

## ABSTRACT

**Background:** For children with intellectual disability (ID), fitness and overall functioning is lower as they are not active during the course of school days and have less opportunities to participate in physical activities available to their peers. Moreover, they show disorders at perceptive-motor development and coordination levels. As compared to other groups with disabilities, these individuals have more functional limitations in an adaptive behavior and motor function.

**Aim:** The aim of the present study is to assess an outcome of yoga practices on health-related physical fitness and psycho-motor performance in intellectually disabled children.

**Methods:** A Quasi experimental pre-post- design has been used for conducting this research study. The purposive sample is randomly assigned into the experimental group (n = 35; 24 male and 11 female, age group mean  $\pm$ SD; 12.37 $\pm$ 1.43 years) and the control (n = 35; 19 male and 16 female, age group mean  $\pm$ SD; 13.0 $\pm$ 1.7 years) group by making the use of table random numbers. Both the experimental and control groups were assessed on the first day and after 12 weeks of the interventions for health-related physical fitness, static balance, eye hand co-ordination, agility and reaction time by using standardized tests. The subjects of the experimental group then underwent a training of yoga practices, under the supervision of a yoga expert for one hour in evenings, excluding Saturdays, Sundays and holidays for a total period of 12 weeks. The control group did not undergo any yoga training during this period. However, both the groups continued to participate in their regular extra-curricular activities during school hours. There were 35 subjects in each group at the baseline testing. However, at the end of 12 weeks, there were 32 subjects in the experimental group and 29 subjects

in the control group because of nine drop-outs. The drop-outs were due to reasons like disinterest, illness and absence during either the pre-test or post-test.

**Results: Health Related Physical Fitness:** The results of the paired sample t- test in the experimental group showed a significant change in cardiovascular efficiency ( $p < 0.001$ ) and strength and endurance of abdominal muscles ( $p < 0.001$ ) after the yoga training intervention. However, there was no significant change in body fat percentage ( $p > 0.05$ ) after the yoga training intervention. A significant increase in the body fat percentage ( $p < 0.01$ ) was observed in the control group participants.

**Psycho-motor Abilities:** The results of the paired sample t-test in the experimental group showed a significant change in static balance ( $p < 0.001$ ); eye hand coordination ( $p < 0.001$ ); agility ( $p < 0.001$ ) and reaction time ( $p < 0.001$ ) after the yoga training intervention. A significant increase in the eye hand co-ordination ( $p < 0.01$ ) was observed in the control group participants.

**Conclusion:** The present study demonstrates that 12 weeks of yoga intervention was effective in improving some domains of health-related physical fitness and psycho-motor abilities of intellectually disabled children.

**Key words:** yoga, intellectually disabled children, health related physical fitness, motor function