

## CHAPTER 6.0

### 6.0 RESULTS

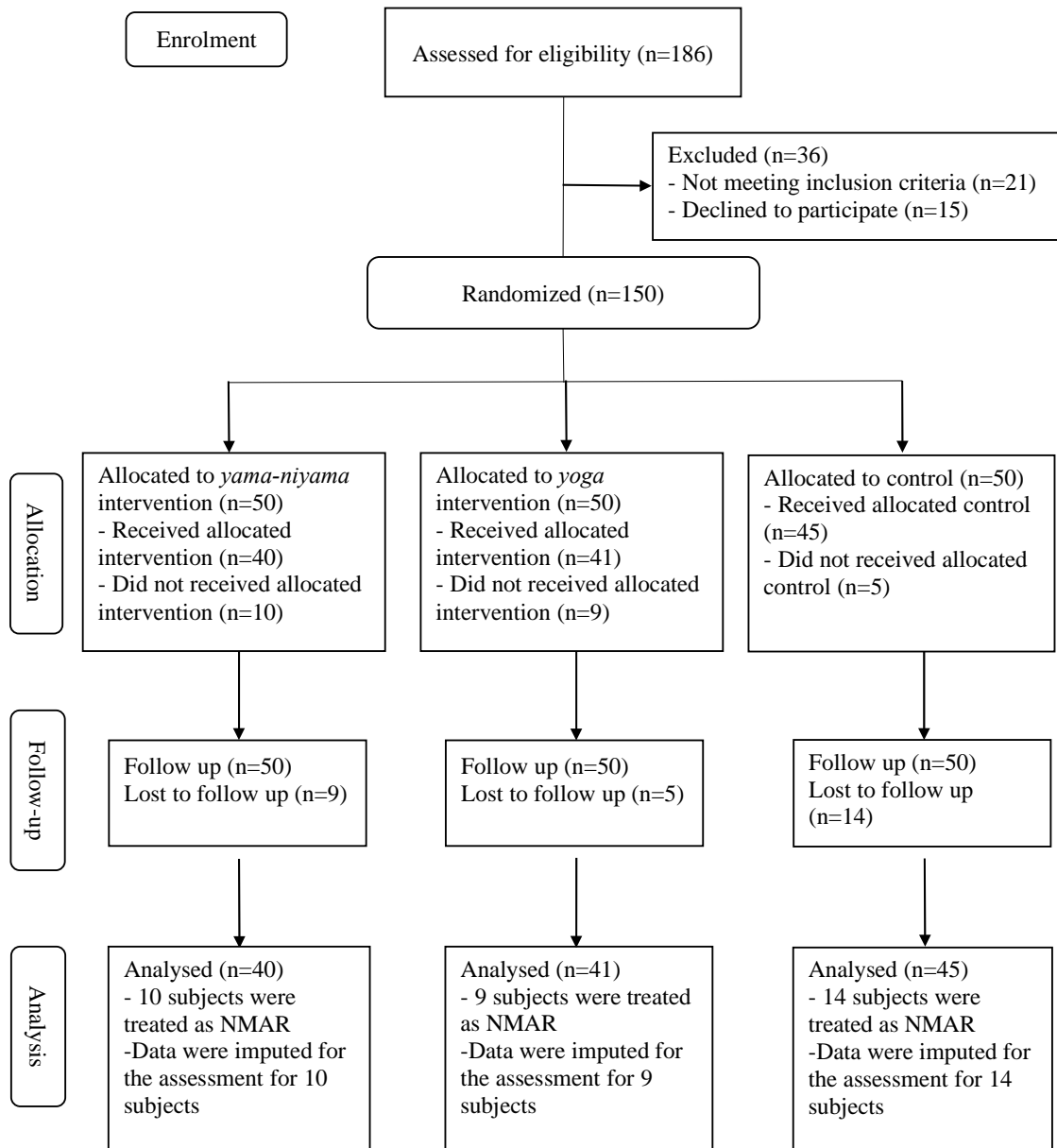
#### 6.1 STUDY PROFILE

The CONSORT diagram is shown in Figure 8. One hundred and eighty-six participants were assessed for eligibility and 150 participants gave consent to participate in the study. No statistically significant differences were seen among the three groups in demographic factors (Table 5). Figure 8 shows that 24 subjects (10 from the *yama-niyama* group, 9 from the *yoga* group and 5 from the control group) dropped out after providing baseline data. Since no information was available as to the reason for dropout, the data for these 24 subjects were treated as NMAR (Not Missing at Random), for which data imputation is not permissible. The effective sample size thus reduced to 126 (YN: 40, Y: 41, C: 45).

The data for these 126 subjects were completed for baseline, third month and follow-up data. For the follow-up at the fourth month, there were missing data: 9 in the YN group, 5 in the control group and 14 in the control group. It was ascertained that these data could be treated as MAR (Missing At Random) and the missing data were imputed in R (version 3.6.3) using the mice package. The diagnostics for the imputed data were satisfactory and these imputed data with 126 complete cases were used for the final analysis presented here.

**Table 5: Baseline characteristics**

| <b>Characteristics</b>  | <b>YN group</b> | <b>Yoga group</b> | <b>Control group</b> | <b>Difference</b> |
|---|-----------------|-------------------|----------------------|-------------------|
| Age (M±SD)  | 19.28±1.16      | 18.62±0.92        | 19.62±1.23           | NS                |
| <b>Gender</b>   |                 |                   |                      |                   |
| Male  | 32              | 16                | 39                   | NS                |
| Female  | 18              | 34                | 11                   |                   |
| <b>Marital status</b>   |                 |                   |                      |                   |
| Unmarried   | 50              | 50                | 50                   | NS                |
| <b>Educational status</b>   |                 |                   |                      |                   |
| High school grad.   | 50              | 50                | 50                   | NS                |
| <b>Health Status</b>  |                 |                   |                      |                   |
| Good to excellent   | 50              | 50                | 50                   | NS                |
| <b>Yoga experience</b>  |                 |                   |                      |                   |
| No  | 50              | 50                | 50                   | NS                |
| <b>Note:</b> NS = Not Significant, YN = <i>Yama</i> and <i>Niyama</i> , M = Mean, SD = Standard Deviation |                 |                   |                      |                   |



**Figure 8: CONSORT diagram**

## 6.2 ENERGY AND ENTROPY LEVELS OF PHYSICAL VARIABLES

Repeated measures ANOVA were performed for time points (baseline, after intervention and one month follow-up) and groups (*yama-niyama*, *yoga* and control). Statistically significant differences of time points and the interaction between time points and groups are shown in Table 6. The results of energy level (mean±SD) for HEF, HS, HR, heart, lung, liver, spleen and kidney and entropy level for five emotion-related organs (heart, heart, lung, liver, spleen and kidney) are shown in Table 7–9. The effect size between *yama-niyama* group and control group after intervention are shown in Table 10.

**Table 6: Summary of repeated measures ANOVA showing the results in physical factors.**

| Variables   | Factors            | F Value | Level of significance | $\eta_p^2$ |
|---|--------------------|---------|-----------------------|------------|
| Energy level  |                    |         |                       |            |
| HEF   | Time point         | 171.53  | <0.001                | 0.58       |
|   | Group x Time point | 15.41   | <0.001                | 0.20       |
| HS  | Time point         | 252.66  | <0.001                | 0.67       |
|   | Group x Time point | 16.15   | <0.001                | 0.21       |
| ER  | Time point         | 250.29  | <0.001                | 0.67       |
|   | Group x Time point | 14.74   | <0.001                | 0.19       |
| Heart   | Time point         | 119.91  | <0.001                | 0.49       |
|   | Group x Time point | 12.68   | <0.001                | 0.17       |
| Lung  | Time point         | 143.41  | <0.001                | 0.54       |
|   | Group x Time point | 11.00   | <0.001                | 0.15       |
| Liver   | Time point         | 84.27   | <0.001                | 0.41       |
|   | Group x Time point | 7.74    | <0.001                | 0.11       |
| Spleen  | Time point         | 67.74   | <0.001                | 0.36       |
|   | Group x Time point | 8.57    | <0.001                | 0.11       |
| Kidney  | Time point         | 103.26  | <0.001                | 0.46       |
|   | Group x Time point | 11.41   | <0.001                | 0.16       |
| Entropy level                                       |                    |         |                       |            |
| Heart   | Time point         | 13.50   | <0.001                | 0.10       |
|   | Group x Time point | 0.51    | 0.731                 | 0.01       |
| Lung  | Time point         | 33.02   | <0.001                | 0.21       |
|   | Group x Time point | 3.86    | 0.005                 | 0.06       |
| Liver   | Time point         | 11.30   | <0.001                | 0.09       |
|   | Group x Time point | 2.19    | 0.071                 | 0.03       |
| Spleen  | Time point         | 26.38   | <0.001                | 0.18       |
|   | Group x Time point | 1.45    | 0.218                 | 0.02       |
| Kidney  | Time point         | 28.94   | <0.001                | 0.19       |
|   | Group x Time point | 2.04    | 0.090                 | 0.03       |
| Note: $\eta_p^2$ , partial eta square – effect size |                    |         |                       |            |

**Table 7: Comparison between/within *yama-niyama* group and control group for physical factors at the baseline, after intervention and one month follow-up.**

| variables   | Group | Baseline                 | After intervention            | Follow-up                   |
|---|-------|--------------------------|-------------------------------|-----------------------------|
| <b>Energy level</b>   |       |                          |                               |                             |
| HEF   | YN    | 54.31±8.35 <sup>§§</sup> | 47.89±6.58 <sup>***§§§</sup>  | 42.09±4.14 <sup>***§</sup>  |
|   | C     | 60.57±10.75              | 39.15±7.16 <sup>***</sup>     | 45.02±5.50 <sup>***</sup>   |
| HS  | YN    | 0.01±0.35                | -0.40±0.25 <sup>***§§§</sup>  | -0.57±0.23 <sup>***</sup>   |
|   | C     | 0.15±0.29                | -0.81±0.37 <sup>***</sup>     | -0.44±0.35 <sup>***</sup>   |
| ER  | YN    | 79.17±27.49              | 50.68±23.36 <sup>***§§§</sup> | 33.68±17.51 <sup>***</sup>  |
|   | C     | 87.36±16.50              | 21.27±24.54 <sup>***</sup>    | 40.31±23.70 <sup>***</sup>  |
| Heart   | YN    | 4.77±0.86                | 4.00±0.73 <sup>***§§§</sup>   | 3.39±0.55 <sup>***§§§</sup> |
|   | C     | 5.31±1.25                | 3.03±0.87 <sup>***</sup>      | 3.92±0.78 <sup>***</sup>    |
| Lung  | YN    | 5.28±1.23                | 4.38±0.91 <sup>*§§§</sup>     | 3.73±0.65 <sup>***§</sup>   |
|   | C     | 5.91±1.27                | 3.39±0.89 <sup>***</sup>      | 4.10±0.78 <sup>***</sup>    |
| Liver   | YN    | 5.60±1.71                | 4.79±1.12 <sup>*§§§</sup>     | 4.07±0.86 <sup>***</sup>    |
|   | C     | 6.28±1.84                | 3.45±1.20 <sup>***</sup>      | 4.21±1.03 <sup>***</sup>    |
| Spleen  | YN    | 4.30±1.01 <sup>§§</sup>  | 4.03±0.80 <sup>§§§</sup>      | 3.53±0.75 <sup>**</sup>     |
|   | C     | 5.17±1.39                | 3.29±0.89 <sup>***</sup>      | 3.52±0.99 <sup>***</sup>    |
| Kidney  | YN    | 5.13±1.17                | 4.46±0.83 <sup>*§§§</sup>     | 3.78±0.76 <sup>***</sup>    |
|   | C     | 5.69±1.63                | 3.27±0.99 <sup>***</sup>      | 4.13±0.94 <sup>***</sup>    |
| <b>Entropy level</b>  |       |                          |                               |                             |
| Heart   | YN    | 2.51±0.33                | 2.31±0.20 <sup>*</sup>        | 2.47±0.41                   |
|   | C     | 2.60±0.34                | 2.31±0.49 <sup>**</sup>       | 2.49±0.34                   |
| Lung  | YN    | 2.41±0.29                | 2.21±0.17 <sup>***</sup>      | 2.34±0.22                   |
|   | C     | 2.49±0.26                | 2.20±0.22 <sup>***</sup>      | 2.40±0.28                   |
| Liver   | YN    | 2.50±0.46                | 2.19±0.26 <sup>**</sup>       | 2.30±0.34 <sup>§</sup>      |
|   | C     | 2.56±0.46                | 2.32±0.40 <sup>*</sup>        | 2.54±0.52                   |
| Spleen  | YN    | 2.36±0.31                | 2.04±0.17 <sup>**</sup>       | 2.29±0.44                   |
|   | C     | 2.63±0.72                | 2.15±0.33 <sup>***</sup>      | 2.37±0.53 <sup>*</sup>      |
| Kidney  | YN    | 2.47±0.24                | 2.25±0.17 <sup>***</sup>      | 2.41±0.29                   |
|   | C     | 2.58±0.31                | 2.24±0.29 <sup>***</sup>      | 2.47±0.37                   |
| <p>Note: Data were analysed using repeated measures of ANOVA followed by Post hoc analysis with Bonferroni adjustment. Values are group mean ± S.D.; *: Represents within group changes when compared to baseline; *<i>p</i> &lt; 0.05; **<i>p</i> &lt; 0.01; ***<i>p</i> &lt; 0.001; §: Represents between group differences when compared to Control group; § <i>p</i> &lt; 0.05; §§ <i>p</i> &lt; 0.01; §§§ <i>p</i> &lt; 0.001; YN=<i>Yama-niyama</i>; C=control; HEF=Human Energy Field; HS=Health Status; ER= Energy Reserve.</p> |       |                          |                               |                             |

**Table 8: Comparison between/within *yama-niyama* group and *yoga* group for physical factors at the baseline, after intervention and one month follow-up.**

| variables   | Group | Baseline    | After intervention | Follow-up      |
|---|-------|-------------|--------------------|----------------|
| <b>Energy level</b>   |       |             |                    |                |
| HEF   | YN    | 54.31±8.35  | 47.89±6.58**       | 42.09±4.14***  |
|   | Y     | 58.76±8.10  | 46.30±9.44***      | 40.71±3.80***  |
| HS  | YN    | 0.01±0.35   | -0.40±0.25***      | -0.57±0.23***  |
|   | Y     | 0.14±0.32   | -0.56±0.33***      | -0.62±0.22***  |
| ER  | YN    | 79.17±27.49 | 50.68±23.36***     | 33.68±17.51*** |
|   | Y     | 87.88±17.53 | 41.41±30.98***     | 26.41±16.67*** |
| Heart   | YN    | 4.77±0.86   | 4.00±0.73**        | 3.39±0.55***   |
|   | Y     | 4.95±1.02   | 3.77±1.07***       | 3.35±0.51***   |
| Lung  | YN    | 5.28±1.23   | 4.38±0.91*         | 3.73±0.65***   |
|   | Y     | 5.78±1.19   | 4.25±1.09***       | 3.58±0.55***   |
| Liver   | YN    | 5.60±1.71   | 4.79±1.12*         | 4.07±0.86***   |
|   | Y     | 6.17±1.92   | 4.50±1.42***       | 3.83±0.95***   |
| Spleen  | YN    | 4.30±1.01   | 4.03±0.80          | 3.53±0.75**    |
|   | Y     | 4.90±1.29   | 3.90±1.12***       | 3.25±0.77***   |
| Kidney  | YN    | 5.13±1.17   | 4.46±0.83*         | 3.78±0.76***   |
|   | Y     | 5.66±1.42   | 4.14±1.11***       | 3.51±0.74***   |
| <b>Entropy level</b>  |       |             |                    |                |
| Heart   | YN    | 2.51±0.33   | 2.31±0.20*         | 2.47±0.41      |
|   | Y     | 2.58±0.38   | 2.39±0.32*         | 2.43±0.26      |
| Lung  | YN    | 2.41±0.29   | 2.21±0.17***       | 2.34±0.22      |
|   | Y     | 2.44±0.24   | 2.31±0.24*         | 2.28±0.19***   |
| Liver   | YN    | 2.50±0.46   | 2.19±0.26**        | 2.30±0.34      |
|   | Y     | 2.51±0.31   | 2.38±0.37          | 2.28±0.37*     |
| Spleen  | YN    | 2.36±0.31   | 2.04±0.17**        | 2.29±0.44      |
|   | Y     | 2.47±0.36   | 2.19±0.33**        | 2.25±0.35      |
| Kidney  | YN    | 2.47±0.24   | 2.25±0.17***       | 2.41±0.29      |
|   | Y     | 2.58±0.30   | 2.38±0.26***       | 2.39±0.32**    |
| <p>Note: Data were analysed using repeated measures of ANOVA followed by Post hoc analysis with Bonferroni adjustment. Values are group mean ± S.D.; *: Represents within group changes when compared to baseline; *<math>p &lt; 0.05</math>; **<math>p &lt; 0.01</math>; ***<math>p &lt; 0.001</math>; §: Represents between group differences when compared to Control group; § <math>p &lt; 0.05</math>; §§ <math>p &lt; 0.01</math>; §§§ <math>p &lt; 0.001</math>; YN=<i>Yama-niyama</i>; Y=<i>Yoga</i>; HEF=Human Energy Field; HS=Health Status; ER= Energy Reserve.</p> |       |             |                    |                |

**Table 9: Comparison between/within and yoga group and control group for physical factors at the baseline, after intervention and one month follow-up.**

| variables  | Group | Baseline    | After intervention           | Follow-up                    |
|--|-------|-------------|------------------------------|------------------------------|
| <b>Energy level</b>  |       |             |                              |                              |
| HEF  | Y     | 58.76±8.10  | 46.30±9.44 <sup>***§§§</sup> | 40.71±3.80 <sup>***§§§</sup> |
|  | C     | 60.57±10.75 | 39.15±7.16 <sup>***</sup>    | 45.02±5.50 <sup>***</sup>    |
| HS   | Y     | 0.14±0.32   | -0.56±0.33 <sup>***§§</sup>  | -0.62±0.22 <sup>***§</sup>   |
|  | C     | 0.15±0.29   | -0.81±0.37 <sup>***</sup>    | -0.44±0.35 <sup>***</sup>    |
| ER   | Y     | 87.88±17.53 | 41.41±30.98 <sup>***§§</sup> | 26.41±16.67 <sup>***§§</sup> |
|  | C     | 87.36±16.50 | 21.27±24.54 <sup>***</sup>   | 40.31±23.70 <sup>***</sup>   |
| Heart  | Y     | 4.95±1.02   | 3.77±1.07 <sup>***§§§</sup>  | 3.35±0.51 <sup>***§§§</sup>  |
|  | C     | 5.31±1.25   | 3.03±0.87 <sup>***</sup>     | 3.92±0.78 <sup>***</sup>     |
| Lung   | Y     | 5.78±1.19   | 4.25±1.09 <sup>***§§§</sup>  | 3.58±0.55 <sup>***§§§</sup>  |
|  | C     | 5.91±1.27   | 3.39±0.89 <sup>***</sup>     | 4.10±0.78 <sup>***</sup>     |
| Liver  | Y     | 6.17±1.92   | 4.50±1.42 <sup>***§§§</sup>  | 3.83±0.95 <sup>***</sup>     |
|  | C     | 6.28±1.84   | 3.45±1.20 <sup>***</sup>     | 4.21±1.03 <sup>***</sup>     |
| Spleen   | Y     | 4.90±1.29   | 3.90±1.12 <sup>***§§§</sup>  | 3.25±0.77 <sup>***</sup>     |
|  | C     | 5.17±1.39   | 3.29±0.89 <sup>***</sup>     | 3.52±0.99 <sup>***</sup>     |
| Kidney   | Y     | 5.66±1.42   | 4.14±1.11 <sup>***§§§</sup>  | 3.51±0.74 <sup>***§§</sup>   |
|  | C     | 5.69±1.63   | 3.27±0.99 <sup>***</sup>     | 4.13±0.94 <sup>***</sup>     |
| <b>Entropy level</b>   |       |             |                              |                              |
| Heart  | Y     | 2.58±0.38   | 2.39±0.32 <sup>*</sup>       | 2.43±0.26                    |
|  | C     | 2.60±0.34   | 2.31±0.49 <sup>**</sup>      | 2.49±0.34                    |
| Lung   | Y     | 2.44±0.24   | 2.31±0.24 <sup>*</sup>       | 2.28±0.19 <sup>***</sup>     |
|  | C     | 2.49±0.26   | 2.20±0.22 <sup>***</sup>     | 2.40±0.28                    |
| Liver  | Y     | 2.51±0.31   | 2.38±0.37                    | 2.28±0.37 <sup>*§</sup>      |
|  | C     | 2.56±0.46   | 2.32±0.40 <sup>*</sup>       | 2.54±0.52                    |
| Spleen   | Y     | 2.47±0.36   | 2.19±0.33 <sup>**</sup>      | 2.25±0.35                    |
|  | C     | 2.63±0.72   | 2.15±0.33 <sup>***</sup>     | 2.37±0.53 <sup>*</sup>       |
| Kidney   | Y     | 2.58±0.30   | 2.38±0.26 <sup>***</sup>     | 2.39±0.32 <sup>**</sup>      |
|  | C     | 2.58±0.31   | 2.24±0.29 <sup>***</sup>     | 2.47±0.37                    |
| <p>Note: Data were analysed using repeated measures of ANOVA followed by Post hoc analysis with Bonferroni adjustment. Values are group mean ± S.D.; *: Represents within group changes when compared to baseline; *<i>p</i> &lt; 0.05; **<i>p</i> &lt; 0.01; ***<i>p</i> &lt; 0.001; §: Represents between group differences when compared to Control group; § <i>p</i> &lt; 0.05; §§ <i>p</i> &lt; 0.01; §§§ <i>p</i> &lt; 0.001; Y=Yoga; C=Control; HEF=Human Energy Field; HS=Health Status; ER= Energy Reserve.</p> |       |             |                              |                              |

**Table 10: Between group comparisons effect size.**

| Yama-niyama group  |       |       | Control group |       |       | Sig.     | Effect size |
|--|-------|-------|---------------|-------|-------|----------|-------------|
|  |       |       | Energy level  |       |       |          |             |
| Variables  | Mean  | SD    | Variables     | Mean  | SD    | <i>p</i> | <i>d</i>    |
| HEF  | 47.89 | 6.58  | HEF           | 39.15 | 7.16  | <0.001   | 1.27        |
| HS   | -0.4  | 0.25  | HS            | -0.81 | 0.37  | <0.001   | 1.30        |
| ER   | 50.68 | 23.36 | ER            | 21.27 | 24.54 | <0.001   | 1.23        |
| Heart  | 4     | 0.73  | Heart         | 3.03  | 0.87  | <0.001   | 1.21        |
| Lung   | 4.38  | 0.91  | Lung          | 3.39  | 0.89  | <0.001   | 1.10        |
| Liver  | 4.79  | 1.12  | Liver         | 3.45  | 1.2   | <0.001   | 1.15        |
| Spleen   | 4.03  | 0.8   | Spleen        | 3.29  | 0.89  | <0.001   | 0.87        |
| Kidney   | 4.46  | 0.83  | Kidney        | 3.27  | 0.99  | <0.001   | 1.30        |
|  |       |       |               |       |       |          |             |
| Yoga group   |       |       | Control group |       |       | Sig.     | Effect size |
| Variables  | Mean  | SD    | Variables     | Mean  | SD    | <i>p</i> | <i>d</i>    |
| HEF  | 46.3  | 9.44  | HEF           | 39.15 | 7.16  | <0.001   | 0.85        |
| HS   | -0.56 | 0.33  | HS            | -0.81 | 0.37  | 0.002    | 0.71        |
| ER   | 41.41 | 30.98 | ER            | 21.27 | 24.54 | 0.002    | 0.72        |
| Heart  | 3.77  | 1.07  | Heart         | 3.03  | 0.87  | <0.001   | 0.76        |
| Lung   | 4.25  | 1.09  | Lung          | 3.39  | 0.89  | <0.001   | 0.86        |
| Liver  | 4.5   | 1.42  | Liver         | 3.45  | 1.2   | <0.001   | 0.80        |
| Spleen   | 3.9   | 1.12  | Spleen        | 3.29  | 0.89  | 0.010    | 0.60        |
| Kidney   | 4.14  | 1.11  | Kidney        | 3.27  | 0.99  | <0.001   | 0.83        |
| <b>Note:</b> <i>p</i> : Significance difference after intervention; <i>d</i> : effect size after intervention. |       |       |               |       |       |          |             |

## **6.2.1 ENERGY LEVEL**

### **6.2.1.1 Human Energy Filed (HEF)**

As shown in Figure 9, there was a statistically significant difference at the three time points (baseline, after intervention and follow-up) for HEF score,  $F(2,246)=171.53, p<0.001$ . There was a significant difference in group and time interaction for HEF score,  $F(4,246)=15.41, p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in HEF score at time points of baseline ( $p=0.008$ ), after intervention ( $p<0.001$ ) and follow-up ( $p=0.011$ ), after Bonferroni correction. There was a statistically significant difference between groups (YN & Control) on the post HEF score (after the intervention and follow-up) after controlling baseline HEF score,  $F(2,122)=14.81, p<0.001$  and  $F(2,122)=9.04, p<0.001$ .

(ii) *Yama-niyama* group compared to *yoga* group

There were no significant differences in HEF score at the three time points.

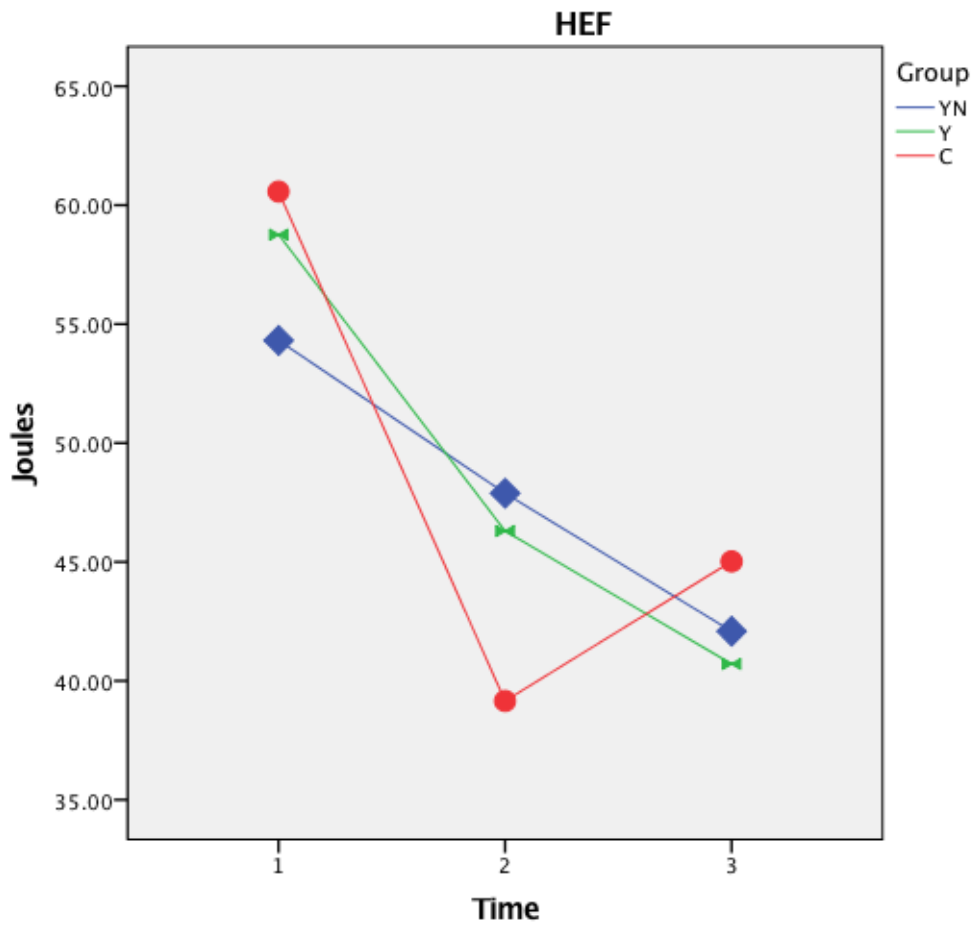
(iii) *Yoga* group compared to control group

There was a significant difference in HEF score after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ).

#### **Within-group comparison**

The results in YN group showed significant decreases in HEF score at time points after intervention ( $p=0.003$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction. The HEF score significantly decreased at time points after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) in *yoga* and control group compared to baseline.





**Figure 9: Changes in the Human Energy Field scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.1.2 Health Status (HS)**

As shown in Figure 10, there was a statistically significant difference at the three time points for HS score,  $F(2,246)=252.66$ ,  $p<0.001$ . There was a significant difference in group and time interaction for HS score,  $F(4,246)=16.15$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in HS score after intervention ( $p<0.001$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

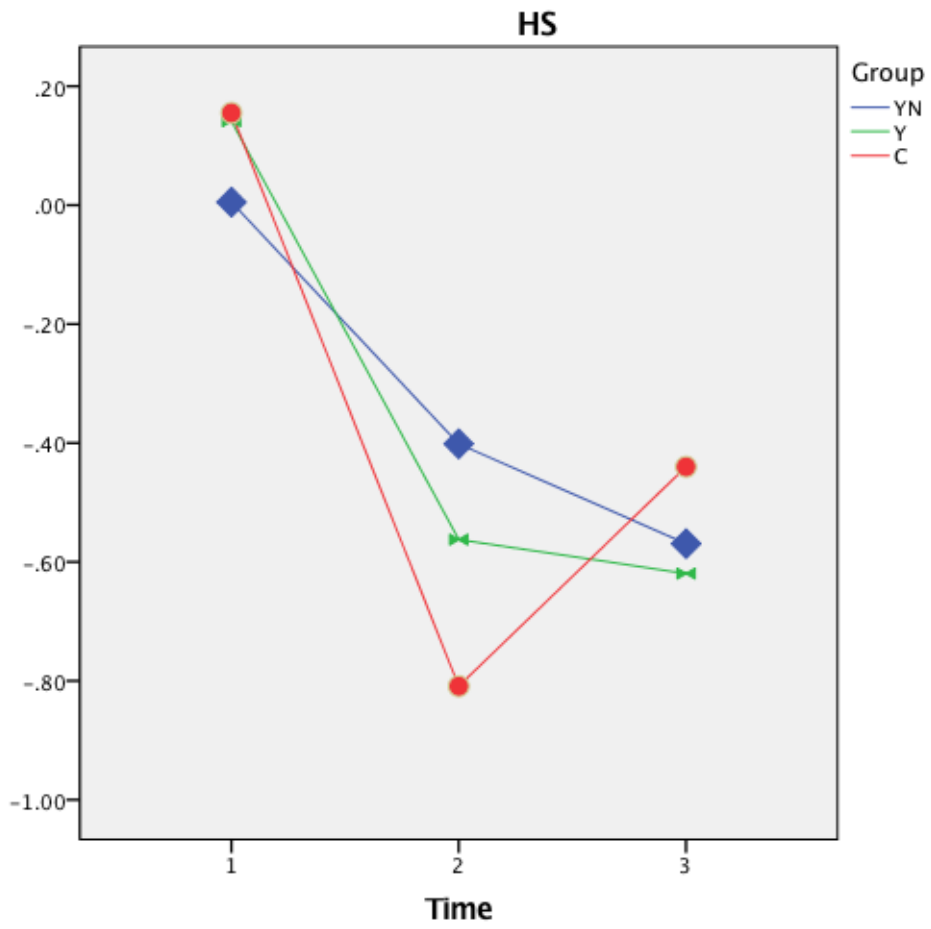
There were no significant differences in HS score at the three time points.

(iii) *Yoga* group compared to control group

There was a significant difference in HS score after intervention ( $p=0.002$ ) and follow-up ( $p=0.010$ ).

#### **Within-group comparison**

The results in three groups showed significant decreases in HS score at the three time points of baseline ( $p<0.001$ ), after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction.



**Figure 10: Changes in the Health Status scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.1.3 Energy Reserve (ER)**

As shown in Figure 11, there was a statistically significant difference at the three time points for ER score,  $F(2,246)=250.29$ ,  $p<0.001$ . There was a significant difference in group and time interaction for ER score,  $F(4,246)=14.74$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in ER score after intervention ( $p<0.001$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

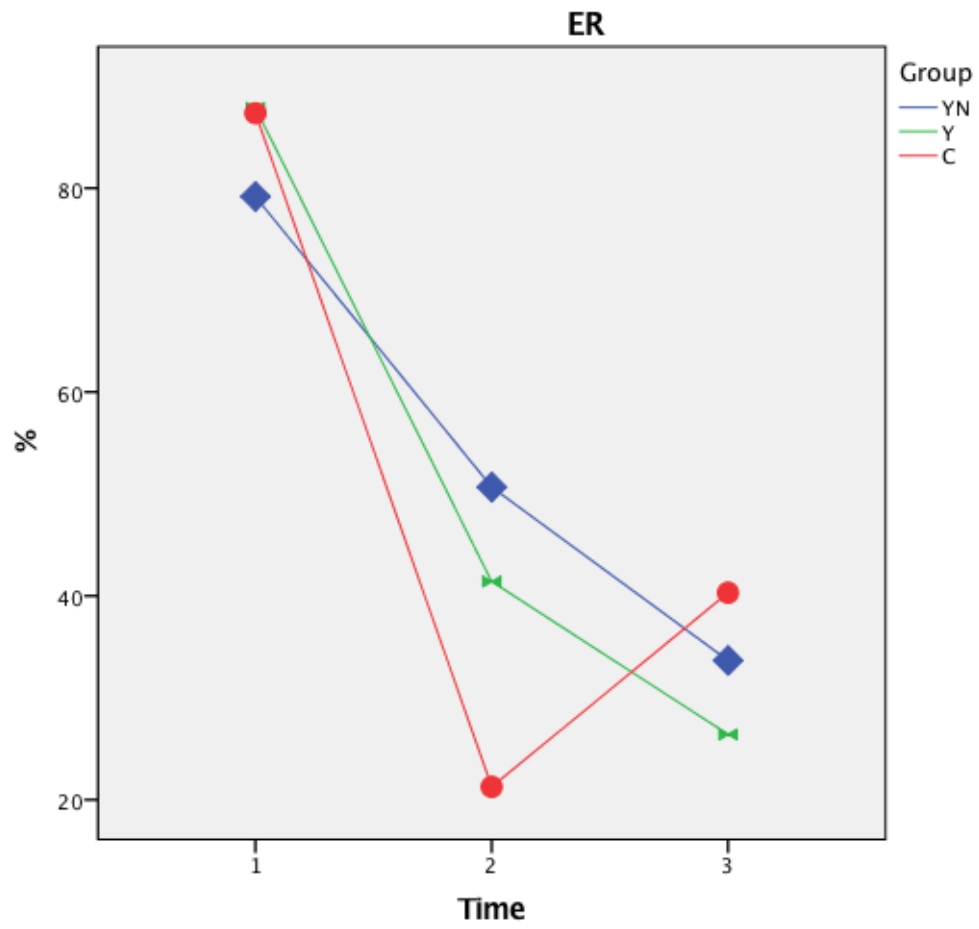
There were no significant differences in ER score at the three time points.

(iii) *Yoga* group compared to control group

There was a significant difference in ER score after intervention ( $p=0.002$ ) and follow-up ( $p=0.004$ ).

#### **Within-group comparison**

The results in three groups showed significant decreases in ER score after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction.



**Figure 11: Changes in the energy reserve scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

#### **6.2.1.4 Heart Energy**

As shown in Figure 12, there was a statistically significant difference at the three time points for heart energy score,  $F(2,246)=119.91$ ,  $p<0.001$ . There was a significant difference in group and time interaction for heart energy score,  $F(4,246)=12.68$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in heart energy score after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

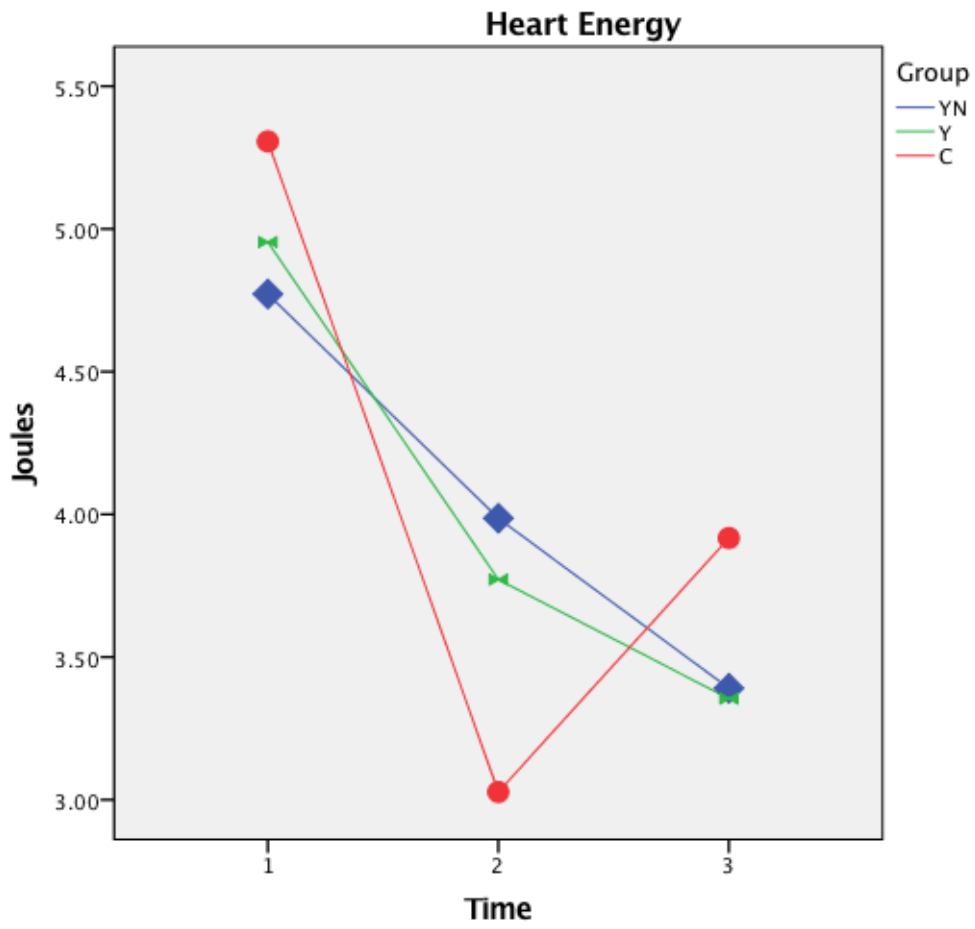
There were no significant differences in heart energy score at the three time points.

(iii) *Yoga* group compared to control group

There was a significant difference in heart score at time points after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ).

#### **Within-group comparison**

The results in YN group showed significant decreases in heart energy score after intervention ( $p=0.002$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction. The heart energy score significantly decreased in *yoga* and control group after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline.



**Figure 12: Changes in the heart energy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.1.5 Lung Energy**

As shown in Figure 13, there was a statistically significant difference at the three time points for lung energy score,  $F(2,246)=143.41$ ,  $p<0.001$ . There was a significant difference in group and time interaction for lung energy score,  $F(4,246)=11.00$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in lung energy score at time points after intervention ( $p<0.001$ ) and follow-up ( $p=0.040$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

There were no significant differences in lung energy score at the three time points.

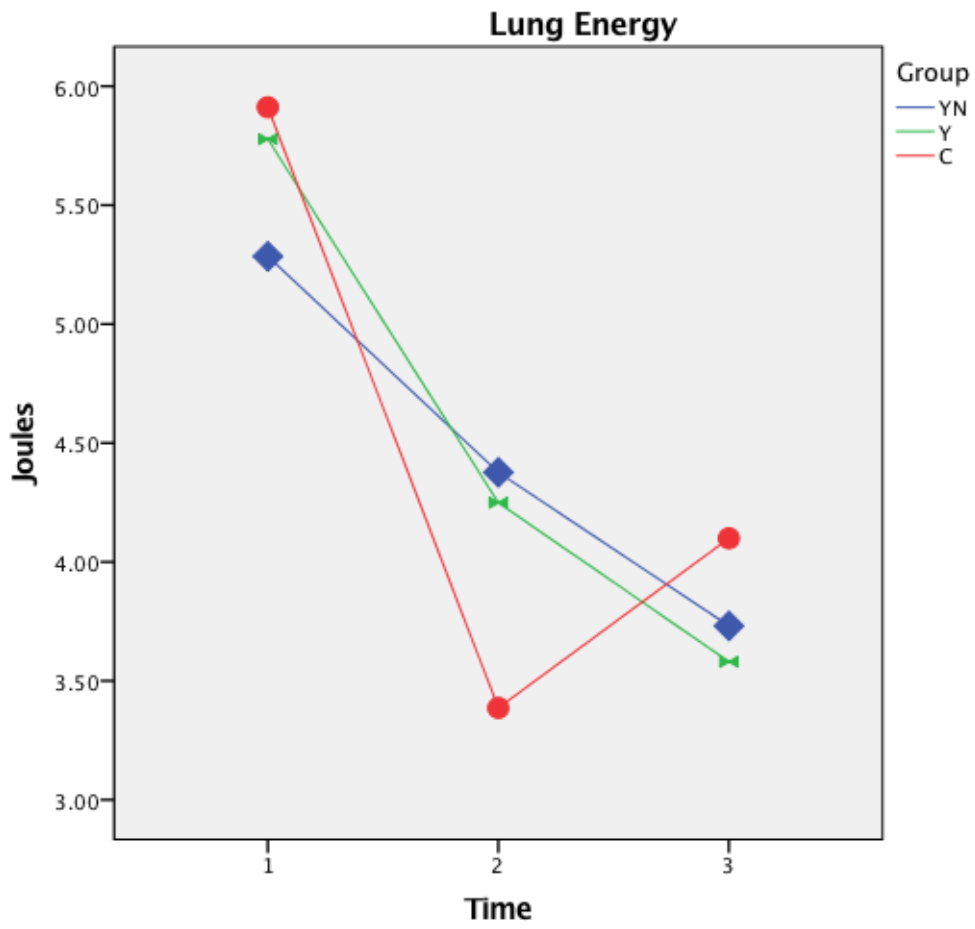
(iii) *Yoga* group compared to control group

There was a significant difference in lung energy score at time points after intervention ( $p<0.001$ ) and follow-up ( $p=0.002$ ).

#### **Within-group comparison**

The results in three groups showed significant decreases in lung energy score after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction.





**Figure 13: Changes in the lung energy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.1.6 Liver Energy**

As shown in Figure 14, there was a statistically significant difference at the three time points for liver energy score,  $F(2,246)=84.27, p<0.001$ . There was a significant difference in group and time interaction for liver energy score,  $F(4,246)=7.74, p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in liver energy score after intervention ( $p<0.001$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

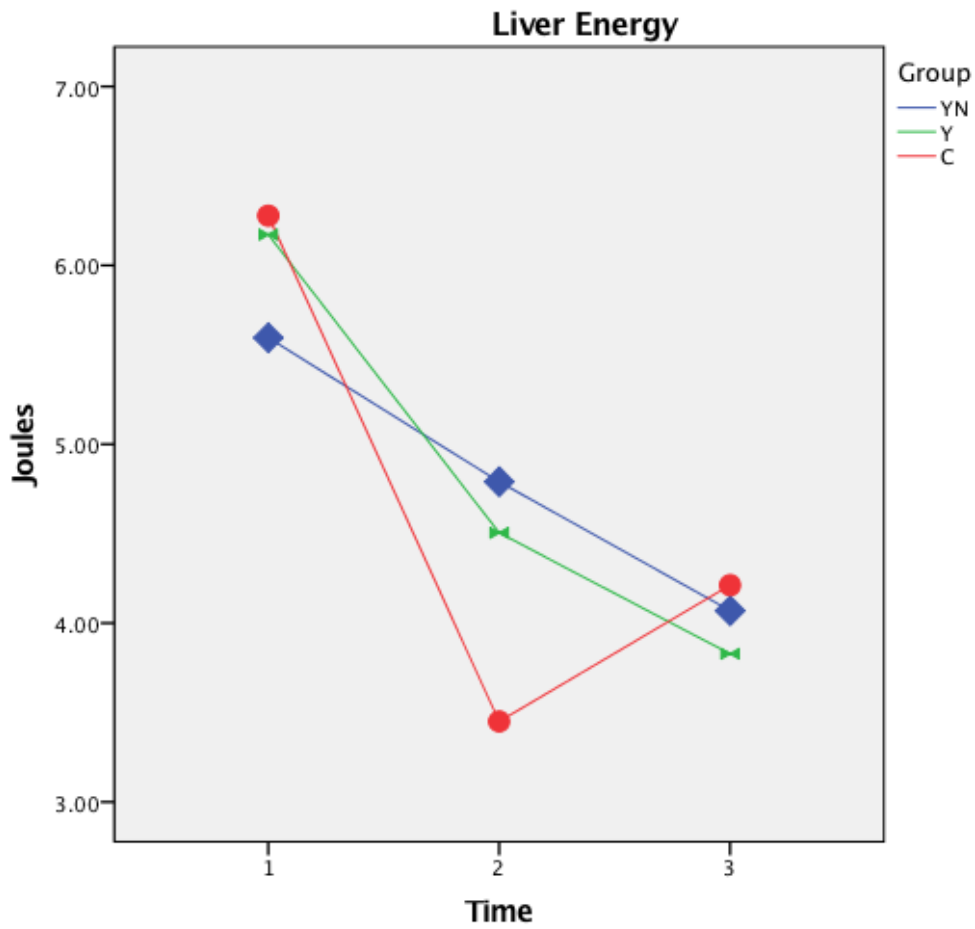
There were no significant differences in liver energy score at the three time points.

(iii) *Yoga* group compared to control group

There was a significant difference in liver energy score after intervention ( $p<0.001$ ).

#### **Within-group comparison**

The results in YN group showed significant decreases in liver energy score at the time points after intervention ( $p=0.040$ ) and follow-up ( $p<0.001$ ), after Bonferroni correction. The liver energy score significantly decreased ( $p<0.001$ ) in *yoga* and control group after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline.



**Figure 14: Changes in the liver energy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.1.7 Spleen Energy**

As shown in Figure 15, there was a statistically significant difference at the three time points for spleen energy score,  $F(2,246)=67.74$ ,  $p<0.001$ . There was a significant difference in group and time interaction for spleen energy score,  $F(4,246)=8.57$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in spleen energy score at time points of baseline ( $p=0.005$ ) and after intervention ( $p<0.001$ ), after Bonferroni correction. There was a significant difference between groups (YN & Control) on the post spleen energy score (after intervention) after controlling baseline spleen energy score,  $F(2, 122)=7.59$ ,  $p<0.001$ .

(ii) *Yama-niyama* group compared to *yoga* group

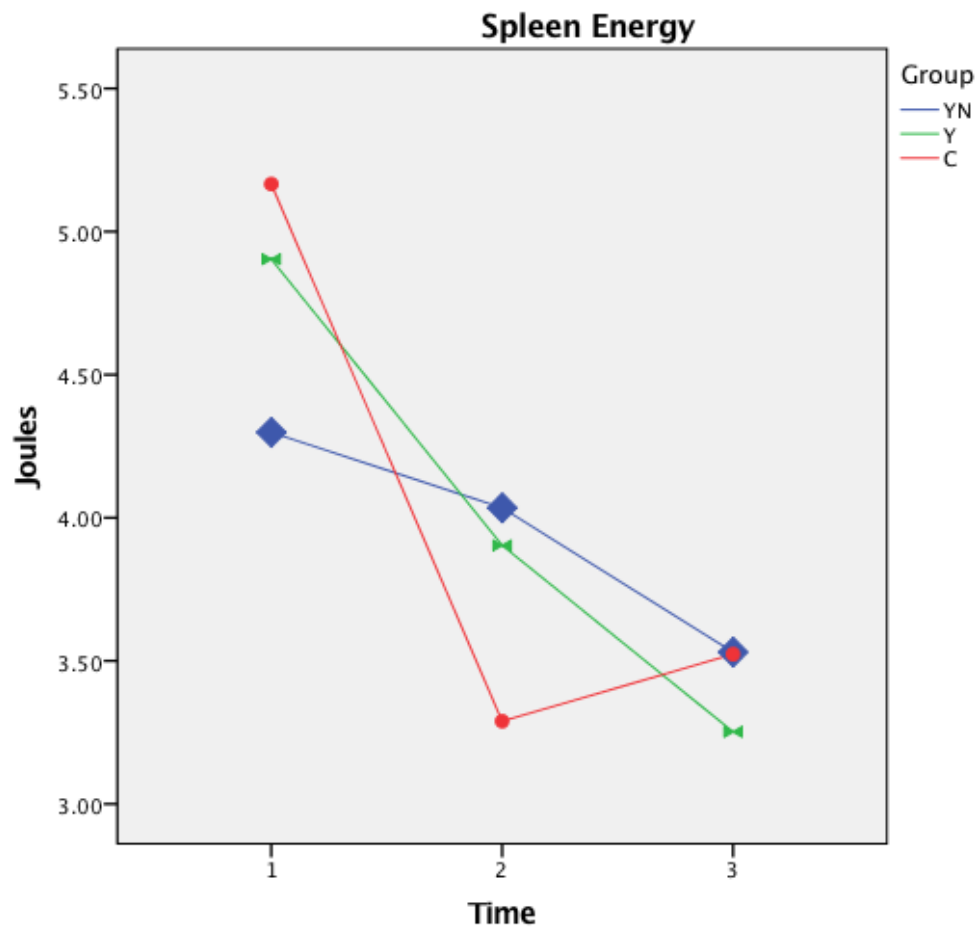
There were no significant differences in spleen energy score at the three time points.

(ii) *Yoga* group compared to control group

There was a significant difference in spleen energy score after intervention ( $p=0.010$ ).

#### **Within-group comparison**

The results in YN group showed significant decreases in spleen energy score at the time points of follow-up ( $p=0.002$ ) compared to baseline, after Bonferroni correction. The spleen energy score significantly decreased in *yoga* and control group after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline.



**Figure 15: Changes in the spleen energy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.1.8 Kidney Energy**

As shown in Figure 16, there was a statistically significant difference at the three time points for kidney energy score,  $F(2,246)=103.26$ ,  $p<0.001$ . There was a significant difference in group and time interaction for kidney energy score,  $F(4,246)=11.41$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in kidney energy score after intervention ( $p<0.001$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

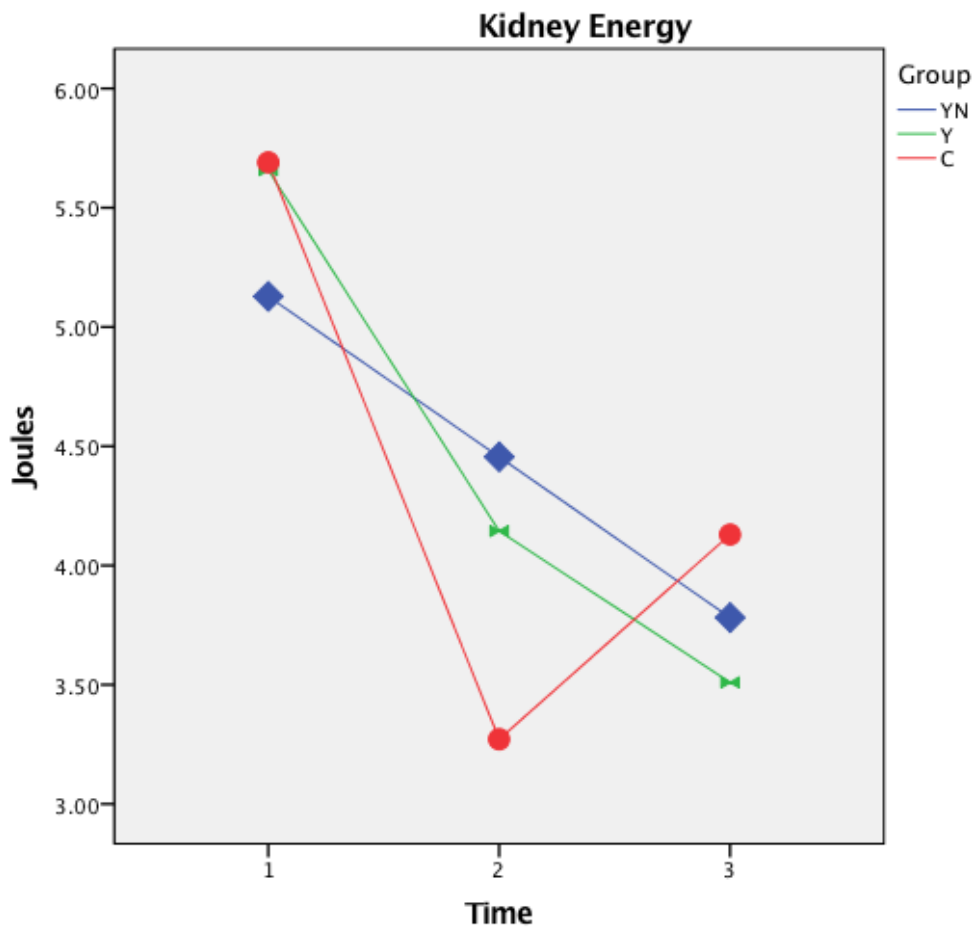
There were no significant differences in kidney energy score at the three time points.

(ii) *Yoga* group compared to control group

There was a significant difference in kidney energy score after intervention ( $p<0.001$ ) and follow-up ( $p=0.002$ ).

#### **Within-group comparison**

The results in YN group showed significant decreases in kidney energy score after intervention ( $p=0.028$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction. The kidney energy score was significantly decreased in *yoga* and control group after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline.



**Figure 16: Changes in the kidney energy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

## **6.2.2 ENTROPY LEVEL**

### **6.2.2.1 Heart Entropy**

As shown in Figure 17, there was a statistically significant difference at the three time points for heart entropy score,  $F(2,246)=13.50$ ,  $p<0.001$ . There was no significant difference in group and time interaction for heart entropy score,  $F(4,246)=0.51$ ,  $p=0.721$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was no significant difference in heart entropy score, after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

There were no significant differences in heart entropy score at the three time points.

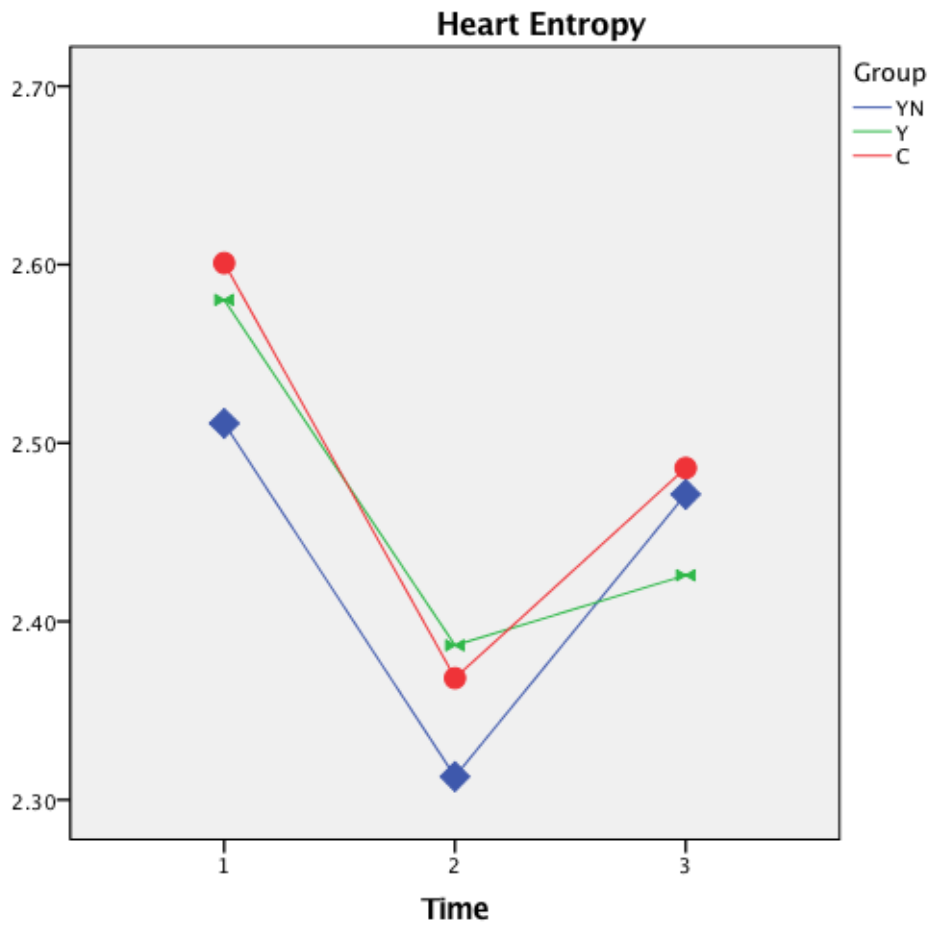
(ii) *Yoga* group compared to control group

No significant difference in heart entropy score in *yoga* group compared to control group.

#### **Within-group comparison**

The results in YN group showed significant decrease in heart entropy after intervention ( $p=0.030$ ) compared to baseline, after Bonferroni correction. The heart entropy significantly decreased in *yoga* ( $p=0.032$ ) and control group ( $p=0.004$ ) after intervention compared to baseline.





**Figure 17: Changes in the heart entropy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.2.2 Lung Entropy**

As shown in Figure 18, there was a statistically significant difference at the three time points for lung entropy score,  $F(2,246)=33.02$ ,  $p<0.001$ . There was a significant difference in group and time interaction for lung entropy score,  $F(4,246)=3.86$ ,  $p=0.005$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was no significant difference in lung entropy score, after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

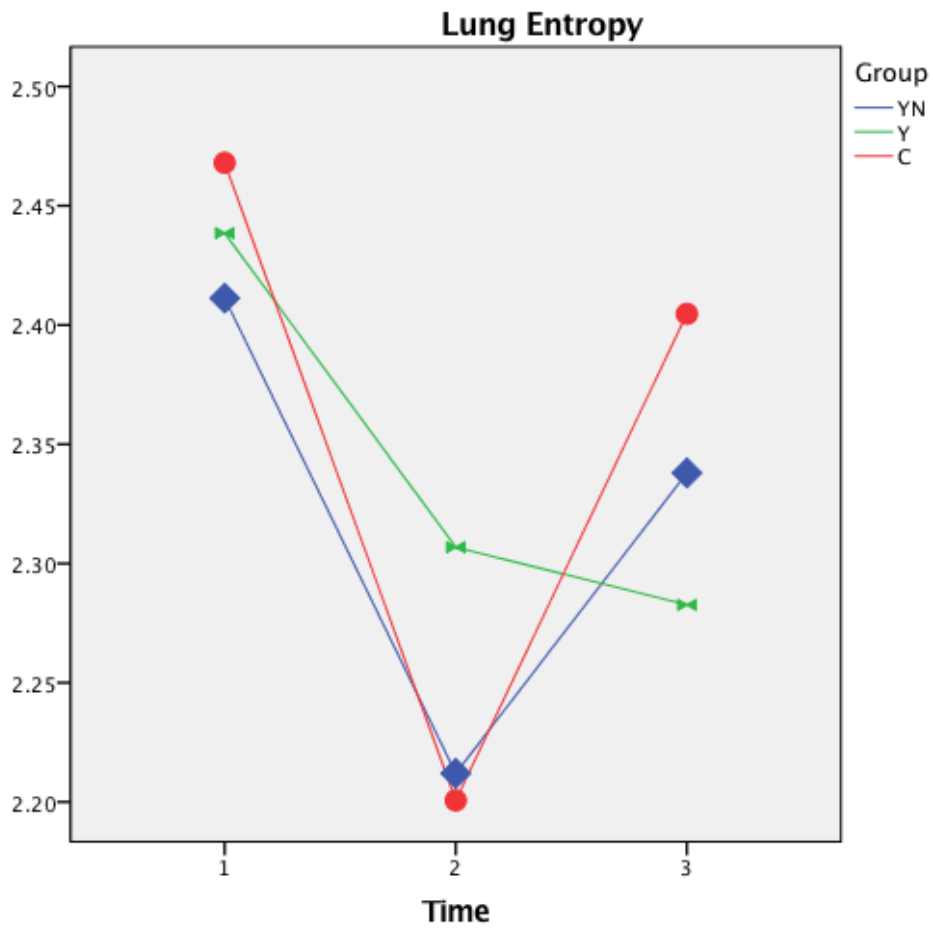
There were no significant differences in lung entropy score at the three time points.

(ii) *Yoga* group compared to control group

No significant difference in lung entropy score in *yoga* group compared to control group.

#### **Within-group comparison**

The results in YN group and control group showed significant decrease in lung entropy after intervention ( $p<0.001$ ) compared to baseline, after Bonferroni correction. The lung entropy score significantly decreased in *yoga* group after intervention ( $p=0.018$ ) and follow-up ( $p<0.001$ ) compared to baseline.



**Figure 18: Changes in the lung entropy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.2.3 Liver Entropy**

As shown in Figure 19, there was a statistically significant difference at the three time points for liver entropy score,  $F(2, 246)=11.30, p<0.001$ . There was no significant difference in group and time interaction for liver entropy score,  $F(4,246)=2.19, p=0.071$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in liver entropy score at the time points of follow-up ( $p=0.038$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

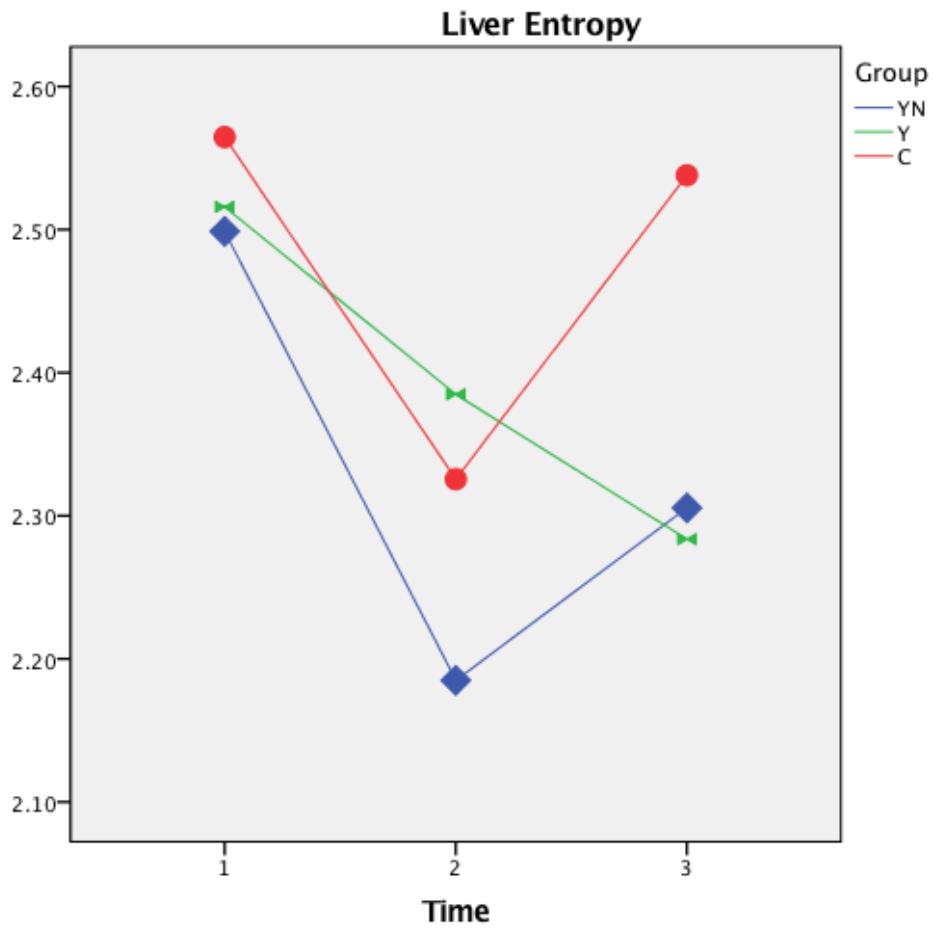
There were no significant differences in liver entropy score at the three time points.

(iii) *Yoga* group compared to control group

There was a significant difference in liver entropy score at the time points of follow-up ( $p=0.018$ ).

#### **Within-group comparison**

The liver entropy score significantly decreased in YN group ( $p=0.002$ ) and control group ( $p=0.016$ ) after intervention compared to baseline, after Bonferroni correction. The results in *yoga* group showed a significant decrease in liver entropy at follow-up ( $p=0.031$ ) compared to baseline.



**Figure 19: Changes in the liver entropy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

#### **6.2.2.4 Spleen Entropy**

As shown in Figure 20, there was a statistically significant difference at the three time points for spleen entropy score,  $F(2,246)=26.38, p<0.001$ . There was no significant difference in group and time interaction for spleen entropy score,  $F(4,246)=1.45, p=0.218$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was no significant difference in spleen entropy score at all three time points, after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

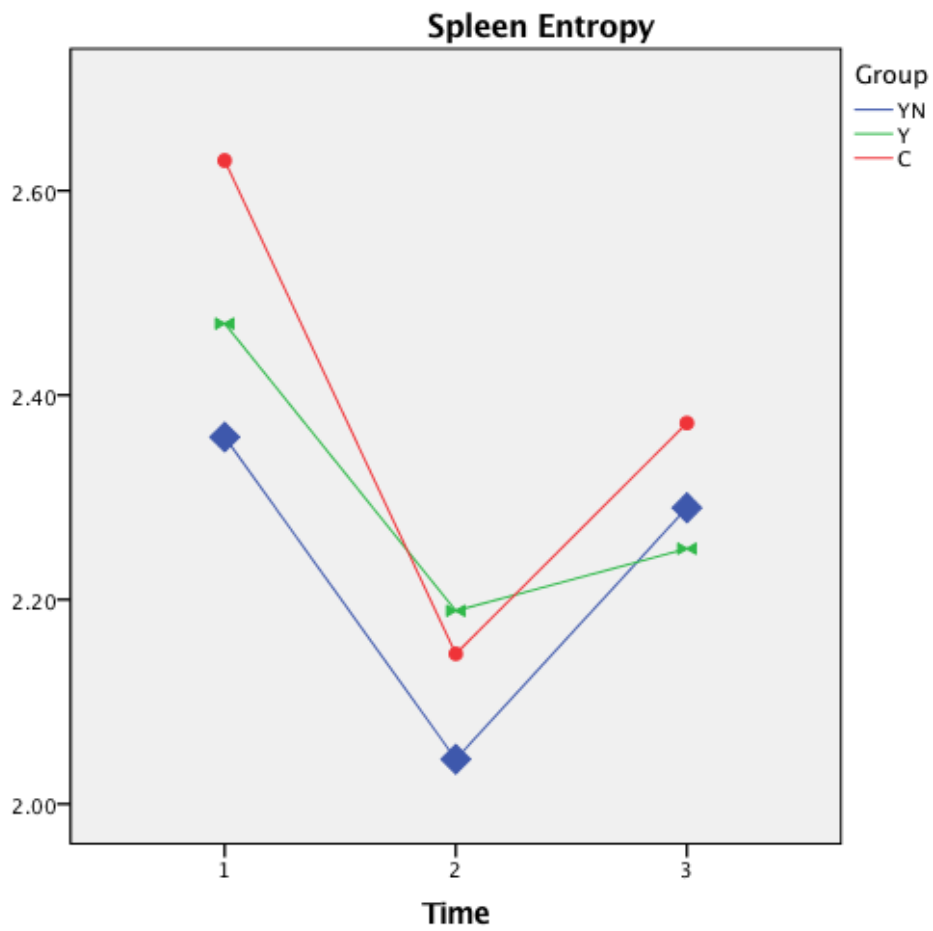
There were no significant differences in spleen entropy score at all three time points.

(iii) *Yoga* group compared to control group

No significant differences in spleen entropy score at all three time points were observed.

#### **Within-group comparison**

The results in YN group ( $p=0.003$ ) and *yoga* group ( $p=0.008$ ) showed a significant decrease after intervention compared to baseline, after Bonferroni correction. The results in control group showed significant decreases in spleen entropy score after intervention ( $p<0.001$ ) and follow-up ( $p=0.013$ ) compared to baseline.



**Figure 20: Changes in the spleen entropy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.2.2.5 Kidney Entropy**

As shown in Figure 21, there was a statistically significant difference at the three time points for kidney entropy score,  $F(2,246)=28.94$ ,  $p<0.001$ . There was no significant difference in group and time interaction for kidney entropy score,  $F(4, 246)=2.037$ ,  $p=0.090$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there were no significant differences in kidney entropy score at all three time points, after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

There were no significant differences in kidney entropy score at all three time points.

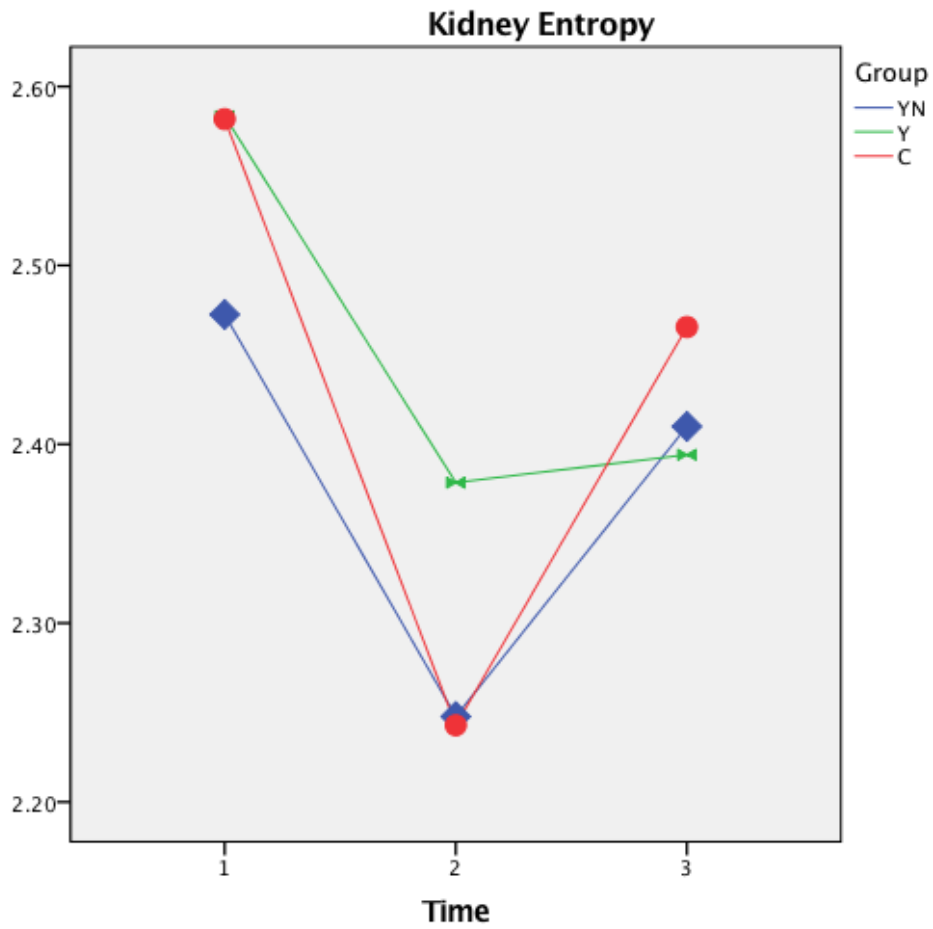
(iii) *Yoga* group compared to control group

There was a significant difference in kidney entropy score after intervention ( $p=0.037$ ).

#### **Within-group comparison**

The results in YN group ( $p<0.001$ ) and control group ( $p<0.001$ ) showed a significant decrease after intervention compared to baseline, after Bonferroni correction. The results in *yoga* group showed a significant decrease in kidney entropy score after intervention ( $p<0.001$ ) and follow-up ( $p=0.007$ ) compared to baseline.





**Figure 21: Changes in the kidney entropy scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### 6.3 PSYCHOSPIRITUAL VARIABLES

Repeated measures ANOVA revealed statistically significant differences of time points and the interaction between time points and groups are shown in Table 11. The results of psychospiritual factors (mean±SD) including Emotional Pressure, *sattva*, *rajas*, *tamas*, and *cakrās* are shown in Table 12–14. The effect size between groups after intervention are shown in Table 15.

**Table 11: Summary of repeated measures ANOVA showing the results in psychospiritual factors.**

| Variables   | Factors            | F Value | Level of significance | $\eta_p^2$ |
|---|--------------------|---------|-----------------------|------------|
| <i>Sattva</i>                                       | Time point         | 18.68   | <0.001                | 0.13       |
|   | Group x Time point | 13.96   | <0.001                | 0.19       |
| <i>Rajas</i>  | Time point         | 14.84   | <0.001                | 0.11       |
|   | Group x Time point | 6.12    | <0.001                | 0.09       |
| <i>Tamas</i>  | Time point         | 7.61    | <0.001                | 0.06       |
|   | Group x Time point | 9.01    | <0.001                | 0.13       |
| <i>Cakrās</i>                                       | Time point         | 7.09    | <0.001                | 0.06       |
|   | Group x Time point | 2.57    | 0.038                 | 0.04       |
| Emotional pressure                                  | Time point         | 2.68    | 0.071                 | 0.02       |
|   | Group x Time point | 5.87    | <0.001                | 0.09       |
| Note: $\eta_p^2$ , partial eta square – effect size |                    |         |                       |            |

**Table 12: Comparison between/within *yama-niyama* group and control group for psychospiritual factors at the baseline, after intervention and one month follow-up.**

| variables   | Group | Baseline                 | After intervention           | Follow-up                  |
|---|-------|--------------------------|------------------------------|----------------------------|
| <i>Sattva</i>   | YN    | 37.45±3.84 <sup>§§</sup> | 45.03±5.61 <sup>***§§§</sup> | 45.40±6.67 <sup>***§</sup> |
|   | C     | 40.69±4.83               | 38.48±5.66                   | 41.49±6.84                 |
| <i>Rajas</i>  | YN    | 33.11±2.90               | 31.29±2.31 <sup>***§§</sup>  | 30.64±3.77 <sup>***</sup>  |
|   | C     | 32.61±3.16               | 32.92±2.16                   | 31.81±3.61                 |
| <i>Tamas</i>  | YN    | 28.45±3.10               | 23.75±4.18 <sup>***§§§</sup> | 24.09±4.37 <sup>***§</sup> |
|   | C     | 26.70±4.03               | 28.59±4.60                   | 27.01±5.30                 |
| <i>Cakrās</i>   | YN    | 81.15±7.48               | 88.75±5.34 <sup>***§§</sup>  | 85.30±5.34                 |
|   | C     | 81.40±7.22               | 82.93±9.78                   | 83.20±9.44                 |
| Emotional pressure  | YN    | 3.01±0.55                | 2.62±0.21 <sup>***§§§</sup>  | 2.69±0.29 <sup>***</sup>   |
|   | C     | 2.79±0.49                | 2.95±0.49                    | 2.86±0.41                  |
| <p>Note: Data were analysed using repeated measures of ANOVA followed by Post hoc analysis with Bonferroni adjustment. Values are group mean ± S.D.; *: Represents within group changes when compared to baseline; *<i>p</i> &lt; 0.05; **<i>p</i> &lt; 0.01; ***<i>p</i> &lt; 0.001; §: Represents between group differences when compared to Control group; § <i>p</i> &lt; 0.05; §§ <i>p</i> &lt; 0.01; §§§ <i>p</i> &lt; 0.001; YN=<i>Yama-niyama</i>; C=Control.</p> |       |                          |                              |                            |

**Table 13: Comparison between/within *yama-niyama* group and *yoga* group for psychospiritual factors at the baseline, after intervention and one month follow-up.**

| variables   | Group | Baseline   | After intervention           | Follow-up                   |
|---|-------|------------|------------------------------|-----------------------------|
| <i>Sattva</i>   | YN    | 37.45±3.84 | 45.03±5.61 <sup>***§§§</sup> | 45.40±6.67 <sup>***§§</sup> |
|   | Y     | 39.21±5.48 | 40.48±5.56                   | 40.92±6.22                  |
| <i>Rajas</i>  | YN    | 33.11±2.90 | 31.29±2.31 <sup>***§§§</sup> | 30.64±3.77 <sup>***</sup>   |
|   | Y     | 33.18±2.79 | 33.22±2.23                   | 32.41±2.60                  |
| <i>Tamas</i>  | YN    | 28.45±3.10 | 23.75±4.18 <sup>***§</sup>   | 24.09±4.37 <sup>***</sup>   |
|   | Y     | 27.76±3.90 | 26.25±4.73                   | 26.67±5.29                  |
| <i>Cakrās</i>   | YN    | 81.15±7.48 | 88.75±5.34 <sup>***§§</sup>  | 85.30±5.34                  |
|   | Y     | 81.49±7.31 | 83.15±7.72                   | 80.80±10.68                 |
| Emotional pressure  | YN    | 3.01±0.55  | 2.62±0.21 <sup>***</sup>     | 2.69±0.29 <sup>***</sup>    |
|   | Y     | 2.82±0.40  | 2.75±0.45                    | 2.81±0.30                   |
| <p>Note: Data were analysed using repeated measures of ANOVA followed by Post hoc analysis with Bonferroni adjustment. Values are group mean ± S.D.; *: Represents within group changes when compared to baseline; *<i>p</i> &lt; 0.05; **<i>p</i> &lt; 0.01; ***<i>p</i> &lt; 0.001; §: Represents between group differences when compared to Control group; § <i>p</i> &lt; 0.05; §§ <i>p</i> &lt; 0.01; §§§ <i>p</i> &lt; 0.001; YN=<i>Yama-niyama</i>; Y=<i>Yoga</i>.</p> |       |            |                              |                             |

**Table 14: Comparison between/within yoga group and control group for psychospiritual factors at the baseline, after intervention and one month follow-up.**

| variables          | Group | Baseline   | After intervention | Follow-up   |
|--------------------|-------|------------|--------------------|-------------|
| <i>Sattva</i>      | Y     | 39.21±5.48 | 40.48±5.56         | 40.92±6.22  |
|                    | C     | 40.69±4.83 | 38.48±5.66         | 41.49±6.84  |
| <i>Rajas</i>       | Y     | 33.18±2.79 | 33.22±2.23         | 32.41±2.60  |
|                    | C     | 32.61±3.16 | 32.92±2.16         | 31.81±3.61  |
| <i>Tamas</i>       | Y     | 27.76±3.90 | 26.25±4.73         | 26.67±5.29  |
|                    | C     | 26.70±4.03 | 28.59±4.60         | 27.01±5.30  |
| <i>Cakrās</i>      | Y     | 81.49±7.31 | 83.15±7.72         | 80.80±10.68 |
|                    | C     | 81.40±7.22 | 82.93±9.78         | 83.20±9.44  |
| Emotional pressure | Y     | 2.82±0.40  | 2.75±0.45          | 2.81±0.30   |
|                    | C     | 2.79±0.49  | 2.95±0.49          | 2.86±0.41   |

Note: Data were analysed using repeated measures of ANOVA followed by Post hoc analysis with Bonferroni adjustment. Values are group mean ± S.D.; \*: Represents within group changes when compared to baseline; \**p* < 0.05; \*\**p* < 0.01; \*\*\**p* < 0.001; §: Represents between group differences when compared to Control group; § *p* < 0.05; §§ *p* < 0.01; §§§ *p* < 0.001; Y=Yoga; C=Control.

**Table 15: Between group comparisons effect size.**

| <i>Yama-niyama</i> group |       |      | Control group      |       |      | Sig.     | Effect size |
|--------------------------|-------|------|--------------------|-------|------|----------|-------------|
| Variables                | Mean  | SD   | Variables          | Mean  | SD   | <i>p</i> | <i>d</i>    |
| <i>Sattva</i>            | 45.03 | 5.61 | <i>Sattva</i>      | 38.48 | 5.66 | <0.001   | 1.16        |
| <i>Rajas</i>             | 31.29 | 2.31 | <i>Rajas</i>       | 32.92 | 2.16 | 0.003    | 0.73        |
| <i>Tamas</i>             | 23.75 | 4.18 | <i>Tamas</i>       | 28.59 | 4.6  | <0.001   | 1.10        |
| <i>Cakrās</i>            | 88.75 | 5.34 | <i>Cakrās</i>      | 82.93 | 9.78 | 0.003    | 0.74        |
| Emotional pressure       | 2.62  | 0.21 | Emotional pressure | 2.95  | 0.49 | <0.001   | 0.88        |

| <i>Yama-niyama</i> group |       |      | <i>Yoga</i> group |       |      | Sig.     | Effect size |
|--------------------------|-------|------|-------------------|-------|------|----------|-------------|
| Variables                | Mean  | SD   | Variables         | Mean  | SD   | <i>p</i> | <i>d</i>    |
| <i>Sattva</i>            | 45.03 | 5.61 | <i>Sattva</i>     | 40.48 | 5.56 | <0.001   | 0.81        |
| <i>Rajas</i>             | 31.29 | 2.31 | <i>Rajas</i>      | 33.22 | 2.23 | <0.001   | 0.85        |
| <i>Tamas</i>             | 23.75 | 4.18 | <i>Tamas</i>      | 26.25 | 4.73 | 0.043    | 0.56        |
| <i>Cakrās</i>            | 88.75 | 5.34 | <i>Cakrās</i>     | 83.15 | 7.72 | 0.005    | 0.84        |

**Note:** *p*: Significance difference after intervention; *d*: effect size after intervention.

### **6.3.1 PSYCHOLOGICAL VARIABLE**

#### **6.3.1.1 Emotional pressure (EP)**

As shown in Figure 22, there was no statistically significant difference at the three time points for EP score,  $F(2,246)=2.68$ ,  $p=0.071$ . There was a significant difference in group and time interaction for EP score,  $F(4, 246)=5.87$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in EP score after ( $p<0.001$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

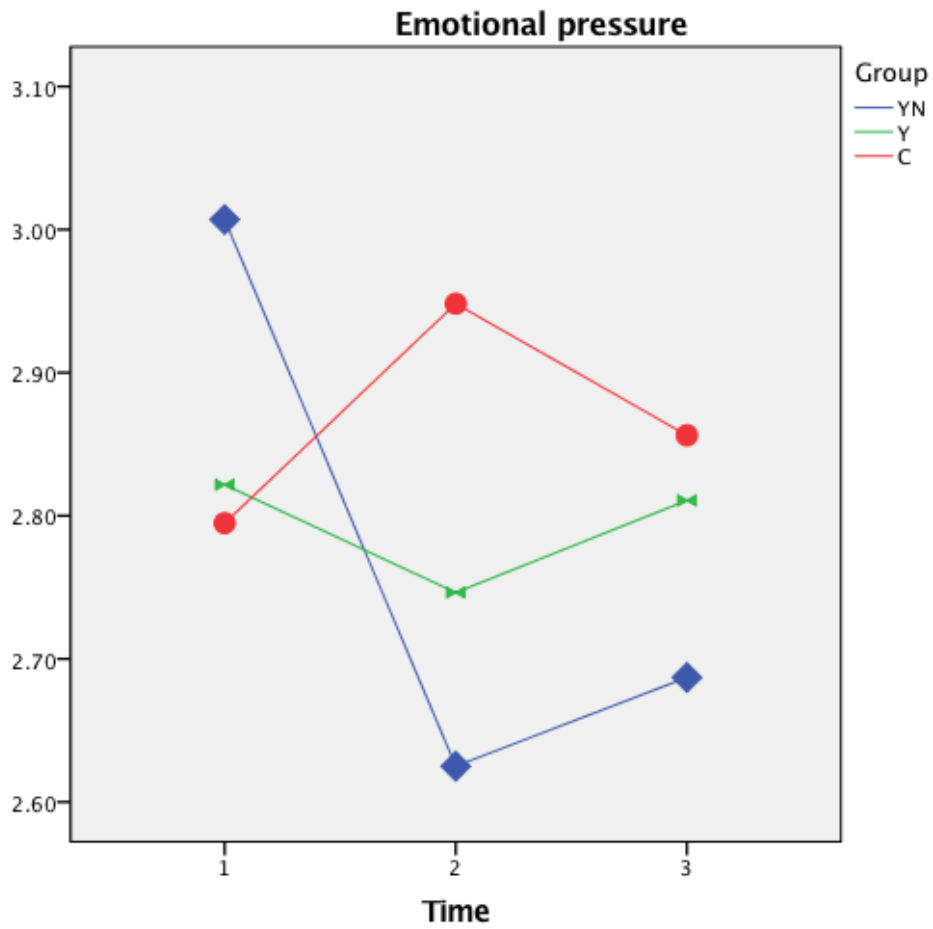
There were no significant differences in EP score at all three time points.

(iii) *Yoga* group compared to control group

There were no significant differences in EP score at all three time points.

#### **Within-group comparison**

The results in YN group showed significant decreases in EP score after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction. No significant changes in *yoga* group and control group were observed.



**Figure 22: Changes in the emotional pressure scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

## 6.3.2 PSYCHOSPIRITUAL VARIABLE

### 6.3.2.1 *Sattva*

As shown in Figure 23, there was a statistically significant difference at all time points for *sattva* score,  $F(2,246)=18.68$ ,  $p<0.001$ . There was a significant difference in group and time interaction for *sattva* score,  $F(4,246)=13.96$ ,  $p<0.001$ .

#### Between-group comparison

(i) *Yama-niyama* group compared to control group

Between-group comparison showed significant differences in *sattva* score at baseline ( $p=0.007$ ), after intervention ( $p<0.001$ ) and follow-up ( $p=0.020$ ), after Bonferroni correction. There was a statistically significant difference between groups (YN & Control) on the post *sattva* score (after intervention and follow-up) after controlling baseline *sattva* score,  $F(2,122)=20.55$ ,  $p<0.001$  and  $F(2,122)=7.95$ ,  $p<0.001$ .

(ii) *Yama-niyama* group compared to *yoga* group

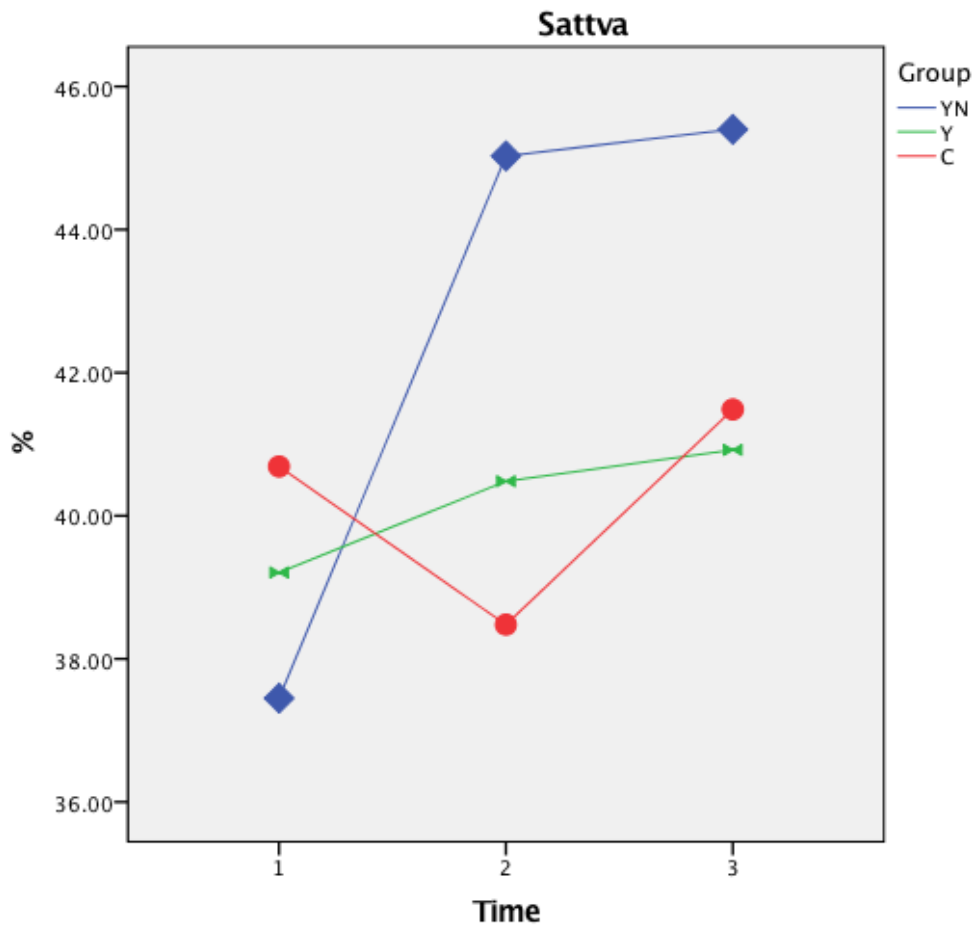
There were significant differences in *sattva* score after intervention ( $p<0.001$ ) and follow-up ( $p=0.007$ ).

(ii) *Yoga* group compared to control group

There were no significant differences in *sattva* score at all three time points.

#### Within-group comparison

The results in YN group showed significant increases in *sattva* after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction. *Sattva* scores were observed to have no significant changes in *yoga* and control group at all time points compared to baseline.



**Figure 23: Changes in the *sattva* scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.



### **6.3.2.2 Rajas**

As shown in Figure 24, there was a statistically significant difference at all time points for *rajas* score,  $F(2,246)=14.84, p<0.001$ . There was a significant difference in group and time interaction for *rajas* score,  $F(4, 246)=6.12, p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

Between-group comparison showed significant differences in *rajas* score after intervention ( $p=0.003$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

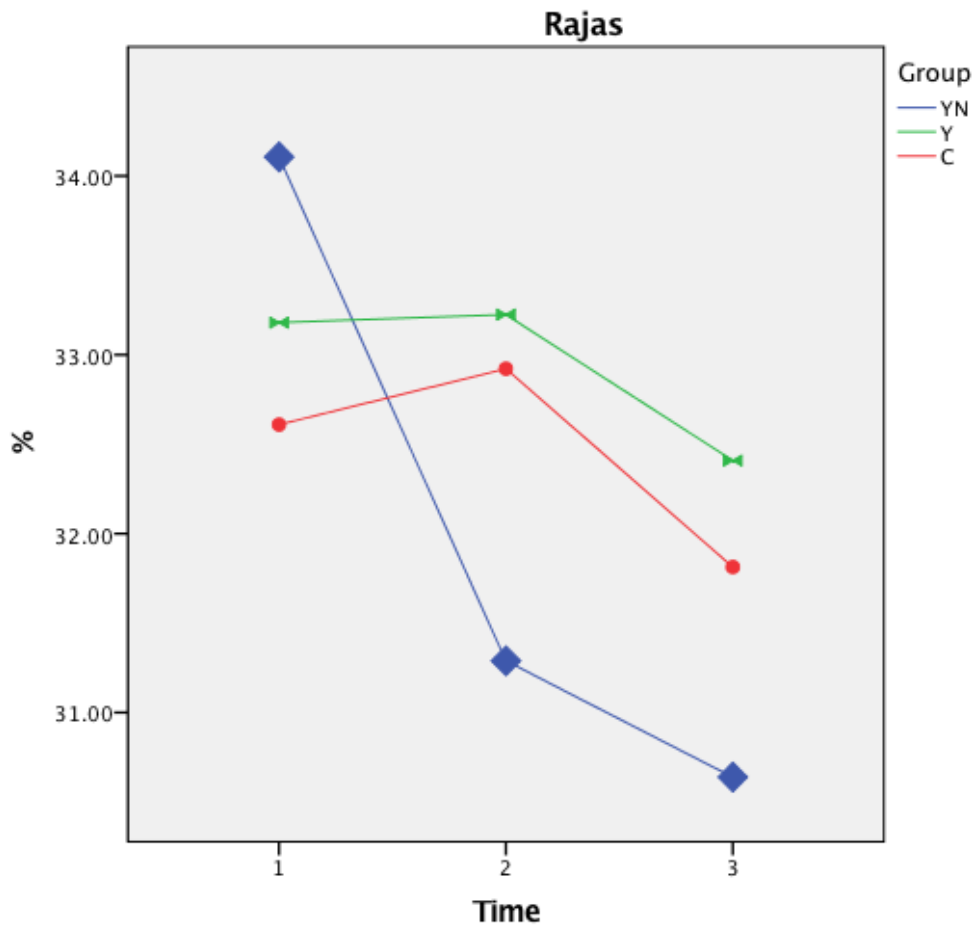
There was a significant difference in *rajas* score after intervention ( $p<0.001$ ).

(iii) *Yoga* group compared to control group

There were no significant differences in *rajas* score at all three time points.

#### **Within-group comparison**

The results in YN group showed significant decreases in *rajas* score after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction. No significant changes in *yoga* and control group were observed.



**Figure 24: Changes in the *rajas* scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

### **6.3.2.3 Tamas**

As shown in Figure 25, there was a statistically significant difference at all time points for *tamas* score,  $F(2,246)=7.61$ ,  $p<0.001$ . There was a significant difference in group and time interaction for *tamas* score,  $F(4, 246)=9.01$ ,  $p<0.001$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

Between-group comparison showed a significant difference in *tamas* score after intervention ( $p<0.001$ ) and follow-up ( $p=0.026$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

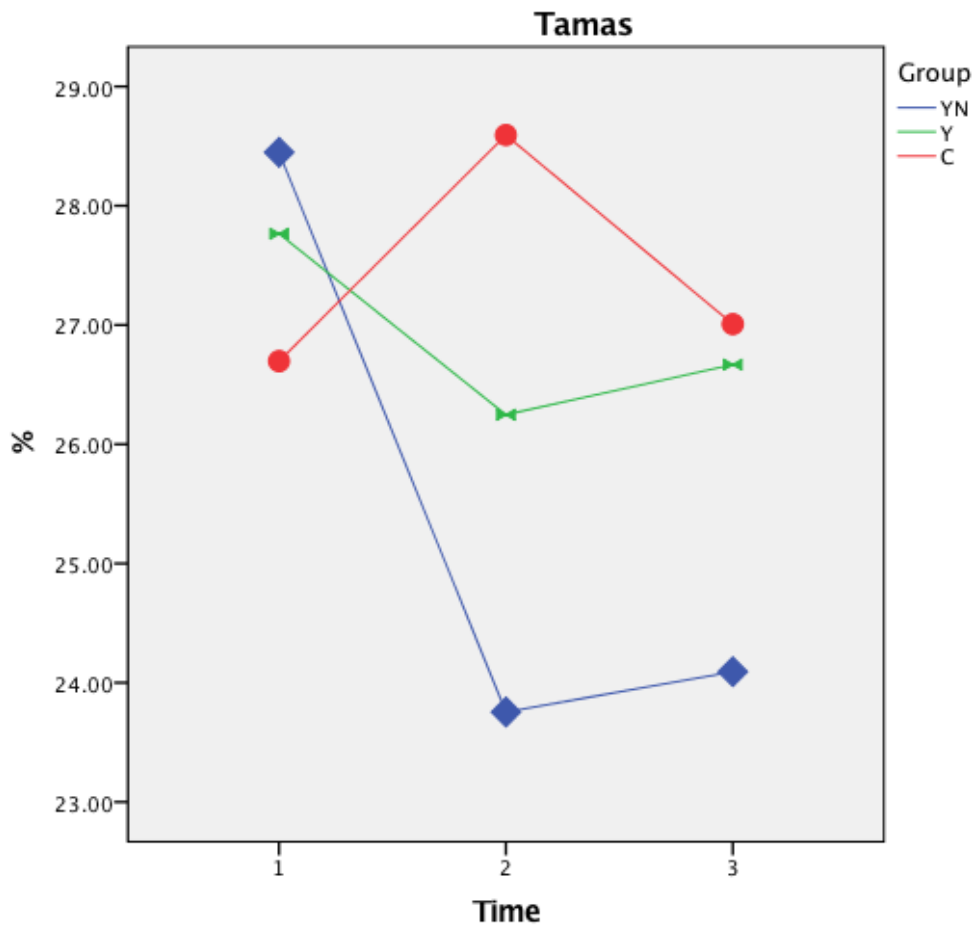
There was a significant difference in *tamas* score after intervention ( $p=0.043$ ).

(iii) *Yoga* group compared to control group

There were no significant differences in *tamas* score at all three time points.

#### **Within-group comparison**

The results in YN group showed significant decreases in *tamas* score after intervention ( $p<0.001$ ) and follow-up ( $p<0.001$ ) compared to baseline, after Bonferroni correction. No significant changes were observed in *yoga* and control group compared to baseline.



**Figure 25: Changes in the *tamas* scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.

#### **6.3.2.4 Cakra Alignment**

As shown in Figure 26, there was a statistically significant difference at all time points for *cakra* score,  $F(2,246)=7.09, p<0.001$ . There was no significant difference in group and time interaction for *cakra* score,  $F(4, 246)=2.57, p=0.038$ .

#### **Between-group comparison**

(i) *Yama-niyama* group compared to control group

For between-group comparison, there was a significant difference in *cakra* score after intervention ( $p=0.003$ ), after Bonferroni correction.

(ii) *Yama-niyama* group compared to *yoga* group

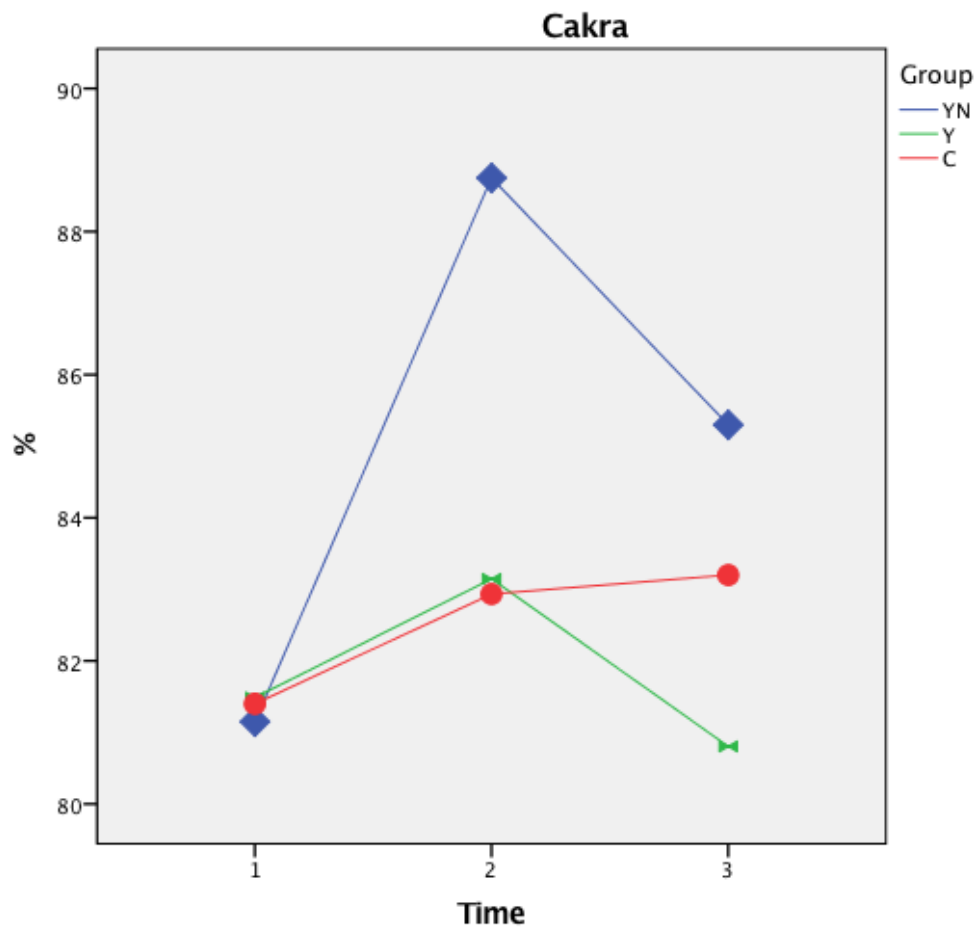
There was a significant difference in *cakra* score after intervention ( $p=0.005$ ).

(ii) *Yoga* group compared to control group

There were no significant differences in *cakra* score at any time points.

#### **Within-group comparison**

The results in YN group showed significant better aligned *cakra* scores after intervention ( $p<0.001$ ) compared to baseline, after Bonferroni correction. No significant changes were observed in *yoga* and control group compared to baseline.



**Figure 26: Changes in the *cakra* scores in all three groups at three points of time.**

Group: YN: *Yama-niyama*; Y: *Yoga*; C: Control.

Time: 1: Baseline; 2: After intervention; 3: After one month follow-up.