EFFECT OF YOGA PERSONALITY DEVELOPMENT CAMP ON THE TRIGUNA IN CHILDREN

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Abstract

The study was comprised to comprehend the effect of Yoga Personality Development Camp on the trigunas in children. The study was pre-post design with control group. 200 children (100 children in each group), aged 8-12 yrs, selected from a residential camp at Prashanti Kutiram Jigani (Yoga group) and Jayagopal Garodia Rastrotthana School. Experimental group children practiced Integral Yoga module including Asanas, pranayama, mudras, chanting and games. Control group children were under daily routine. Sushruta Child personality inventory was administered before and after 10 days. Mann-Whitney U test and Wilcoxon Signed Ranks Test were applied. Sattva increased significantly while Rajas and Tamas decreased significantly as compared to the control group. Yoga Personality Development camp has the significant effect on Sattva, Rajas and Tamas in Children.

Key words : Yoga, Sattva, Rajas and Tamas

Indian philosophy conceptualizes Trigunas (Sattva. Rajas, Tamas-representing knowledge, activity, inertia) are the source of the personality. Ayurveda classics point out sixteen types of mental constitution (7 Sattva, 6 Rajas, 3 Tamas) formed at the time of conception. According to Ayurveda a child’s mental constitution evolves at different stages of growth. As there was no study available on the effect of Yoga Personality Development Camp on trigunas in children, requirement was felt for the present study to be carried out.

Methods : Study was approved by ethical committee of SVYASA. This study has pre-post design with control group. Yoga group children attended ten days Yoga Personality Development Camp. Sushruta child personality inventory (In peer review) was administered at the beginning, and at the end of ten days. Sattva, Rajas, Tamas mean scores were analyzed. SPSS (16.0) was used for the statistical analysis. Kolomogorov-Smirnov test was applied to check normal distribution of the data. Within group significance was analyzed by using Wilcoxon Signed Ranks Test and between group significance was analyzed by Mann-Whitney U test. Sushruta child personality inventory which was based on Sanskrit verses quoted in nine texts and content validity by Ayurveda experts and psychologist. It had three subscales - Sattva (A), Rajas (B), Tamas (C) with 20, 18 and 16 items respectively. It was associated with good reliability (Cronbach's alpha for A, B and C scales were 0.60, 0.64 and 0.61 respectively and split half scores were 0.62, 0.68 and 0.54 respectively. Factor validity coefficient Scores on each items was above 0.3. 100 children (for each group) of the age group 8-12 years from Yoga Personality Development Camp in Prashanti Kutiram and Jayagopal Garodia Rastrotthana School Bangalore were included in the study. Children with Attention Deficit Hyperactive Disorder, Autism, Psychosis, who are mentally challenged were excluded from the study. In Yoga group 46 boys and 54 girls were there. Similarly in control group 52 boys and 48 girls were there.

Table-1 Yoga practices included Breathing exercises like anulom vilom, Agni Tharasana, Surya Namaskara, Bhakthi mudra, Pranayama like Kriyakriya, choorna pranayama, Bhujangasana, Bhujapidasana, Surya Namaskara. Children with Attention Deficit Hyperactive Disorder, Autism, Psychosis, who are mentally challenged were excluded from the study. In Yoga group 46 boys and 54 girls were there. Similarly in control group 52 boys and 48 girls were there.
Table 1 gives demographics of both groups. In Yoga group 46 boys and 54 girls were there. Similarly in control group 52 boys and 48 girls were there.

**Results**: Yoga group showed significant changes in Sattva, Rajas and Tamas after intervention. Although in control group there was no significant changes. (Table-2)

<table>
<thead>
<tr>
<th>Guna</th>
<th>Y (pre)</th>
<th>Y (post)</th>
<th>Significance</th>
<th>C (pre)</th>
<th>C (post)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sattva</td>
<td>9.40±2.89</td>
<td>10.81±2.77</td>
<td>.001*</td>
<td>10.26±2.77</td>
<td>10.08±2.90</td>
<td>.003*</td>
</tr>
<tr>
<td>Rajas</td>
<td>8.10±2.49</td>
<td>7.54±2.46</td>
<td>.001*</td>
<td>7.52±2.36</td>
<td>7.62±2.32</td>
<td>.086</td>
</tr>
<tr>
<td>Tamas</td>
<td>9.95±2.06</td>
<td>8.84±1.92†</td>
<td>.001*</td>
<td>9.65±2.39</td>
<td>9.72±2.42</td>
<td>.144</td>
</tr>
</tbody>
</table>

Table 2 gives mean scores and standard deviation of yoga (Y) and control (C) group before and after ten days of intervention. Sattva has increased and Rajas and Tamas have decreased significantly in Yoga group compared to control group. (*Wilcoxon Signed Ranks Test). Post intervention changes in Rajas and Tamas was significant, showing both groups are different.

<table>
<thead>
<tr>
<th>Guna</th>
<th>B (pre)</th>
<th>B (post)</th>
<th>Significance</th>
<th>G (pre)</th>
<th>G (post)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sattva</td>
<td>9.56±2.79</td>
<td>10.81±2.95</td>
<td>.001*</td>
<td>9.25±2.82</td>
<td>10.57±2.62</td>
<td>.001*</td>
</tr>
<tr>
<td>Rajas</td>
<td>7.95±2.47</td>
<td>7.35±2.55†</td>
<td>.001*</td>
<td>8.33±2.52</td>
<td>7.68±2.33</td>
<td>.001*</td>
</tr>
<tr>
<td>Tamas</td>
<td>9.86±2.10</td>
<td>9.08±1.84†</td>
<td>.001*</td>
<td>10.01±2.10</td>
<td>8.90±1.99</td>
<td>.001*</td>
</tr>
</tbody>
</table>

Table 3 gives mean scores and standard deviation of Boys and Girls in Yoga group before and after ten days of intervention. Sattva has increased and have increased. Rajas and Tamas decreased have significantly in both Boys and Girls. *Wilcoxon Signed Ranks Test). But changes in Girls in all gunas are more compared to the Boys. Post intervention changes in was not significant between groups, showing both groups are not different for the effect of Yoga.

Table 4 gives mean scores and standard deviation of Boys and Girls in control group before and after ten days of intervention. Rajas and Tamas have increased. Sattva has increased in both Boys and Girls, but changes were not significant. *Wilcoxon Signed Ranks Test). Post intervention changes in Sattva,Rajas and Tamas was not significant between groups, showing both groups are not different after intervention.

<table>
<thead>
<tr>
<th>Guna</th>
<th>boys (pre)</th>
<th>boys (post)</th>
<th>girls (pre)</th>
<th>girls (post)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sattva</td>
<td>0.080</td>
<td>0.266</td>
<td>0.231</td>
<td>0.273</td>
</tr>
<tr>
<td>Rajas</td>
<td>0.186</td>
<td>0.054</td>
<td>0.207</td>
<td>0.254</td>
</tr>
<tr>
<td>Tamas</td>
<td>0.477</td>
<td>0.001</td>
<td>0.593</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 5 gives significance values of both Boys and Girls between group analysis of Yoga group with control group. Post intervention changes in Tamas after Yoga in was significant in both boys and girls showing both (Yoga and Control) group are different.

**Discussion**: Present study has described the effect of ten days, Yoga personality Development Camp on trigunahas in children. Scores on three subscales before and after were not distributed normally (Kolomogorov-Smirnov Test). Baseline data in two groups were not significant. Scores on Sattva scale were increased significantly after yoga practice. Similarly scores on Rajas and Tama scale were decreased significantly. While in control group Rajas and Tamas has increased (table-2) though not significant. Changes after yoga in yoga group were significant (Wilcoxon Signed Ranks Test). In Yoga group, percentage of change in Sattva was 12%, Rajas was 7% and in Tamas was 11%. However, in control group it was 0.2%, 0.1% and 0.07% respectively. Earlier studies have revealed Sattva score changes (increased) were 21 and changes in Rajas scores (decreased) were not significant.24 Percentage changes in earlier study were 6% (Sattva), 5% (Rajas), and 6% (Tamas)24 and it was 5%, 2.5% and 3.3% respectively in the other study done on adults25. While the present study has exhibited significant changes in all Sattva, Rajas and Tamas. (Table-6)
Table -6

<table>
<thead>
<tr>
<th>Studies</th>
<th>Age range</th>
<th>Sattva change (mean±SD)</th>
<th>Rajas change (mean±SD)</th>
<th>Tamas change (mean±SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present Study</td>
<td>6-12 years</td>
<td>12%</td>
<td>7%</td>
<td>11%</td>
</tr>
<tr>
<td>Keswani et al study2</td>
<td>17-63 years</td>
<td>6%</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Sudheer Deshpande et al study4</td>
<td>18-71 years</td>
<td>5%</td>
<td>2.5%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

Results of comparing scores on Rajas and Tamas after experiment showed two groups are significantly different in changes occurred. Mann-Whitney U-test, though Sattva change was not significant. Sattva, Rajas and Tamas scores were analyzed for Boys and Girls in both groups. This showed Yoga has significant (Wilcoxon Signed Ranks Test) effect on Rajas and Tamas in both Boys and Girls compared to control group while girls showed more change compared to boys. (Table 3 and 4). Between group analysis of boys in both groups and girls in both groups revealed changes in Tamas was significant (Mann-Whitney U-test) in both boys and girls. (Table-5) Meditation practiced by children in this study helped to increase Sattva guna. Ayurveda describes Self-knowledge (Ațtmajnâna) enhances Sattva guna. Early studies have shown Sattva guna increases after yoga. Energy consumption results by Yoga and that results in increase in Kapha. The present study has showed that a ten days Yoga Personality Development Camp on triguunas in children. It has compared yoga group with control group. Researcher was blinded for yoga practice. While, Ayurveda quotes, persons with predominance of Rajas and Tamas are prone to psychosis and neurosis. The present result may point, that yoga helps to move towards positive health by increasing Sattva guna. The study has discarded null hypothesis that yoga cannot reduce Rajas and Tamas and increase Sattva guna. Limitations of the study is though yoga personality camp has resulted in significant changes in triguunas, samples were not randomized. Assessor was not blinded. Future studies are required on randomly assigned sample with blinded assessor. Effect of different types of yoga module, eg, Asanas, Pranayama, Meditation can be studied independently.

Conclusions:
The present study has shown that a ten days practice of integral Yoga has a significant effect on Sattva, Rajas and Tamas in children as compared to control group, of the age group 8-12 years. This may point out towards prevention of psychological disorders.

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