: Yoga group shows significant improvement on SCH *** *p<0.001*within group comparisons.						

Figure.6.3,13 Changes in Satisfaction with Current Health.

6.3.14 CURRENT KNOWLEDGE ABOUT DIABETES (CKD)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had CKD score (M =2.24, SD =0.428) over the control group (M=2.05, SD=0.222 , t(304) = - 4.814, p = .000)

Over a period of four months of yoga intervention, participants of the yoga group significantly differ in CKD score (M =2.99, SD = 0.36) than those in the control group (M =2.35, SD=0.53, t(304) = - 27.375, p = .000).With regard to yoga intervention group, results indicate a significant improvement for CKD after yoga Intervention (M=2.99, SD=0.36) over CKD before yoga intervention (M=2.24, SD= 0.43, t(151) = - 16.98, p<.000). In the case control group, the results indicate insignificant improvement of CKD after conservative treatment (M=2.35, SD=0.53) over CKD before treatment which is insignificant (M= 2.05, SD= 0.22, t(153)= - 1.419, p>0.158). Table 14shows the changes within the Intervention group and control group. There was significant improvement in Group X Time interaction for CKD [F(1,302)= 115.44, p < 0.001, η2 = 0.28]. Table 6.3.14 and Figure 6.3.14 show the changes within the Intervention group and control.

Table 6.3.14 Results of Current knowledge about diabetes (CKD)

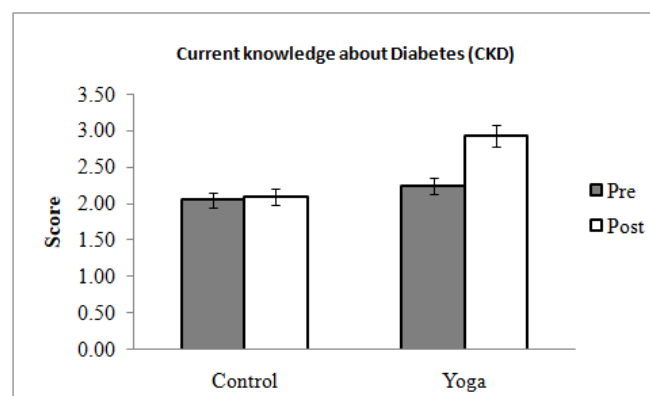| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
CKD	Y (n=151)	2.24 ±0.43	2.99 ±0.36***	1.34	- 0.69	**_p<0.001_**
	C (n=153)	2.05 ±0.22	2.35 ±0.53***	0.54	- 0.04	
Legend: Yoga group shows significant improvement on CKD *** _p<0.001_ within group comparisons.						

Figure 6.3.14 Changes in current knowledge about Diabetes

6.4 QUALITY OF LIFE INSTRUMENT FOR DIABETES

6.4.1 ROLE LIMITATION DUE TO PHYSICAL HEALTH (RLDPH)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had RLDPH score (M =57.17, SD =6.41) over the control group (M=57.58, SD=1.49 , t(304) = 1.217, p = .224).Over a period of four months of yoga intervention, participants of the yoga group significantly differ in RLDPH score (M =73.84, SD = 2.90) than those in the control group (M =68.30, SD=2.39, t(304) = - 17.694, p = .000).With regard to yoga intervention group, results indicate a significant improvement for RLDPH after yoga Intervention (M=73.84, SD=2.90) over RLDPH before yoga intervention (M=57.17, SD= 6.41, t(151) = - 32.915, p<.000). In the case control group, the results indicate significant improvement of RLDPH after conservative treatment (M=68.30, SD= 2.39) over RLDPH before treatment which is significant (M= 57.58, SD= 1.49, t(153)= - 50.476, p>0.000). Significant improvement in Group X Time interaction for Limitation due to Physical Health [F (1,302) = 119.03, p< 0.001, η2 = 0.283], was observed. Table 6.4.1and Figure 6.4.1show the changes within the Intervention group and control group.

Table 6.4.1 Results of Role Limitation due to Physical Health (RLDPH)

Variables	Group	Pre (M ±SD)	Post (M ±SD)	ES	Change score of mean	Group*Time
RLDPH	Control (n=153)	57.58 ±1.49	68.30 ±2.39***	3.89	- 10.72	*p< 0.001*
	Yoga (n=151)	57.17 ±6.41	73.84 ±2.90***	2.71	- 16.26	

Legend: Yoga shows significant improvement on RLDPH *** P< 0.001 within group comparisons.
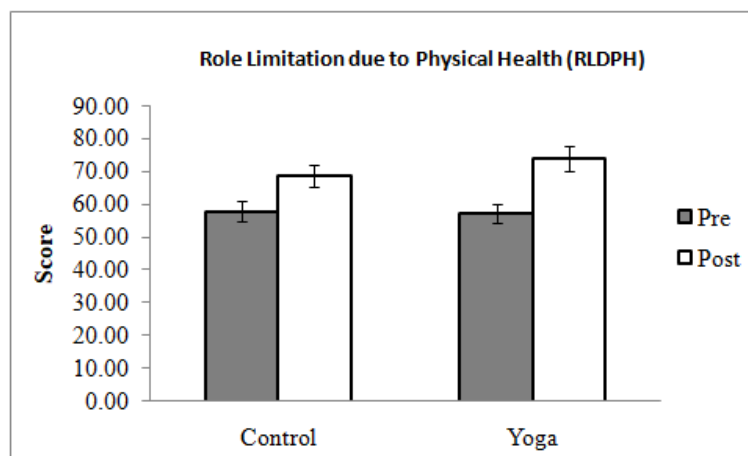

Figure 6.4.1 Change in Role limitation due to Physical Health

6.4.2. PHYSICAL ENDURANCE (PE)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had PE score (M =68.43, SD =5.71) over the control group (M=66.54, SD=2.62 , t(304) = -3.779, p = .000) Over a period of four months of yoga intervention, participants of the yoga group significantly differ in PE score (M =76.56, SD = 0.60) than those in the control group (M =73.36, SD=0.90, t(304) = - 40.369, p = .000). With regard to yoga intervention group, results indicate a significant improvement for PE after yoga Intervention (M=76.56, SD=0.60) over PE before yoga intervention (M=68.43, SD= 5.71, t(151) = -17.894, p<.000). In the case control group, the results indicate significant improvement of PE after conservative treatment (M=73.36, SD= 0.90) over PE before treatment which is significant (M= 66.54, SD= 2.62, t(153)= - 26.429, p>0.000). Significant improvement in Group X Time interaction for Physical Endurance [$F(1,302) = 6.37$, $p < 0.001$, $\eta2 = 0.021$] was observed. Table 6.4.2 and Figure 6.4.2 show the changes within the Intervention group and control group.

Table .6.4.2 Results of Physical Endurance (PE)

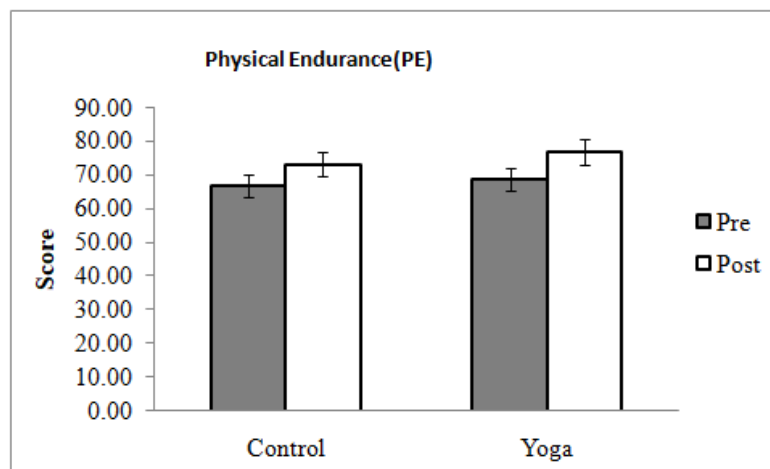| Variables	Group	Pre M ±SD	Post M± SD	ES	Change score of mean	Group*Time
PE	C (n=153)	66.54 ±2.62	73.36 ±0.90***	2.36	- 6.82	*p< 0.001*
	Y (n=151)	68.43 ±5.71	76.56 ±0.60***	1.43	- 8.13	
Legend: Yoga group shows significant improvement on PE *** *p<0.001*within group comparisons.						

Figure 6.4.2 Changes in Physical Endurance

6.4.3 GENERAL HEALTH (GH)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had GH score (M =61.02, SD =7.77) over the control group (M=56.64, SD=4.66 , t(304) = - 12.656, p = .000).Over a period of four months of yoga intervention, participants of the yoga group significantly differ in GH score (M =70.07, SD = 4.61) than those in the control group (M =61.22, SD=4.80, t(304) = - 16.110, p = .000).With regard to yoga intervention group, results indicate a significant improvement for GH after yoga Intervention (M=70.07, SD=4.61) over GH before yoga intervention (M=61.02, SD= 7.77, t(151) = -14.992, p<.000). In the case control group, the results indicate significant improvement of GH after conservative treatment (M=61.22, SD= 4.80) over GH before treatment which is significant (M= 56.64, SD=4.66, t(153)= - 28.447, p>0.000). Significant improvement in Group X Time interaction for General Health [F(1,302) = 29.9, p< 0.001, η2 = 0.090] was obtained. Table 6.4.3 and Figure 6.4.3 show the changes within the Intervention group and control group.

Table 6.4.3 Results of General Health (GH)

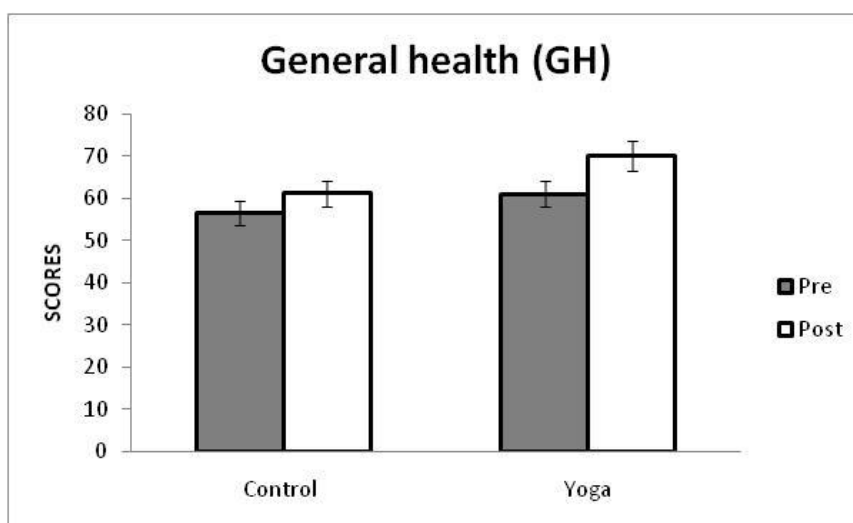| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
GH	C (n=153)	56.64 ±4.66	61.22 ±4.80***	0.66	- 4.58	*p< 0.001*
	Y (n=151)	61.02 ±7.77	70.07 ±4.61***	1.22	- 9.05	
Legend: Yoga group shows significant improvement on GH *** *p*<0.001within group comparisons.						

Figure 6.4.3 Changes in General health

6.4.4 TREATMENT SATISFACTION (TS)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had TS score (M =33.08, SD =7.66) over the control group (M=31.73, SD=5.48 , t(304) = 1.7, p = .08).Over a period of four months of yoga intervention, participants of the yoga group significantly differ in TS score (M =81.16, SD = 6.26) than those in the control group (M =58.24, SD=3.46, t(304) = 39.59, p = .000).With regard to yoga intervention group, results indicate a significant improvement for TS after yoga Intervention (M=81.16, SD=6.26) over TS before yoga intervention (M=33.08, SD= 7.66, t(151) = -68.86 p<.000). In the case control group, the results indicate significant improvement of TS after conservative treatment (M=58.24, SD= 3.46) over TS before treatment which is significant (M= 31.73, SD=5.48, t(153)= - 7.12, p>0.000). . Significant improvement in Group X Time interaction for Treatment Satisfaction [F(1,302) = 621.29, p < 001, η2 =0.673]   was obtained. Table 6.4.4 and Figure 6.4.4.show the changes within the Intervention group and control group.

Table. 6.4.4. Results of Treatment Satisfaction(TS)

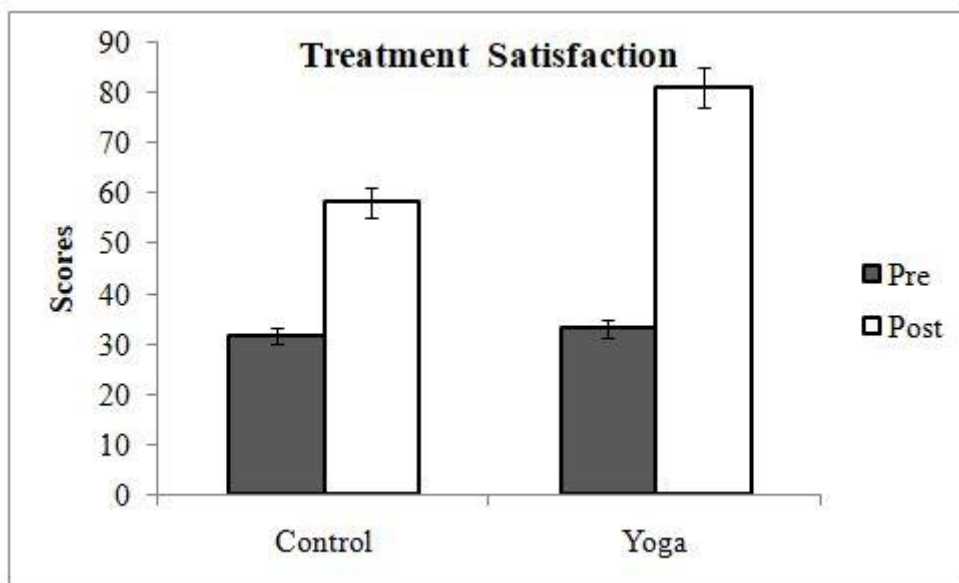| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of mean	Group*Time
TS	C (n=153)	31.73 ±5.48	58.24 ±3.46***	4.17	-26.51	*p*< 0.001
	Y (n=151)	33.08 ±7.66	81.16 ±6.26***	5.60	- 48.08	
Legend: Yoga group shows significant improvement on TS *** *p*<0.001within group comparisons.						

Figure. 6.4.4. Changes in Treatment Satisfaction

6.4.5 SYMPTOM BOTHERNESS (SB)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had SB score (M =72.36, SD =4.10) over the control group (M=52.01, SD=4.00 , t(304) = 19.454, p = .000).Over a period of four months of yoga intervention, participants of the yoga group significantly differ in SB score (M =72.36, SD = 4.10) than those in the control group (M =72.98, SD=1.49, t(304) = - 2.857 , p = .005).With regard to yoga intervention group, results indicated significant improvement for SB after yoga Intervention (M=72.36, SD=4.10) over SB before yoga intervention (M=52.01, SD= 4.00, t(151) =-90.24, p< .001). In the case control group, the results indicate significant improvement of SB after conservative treatment (M=72.98, SD= 1.49) over SB before treatment which is significant (M= 58.08, SD=3.03, t(153)= - 51.700, p>0.000). Significant improvement in Group X Time interaction for Symptom Botherness [F (1,302) = 100.23, p < 0.001, η2 = 0.249]   was obtained. Table 6.4.5 and Figure 6.4.5 show the changes within the Intervention group and control group.

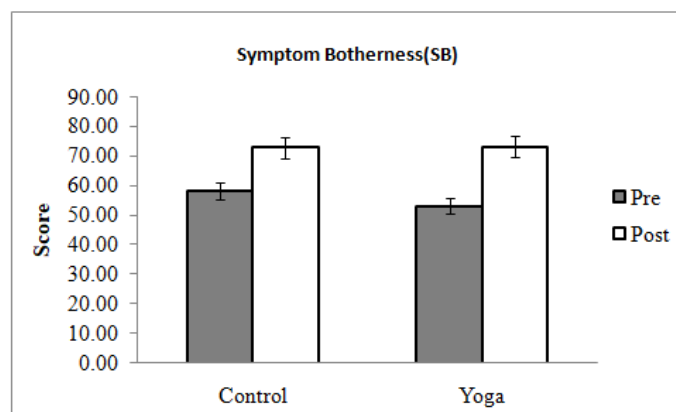| Table 6.4.5 Results of Symptom botherness (SB)						
Variables	**Group**	**Pre M ±SD**	**Post M± SD**	**ES**	**Change score of mean**	**Group*Time**
SB	C (n=153)	58.08 ±3.03	72.98 ±1.49***	4.28	- 14.90	p <0.001
	Y (n=151)	52.01 ±4.00	72.36 ±4.10***	3.54	- 20.35	
Legend: Yoga group shows significant improvement on SB *** p<0.001within group comparisons.						

Figure.6.4.5. Changes in Symptom Botherness

6.4.6 FINANCIAL WORRIES (FW)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had FW score (M =48.25, SD =7.92) over the control group (M=41.57, SD=5.60 , t(304) = 8.49, p = .000)Over a period of four months of yoga intervention, participants of the yoga group significantly differ in FW score (M =54.40, SD = 6.30) than those in the control group (M =47.32, SD=3.54, t(304) = 12.11 , p = .001).With regard to yoga intervention group, results indicate significant improvement for FW after yoga Intervention (M=54.40, SD=6.30) over FW before yoga intervention (M=48.25, SD= 7.92, t(151) = -51.52, p<0.001). In the case control group, the results indicate significant improvement of FW after conservative treatment (M=47.32, SD= 3.54) over FW before treatment which is significant (M= 41.57, SD=5.60, t(153)= - 10.73, p>0.001). Significant improvement in Group X Time interaction for Financial Worries [F(1,302) = 0.16, p < 0.001, η2 = 0.001],   was obtained. Table 6.4.6 and Figure 6.4.6 show the changes within the Intervention group and control group.

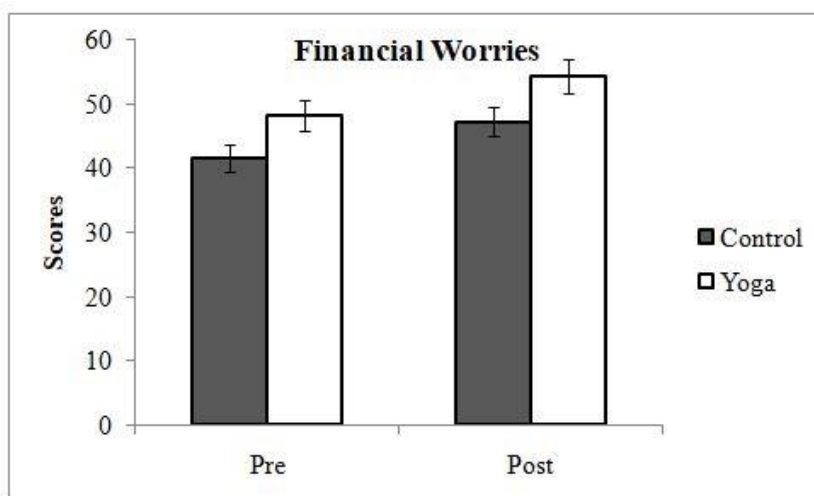| Table 6.4.6 Results of financial worries (FW)						
Variables	**Group**	**Pre M ±SD**	**Post M± SD**	**ES**	**Change score of mean**	**Group*Time**
FW	C (n=153)	41.57 ±5.60	47.32 ±3.54***	0.87	-5.75	p <0.001
	Y (n=151)	48.25 ±7.92	54.40 ±6.30***	0.58	- 6.15	
Legend: Yoga group shows significant improvement on FW *** p<0.001within group comparisons.						

Figure 6.4.6 Changes in Financial Worries

6.4.7 EMOTION/MENTAL HEALTH (MH)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had MH score (M = 63.18, SD =4.01) over the control group (M=60.26, SD=3.86 , t(304) = - 22.179, p = .001). Over a period of four months of yoga intervention, participants of the yoga group significantly differ in MH score (M =84.77, SD = 3.05) than those in the control group (M =79.27, SD=4.17, t(304) = - 19.061, p = .000).With regard to yoga intervention group, results indicate a significant improvement for MH after yoga Intervention (M=84.77, SD=3.05) over MH before yoga intervention (M=63.18, SD= 4.01, t(151) = - 90.342, p<.000). In the case control group, the results indicate significant improvement of MH after conservative treatment (M=79.27, SD= 4.17) over MH before treatment which is significant (M= 60.26, SD=3.86, t(153)= - 48.483, p>0.000). Significant improvement in Group X Time interaction for Emotional Health [F (1,302)=19.11, p < 0.001, $\eta2 = 0.060$] was obtained. Table 6.4.7 and Figure 6.4.7 show the changes within the Intervention group and control group.

Table.6.4.7 Results of Emotion/ Mental Health (MH)

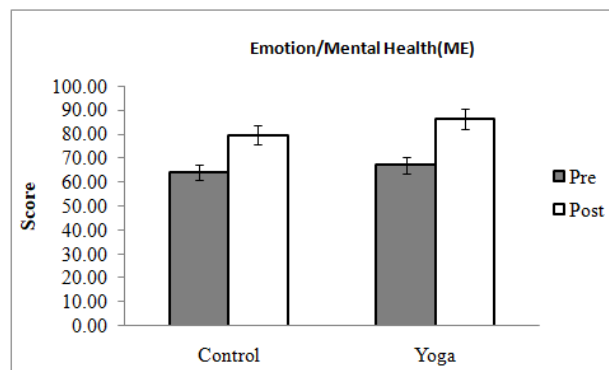| Variables	Group	Pre M ±SD	Post M± SD	ES	Change score of mean	Group*Time
MH	C (n=153)	60.26 ±3.86	79.27 ±4.17***	3.24	- 19.01	*p*<0.001
	Y (n=151)	63.18 ±4.01	84.77 ±3.05***	5.01	- 21.59	
Legend: Yoga group shows significant improvement on MH *** *p*<0.001within group comparisons.						

Figure.6.4.7 Changes in Mental Health

6.4.8 DIET SATISFACTION (DS)

Baseline comparisons (Pre vs Pre): Before intervention, the yoga group had DS score (M = 60.93., SD =5.22) over the control group (M=61.61, SD=4.46, t(304) = - 27.703, p = .000)Over a period of four months of yoga intervention, participants of the yoga group significantly differ in DS score (M =77.22, SD = 3.30) than those in the control group (M =76.30, SD=4.39, t(304) = - 2.096, p = .037).With regard to yoga intervention group, results indicate a significant improvement for DS after yoga Intervention (M=77.22, SD=3.30) over DS before yoga intervention (M=60.93, SD= 5.22, t(151) = 10.363, p<.000). In the case control group, the results indicate significant improvement of DS after conservative treatment (M=76.30, SD=4.39) over DS before treatment which is significant (M= 61.61, SD=4.46, t(153)= - 16.850, p>0.000). Significant improvement in Group X Time interaction for Diet Satisfaction [F(1,302) = 4.90, p < 0.001, η2 = 0.016] was obtained. Table 6.4.8 and Figure 6.4.8 show the changes within the Intervention group and control group.

Table 6.4.8 Results of Diet Satisfaction (DS)

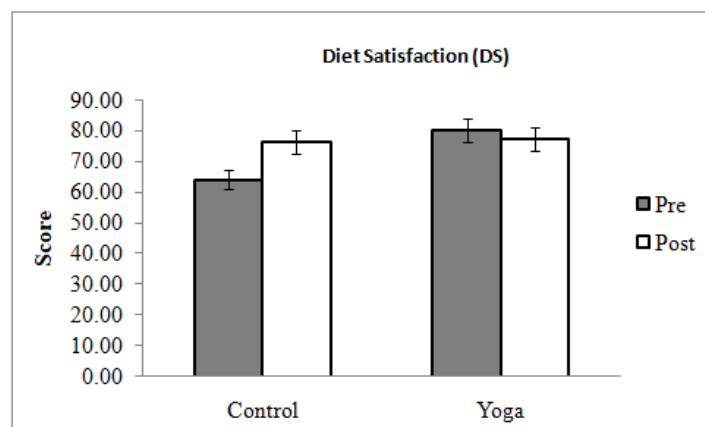| Variables	Group	Pre (M ±SD)	Post (M± SD)	ES	Change score of a mean	Group*Time
DS	C (n=153)	61.61 ±4.46	76.30 ±4.39***	2.20	-14.69	*p< 0.001*
	Y (n=151)	60.93 ± 5.22	77.22 ± 3.30***	2.76	- 16.29	
Legend: Yoga group shows significant improvement on DS *** *p*<0.001within group comparisons.						

Figure.6.4.8 Changes in..Diet Satisfaction