



Role Of Sensory Integration Therapy In Autism Spectrum Disorder

Dr Soumyashree Samantaray(1), Dr Santosh Kumar Singh (2), Dr Swaroop Patel (3) Dr Abhishek Jaiswal (4)

1. Occupational Therapist, 2,3 . Orthopedic Surgeon 4. Pediatrician

Institution: Apex Hospital, Varanasi

Abstract: Sensory Integration Therapy is a type of intervention commonly used for individuals with Autism Spectrum Disorder (ASD) who experience sensory processing difficulties. These difficulties can manifest in various ways, such as hypersensitivity or hyposensitivity to sensory stimuli, difficulty processing sensory information, or challenges with sensory modulation. The goal of sensory integration therapy is to help individuals with ASD better process and respond to sensory information from their environment. This therapy typically involves engaging the individual in sensory-rich activities in a structured and supportive environment. Activities may include swinging, jumping, climbing, touching different textures, playing with various materials, and more.

Autism Spectrum Disorder is a neurodevelopmental disorder affecting social interaction, communication language and stereo type behavior. Globally prevalence of Autism is 1in every 100 children and in India it is 1in 60. Boys are 4 times more affected by AUTISM than girls. Early diagnosis and multidisciplinary team intervention consisting of Pediatric occupational therapist, Speech language Pathologist, Psychologist, Play therapist, Special educator has essential role to improve the symptoms and contribute to the better quality of life of children with Autism.

Pediatric Occupational Therapist uses Sensory Integration therapy to understand, assess and to plan intervention for the sensory behavioral aspect of autism. Sensory integration therapy was invented by Dr Jean Ayres an Occupational Therapist in 1960to 1970. The principle of sensory integration therapy is based on neuroscience and psychology. Sensory integration therapy is used globally as a Frame of Reference to understand the behavior of an individual. Sensory Integration is how our brain perceives the sensory stimulations from external and internal environment ,process and organize them to behave in an effective manner. Our body has five exterior sensory systems. Vision, Auditory, Olfactory, Gustatory, Tactile, 3 interceptors: Proprioception, Kinesthesia and Vestibular .The pyramid of learning says the vestibular and proprioception is the most primitive and fundamental building blocks for learning and behaves effectively in the environment. When our sensory stem acts and process effectively in a

hierarchical manner sensory motor development, perceptual motor development and cognition intellect develops. Self-Regulation is a key point while discussing about effective behavior. Self-regulation develops as a person mature with sensory processing development. When sensory system acts in a coordinated manner i.e. postural security, body awareness, motor planning, auditory language skill, visual spatial processing, ADL, Behavior, learning develops in optimum level. Children with AUTISM exhibit varieties of sensory processing disorder in terms sensory modulation like sensory over responsively, sensory under responsively ,sensory seeking behavior .Sensory based motor disorder gives rise to Dyspraxia and postural disorder. Sensory discrimination disorder makes the child to behave act differently with the same stimulation in different environment which leads to difficulty managing ADL and some academic. Sensory processing disorder behavior are like child misses eye contact during interaction, get anxious in new situation, resist playing among children, needs routine to stay calm, only pay attention to loud noise or ignores sound, is easily distracted with noise, enjoy looking at moving and spinning object, bother by bright light or avoid light, becomes upset when nails trimmed or resist hair cutting, bumps into things, withdraws touch, cuddle ,enjoys only physical activity moving running can't sit still, accident prone or clumsy, poor handwriting, preference one texture food, fussy irritable, becomes so upset in new setting. In Clinical practice Occupational therapist assesses sensory profile of the children along with Sensory Integration Praxis test to evaluate sensory processes that underlie learning and behavior. Sensory integration therapy is a tailor made therapeutic intervention to deliver correct doses of sensory stimulations or diet to process sensory systems in coordinated manner to exhibit behavior effectively in environment.

METHOD:

30 AUTISM children were referred to Occupational Therapy department APEX Hospital, Occupational Therapy Department. All children were age from 4 years to 11 years. Problem areas were poor eye contact, stereotype behavior, rocking, swaying back and forth, difficulty adjusting new environment, picky eater, poor vestibular processing, peripheral vision, tactile defensive, sensory seeking behavior, poor praxis, poor postural control, and difficulty with body scheme. We planned Sensory Integration therapy in OPD basis for 6 months, 5 days a week. We used equipment like Flat swing, T-swing, trampoline, weighted vest, bolster, sensory tunnel, sensory textured play etc.

CONCLUSION:

After 6 months of continuous Sensory Integration therapy administration we found positive changes in sensory profile of children in all areas. Improvement were in postural control, postural stability, attention level, speech clarity, feeding habits, oro-motor strength, tactile processing, body spatial relation, hand writing, reduction in stereo type behavior, improvement in eye contact and more self-regulation. So all Pediatric Occupational Therapist along with other multidisciplinary members treating autism must apply Sensory Integration therapy for assessment and intervention of Autism Spectrum Disorder.