

Chapter – 8
APPRAISAL

8.1 SUMMARY OF THE FINDINGS:

Yoga improved performance on cognitive tasks such as six letter cancellation, digit symbol substitution and Trail making tests indicating that yoga improved measures of mental speed, attention and working memory. This study showed that yoga intervention in school children improved exercise on measures of physical performance such as VO2 max, calf muscle strength, balance, and spinal flexibility.

8.2 CONCLUSION:

The results suggest yoga improves cognitive functions such as attention, working memory and mental speed better than physical exercise intervention in higher primary and high school children. However, the effects of yoga were almost similar to physical exercise intervention with respect to cardio-respiratory fitness, aerobic capacity, spinal flexibility, calf muscle power and back and leg strength.

8.3 IMPLICATION:

This study has helped to validate the Yoga module in improving performance measures in school children in a field setting across the state. The yoga module has been developed by a committee of experts in field of yoga, education, physical sciences and psychology. The module was widely accepted by all schools and was a feasible proposition for including yoga in the school curriculum on lines of Physical education. Yoga helped improve mental fitness, attention span and cognitive abilities in children and can thus be used in conjunction with physical education classes for improving these domains in children. This if implemented could probably improve learning in children and their all-round personality development. This study shows that implementation of a yoga program in higher primary and secondary schools may improve learning and attention faculties in children. This can have a great impact on their health and education and improve their performance measures. The findings from this study can be used in socially disadvantaged and juvenile delinquents' children to bring them to the mainstream.

8.4 APPLICATIONS OF THE STUDY:

The findings of the study have the following applications:

1. Since yoga improves VO₂ max and cardio respiratory fitness in children, this can be used as a safe alternative in children with asthma as vigorous exercise is known to exacerbate asthma.
2. Yoga improves mental speed and attention span and can thus be used to improve attention span in children.
3. Yoga improves memory and therefore can be used to improve learning and grades in education.
4. Qualitative assessment showed yoga to improve appetite and can be used to improve nutritional health in children.
5. Yoga also improved domains on physical fitness such as calf muscle strength, hand grip strength, flexibility, balance, motor speed etc. which are indicators of one's performance status. Improvement in these measures resulted in improvement in physical performance such as speed, endurance and strength in children.
6. Improvement in physical performance measures as above has implications for competitive sport activities in children.
7. Qualitative analysis also showed improved health behaviours, mood states, self-esteem and psychological wellbeing in children.
8. Yoga can therefore be used for all round personality development.

8.5 STRENGTHS OF THE STUDY:

One of the major strengths of this study was that this program was a state sponsored large scale yoga intervention program and this study evaluated the feasibility of yoga intervention in rural schools implemented as a part of this state sponsored program. The results from this study show equivocal benefits of yoga viz. physical exercise on physical performance measures but better

effects on cognitive functions. The results also suggest that imparting yoga in school is a feasible option and can be integrated with the routine physical education. The geographical extent and diversity and size of study of population add significant credibility and power to this experimental study.

8.6 LIMITATION OF THE STUDY:

One of the major limitations in our study was that intervention could not be blinded. However, the raters and field personnel involved in the assessments and interpretation of assessments were blinded to the study groups. The assessments were independently carried out by AYUSH doctors trained in imparting these tests.

8.7 SUGGESTIONS FOR FUTURE STUDIES:

This is one of the largest randomized controlled studies to our knowledge that has validated the effects of yoga program in school children in a field setting. This study has helped to validate the yoga module that can be implemented across schools in the country as a part of the school curriculum. This not only improves personality development in children but also confers value-based education that is very vital in this internet and media savvy world. Molding children's behavior in them is very vital to the development of the youth as this is a sensitive age for adolescent behavioral problems and children can go astray.

Yoga has strong roots in our Vedic texts and helps impart moral and social values that help shape the future of the youth. Laziness and inattention that effect learning can be easily overcome through practice of yoga which helps mold personalities and improves performance. This module is feasible and can be implemented across all government and private schools to improve quality of education in this country.

8.8 ACKNOWLEDGEMENTS:

We acknowledge the Dept. of AYUSH and Dept. of Education, Government of Karnataka.