Abstract

Introduction
Children with Autism Spectrum Disorders (ASD) face severe sensory processing difficulties. India faces several challenges in making sensory integration therapies available for its significant population of children with ASD. Taking cognizance of the rising need for sensory intervention in India, the researcher wished to study the efficacy of the HANDLE (Holistic Approach to NeuroDevelopment & Learning Efficiency) intervention program and study its impact on the perceptual cognitive and behavioral skills of Indian children with ASD. The HANDLE intervention program seeks to support and organize the neurodevelopmental systems without producing stress. Movement activities are used to work on the underlying neurological systems leading to improved learning, organization, efficiency and social interaction. This study “Effectiveness of HANDLE & SI Intervention Techniques on Perceptual Cognitive & Behavioral Skills of Children with Autism Spectrum Disorders” was conducted in the city of Mumbai, India. Children in the age range of 5-13 years were the subjects for this Experimental Pretest-Posttest Equivalent group.

Method
A random selection of children with ASD was made from 21 special and inclusive schools in Mumbai. These children were screened for sensory processing difficulties on eligibility criteria determined by a tool designed by this researcher. The 50 children determined to be eligible were divided randomly into two groups of 25 each, one group being the experimental group and the other being the control group.

The subjects of both groups were assessed on the Scale for Perceptual Cognitive and Behavioral Skills (SPCBS), a measurement tool specifically developed by the researcher for this study. The pretest scores of both the groups were analyzed to ensure parity among the subjects. The validity and reliability of the tool was established.

The researcher administered the HANDLE intervention program to the experimental group over 25 individualized sessions. The parents of the control group were briefed
about the HANDLE intervention program while the group continued with regular activities of the school curriculum.

After 25 sessions of intervention with the experimental group, the perceptual cognitive and behavioral skills of both groups - the experimental and control group - were measured on SPCBS. This tool was administered by the researcher at both pretest and posttest. Direct observation of ability to complete task at hand and behaviors were observed. Parents were given training and a home program to follow after the intervention period.

Parent’s Observation Schedule (POS), a tool developed by the researcher was administered to the parents of the experimental group after the intervention period. This schedule was developed to determine the parental perceptions of progress in their children. A correlation between POS and SPCBS was established.

Results
The data was analyzed using a variety of statistical procedures. The results indicated that the HANDLE intervention program has been successful in significantly enhancing the perceptual cognitive and behavioral skills in children with ASD. Furthermore, in comparison to the control group, the experimental group showed a significant gain in perceptual cognitive and behavioral skills. Post intervention parental feedback of the children’s progress correlated positively with the study results.

This study establishes HANDLE as an India-appropriate, sensory intervention program for children with ASD given that it is effective, accessible, easily administered and low-cost.