

## **8. APPRAISAL**

The present investigation was carried out to assess the impact of yoga intervention on health-related physical fitness and psycho-motor performance of children with intellectual disability. To assess the limitations of the present study as well as to generate new ideas for future investigations, the findings of the present study are critically reviewed as follows:

- a) Summary of findings
- b) Conclusions
- c) Observations
- d) Strengths of the Study
- e) Delimitations
- f) Limitations of the study
- g) Suggestions for future research
- h) Study implications

### **8.1 SUMMARY OF FINDINGS**

In the present study, a yoga module for intellectually disabled children was developed on the basis of ancient texts and scientific studies. The yoga module was validated by following a standard procedure. Further, the feasibility of the yoga module was assessed by conducting a pilot study on 13 intellectually disabled children (6 male and 7 female) with a mean age of 12.53 years. After the validation of the yoga module, and on the basis of the findings of the pilot study, a controlled experiment was conducted. The main experiment was conducted on seventy children who were classified into categories of mild to moderate intellectual disability children on the basis of their IQ scores. The

subjects ages ranged from 10 to 15 years. All the participants were assessed for health-related physical fitness and psycho-motor performance at the baseline. Then, the subjects were randomly assigned into yoga group and wait list control group. The subjects of the experimental group underwent a daily yoga training sixty minutes every day for a total period of three months. After the completion of three months, all the subjects from the experimental and wait-list control groups were assessed for health-related physical fitness and psycho-motor performance. The findings of the present study show that the yoga module was effective in improving health-related physical fitness and psycho-motor performance of the intellectually disabled children. Although a few of the participants reported difficulty in performing some of the yoga postures in the beginning of the intervention, in due course, they were able to perform the said postures with comfort. The attendance of the subjects for the training was more than 80% which seems to be satisfactory. No adverse events were recorded during the yoga classes. The findings reveal that yoga practices are practicable as a training modality for children with intellectual disability.

## **8.2 CONCLUSION**

The study successfully implemented a yoga module to the children with intellectual disability. The yoga module as developed in this study is effective in improving health related physical fitness and psycho-motor performance of intellectually disabled children. The findings of this study may inspire other researchers, teachers and administrators working in schools for differently abled children. The newly developed yoga module proved to be feasible and beneficial for the children whose enthusiastic participation and positive response helped establish effectiveness.

### **8.3 OBSERVATIONS**

- While conducting this study, it was observed that for the implementation of yoga postures to intellectually disabled children, patience is of a prime importance and the children need a special attention while introducing each practice.
- For conducting successful classes, students have to be motivated and appreciated by using terms like ‘nice’, ‘very good’, etc.

### **8.4 STRENGTHS OF THE STUDY**

- To the best of our knowledge, the present study is unique where a randomized controlled design was used and adequate participants were enrolled to the study. Three months duration of the yoga intervention was found to be appropriate to record the beneficial effect on health-related physical fitness and psycho-motor performance.
- For the first time, a yoga module was developed following standard procedures for intellectually disabled children. Further, the yoga module was validated by experts in the field of yoga and a pilot study was conducted.
- In the present study, well-validated measures like health-related physical fitness and psycho-motor performance were assessed.
- Majority of the parameters showed a significant improvement and the power of study was satisfactory.

- From the literature review, it was found that a very few studies are conducted in relation to yoga and health related physical fitness and psycho-motor performance of intellectually disabled children, therefore, this study seems to be justified and logical.
- Intellectually disabled children are deprived of exercise system to maintain their health-related physical fitness. This study, therefore, provides a systematic yoga schedule suitable for them to maintain a good status of health and fitness.
- Teachers dealing with the intellectually disabled children will obviously benefited to transact the curriculum by incorporating yoga module.

## **8.5 DELIMITATIONS**

As this study was conducted in Pune District, Maharashtra, the investigator delimited the study in the following ways:

- The study was delimited to two schools located in Pune; its selection for being only for intellectually disabled children.
- All the study participants were from Pune district.
- The study was delimited to intellectually disabled children aged 10-15 years.
- The present study has been restricted to two variables viz., health related physical fitness and psycho-motor ability.

## 8.6 LIMITATIONS OF THE STUDY

While conducting this research study, the investigator faced many problems and as the study was carried out with intellectually disabled children, the researcher could not have complete control over the group, especially during the remaining hours of the day except the training due to paucity of time and facilities that may be considered as limitations, which are presented as follows:

- The subjects for the study were randomly selected from the schools for intellectually disabled children in Pune. Factors such as geographical locations, nutrition and diet, recreational activities and other similar factors which are beyond control might have influenced the data and affected this experiment, could not be controlled by the research scholar.
- Absence of active control group, a wider age group, uncontrolled physical activities during school hours and time effect or growth effect may play as confounding variables.
- Although a proper care was taken that each subject gives his/her best performance while conducting tests, some of them may not have participated to the best of their ability.
- Despite specific criteria to minimize heterogeneity in the intellectually disabled population, it is likely that there were residual individual differences in family and social backgrounds, which may limit the generalization of the results.
- Lack of follow up assessment after the study.

## 8.7 SUGGESTIONS FOR FUTURE RESEARCH

- A multi-centric randomized controlled trial should be conducted; the scope of the application should be extended to rural settings and those of lower economic status.
- Tracking a one-year yoga intervention for children with intellectual disability would be worthwhile.
- Further investigation with a longer follow-up for different age groups, including adults, young and old with intellectual disability should be considered. Such intervention would offer insights into long-term benefits of yoga practice.
- Yoga could be compared with physical exercise interventions like aerobics, pilates, etc.
- Further studies may assess yoga for children with intellectual disability for: bio-chemical, physiological, genetic, psychological, other sensory functions and gender differences.
- The present yoga module could undergo further rigorous validation by administering it in children with mild to severe intellectual disability.
- A clinical application of yoga in intellectually disabled children may be studied.

## **8.8 IMPLICATIONS OF THE STUDY**

- Both health related physical fitness and psycho-motor ability of children with intellectual disability can be improved by yoga practices.
- Yoga teachers and the teachers teaching intellectually disabled children may be inspired to introduce the newly developed yoga module in schools.
- Parents and teachers may encourage children with intellectual disability to engage in yoga to improve physical fitness, motor ability, reduce stress, and cope with their many needs and challenges.
- Yoga module developed in the present investigation might be effective for improving emotional stability as well as cognitive abilities of intellectually disabled children.