

Autistic mannerisms reduced by sensory treatment

April 25 2008

Parents of children with autism are increasingly turning to sensory integration treatment to help their children deal with the disorder, and they're seeing good results. In 2007, 71 percent of parents who pursued alternatives to traditional treatment used sensory integration methods, and 91 percent found these methods helpful.

A new study from Temple University researchers, presented this month at the American Occupational Therapy Association's 2008 conference, found that children with autistic spectrum disorders who underwent sensory integration therapy exhibited fewer autistic mannerisms compared to children who received standard treatments. Such mannerisms, including repetitive hand movements or actions, making noises, jumping or having highly restricted interests, often interfere with paying attention and learning.

The children assigned to the sensory integration intervention group also reached more goals specified by their parents and therapists, said study authors Beth Pfeiffer, Ph.D., OTR/L, BCP, and Moya Kinnealey, Ph.D., OTR/L, from the Occupational Therapy Department in Temple University's College of Health Professions. The children made progress toward goals in the areas of sensory processing/regulation, social-emotional and functional motor tasks.

Sensory integration is the ability of the brain to properly integrate and adapt to the onslaught of information coming in through the senses. Dysfunction in this area makes it difficult for people with autism to

adapt to and function like others in their environment. They may be hypersensitive to sound or touch, or unable to screen out distracting noise or clothing textures. Their response might be impulsive motor acts, making noises or running away.

Pfeiffer and Kinnealey are part of a group of researchers seeking to bring more scientific understanding to occupational therapy using a sensory integration approach.

“It’s been heavily documented that children on the autistic spectrum have differences in the way they process sensory information and respond motorically,” Pfeiffer said. “While more families are seeking out the sensory integration approach because of its positive results, more research is needed to scientifically establish its effectiveness.”

Children receiving sensory integration therapy typically participate in sensory-based activities to enable them to better regulate their behavioral responses to sensations and situations that they find disturbing or painful. A child who is oversensitive to light touch may enjoy rolling and playing in a giant foam pillow, after which he might be more able to calmly explore, touch and play with other textures. This in turn makes self-care such as dressing and washing and classroom activities that require touch more manageable.

Interpreting the child’s behavior as intentional and controllable and not recognizing the underlying cause and hypersensitivities is common in educational and home settings, but is an approach that Kinnealey discourages as stressful for the child.

The study took place this past summer at a camp near Allentown, Pa., for children with autism. Participants were between the ages of 6 and 12 years old and diagnosed with autism or Pervasive Developmental Disorder–Not Otherwise Specified (PDD-NOS).

One group (17) received traditional fine motor therapy and the other group (20) received sensory integration therapy. Each child received 18 treatment sessions over a period of six weeks.

A statistician randomly assigned the participants to groups; this information was provided to the project coordinator at the site. The primary researchers were blinded to group assignment and served as evaluators before and after the study.

Parents were also blinded to the interventions that their children were assigned to and were not on site. However, there was the potential for the verbal children to talk about the activities that they participated in, which may have influenced the blinding for the parents.

For their outcome data, researchers used a series of scales that measure behavior. While both groups showed significant improvements, the children in the sensory integration group showed more progress in specific areas at the end of the study.

“This pilot study provided a foundation for how we should design randomized control trials for sensory integration interventions with larger sample sizes,” Pfeiffer said. “Specifically, it identified issues with measurement such as the sensitivity of evaluation tools to measure changes in this population.

“Sensory integration treatment is a widely used intervention in occupational therapy. There is a real need for research such as randomized control trials to validate what we are doing with sensory integration in the profession,” she added.

Source: Temple University

Citation: Autistic mannerisms reduced by sensory treatment (2008, April 25) retrieved 1 May 2024 from <https://medicalxpress.com/news/2008-04-autistic-mannerisms-sensory-treatment.html>

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