

Update: Biomedical/Education

Communication books: training methods tested

Teachers training autistic students to use communication booklets should consider using the "delayed prompt" training method rather than fading prompts, according to a new study by Susan Berkowitz.

While teaching four autistic students to point to correct pictures in communication books, Berkowitz tested two training methods:

- *Time delay*, in which the time between the trainer's request to the student and the trainer's prompting of the answer is gradually delayed. (For instance, the trainer says, "dog," waits a second, and then prompts the student to point the dog; after a certain number of correct responses, the trainer waits two seconds before offering the prompt.)
- *Fading prompts*, in which the trainer progresses from hand-over-hand guidance to a light touch on elbow or hand, and then to a gesture, until the student needs no prompting at all to select the correct picture.

"Throughout the training," Berkowitz reports, "students made more correct, unprompted responses per session within the delayed-prompting design."

She adds that "the two participants who required the most trials in the fading-prompting design, and who made the greatest number of errors, both became aggressive during training sessions . . . these behaviors were not displayed during the delayed-prompting sessions, where errors were significantly fewer and reinforcement was therefore more dense."

"A comparison of two methods of prompting in training discrimination of communication book pictures by autistic students," Susan Berkowitz, *Journal of Autism and Developmental Disorders*, Vol. 20, No. 2, 1990, pp. 255-262. Address: Susan Berkowitz, ISEC School, The University Hospital, 85 E. Newton St., Boston, MA 02118.

Sotos and autism: a case report

Sotos syndrome "should be added to the growing list of neurodevelopmental and genetic syndromes which may be associated with autism and the spectrum of communication disorders," say J.D. Morrow and colleagues, who recently reported on a four-year-old boy with both disorders.

Sotos syndrome, also known as cerebral gigantism, causes accelerated growth; enlargement and elongation of the skull; a triangular face shape, wide-set eyes and other facial abnormalities; a high arched palate; webbing between toes; mental retardation (in most cases); and poor muscle tone.

While the boy Morrow et al. examined was mildly developmentally delayed as an

infant, his IQ at age four was normal. However, he had numerous autistic symptoms including flat, "telegraphic" speech; echolalia and irrelevant speech; abnormal eye contact; head-banging and hair-pulling; twirling; spinning and stroking of objects; and impaired social interaction skills.

Morrow and colleagues say there is one other report of a child (a 23-month-old girl) with Sotos syndrome and typical symptoms of autism. (The doctors involved in that case had attributed the child's autistic-like features to the emotional effects of having Sotos syndrome.) In addition, several cases of children with Sotos and some (but not all) features of autism have been reported.

"Autistic disorder in Sotos syndrome: a case report," J.D. Morrow, B.Y. Whitman, and P.J. Accardo, *European Journal of Pediatrics*, 149, 1990, pp. 567-569. Address: J.D. Morrow, Glennon Hall, Cardinal Glennon Children's Hospital, 1465 So. Grand Blvd., St. Louis, MO 63104.

Rings reduce hand "stims"

By placing costume jewelry rings on the fingers of three severely retarded and/or autistic adolescents, researchers Susan Ann Mason and Crighton Newsom were able to reduce the children's nearly constant hand movements to near-zero levels.

The Mason and Newsom study was designed to investigate the possibility that changing the type of sensory feedback an individual obtains from self-stimulation can reduce such behaviors. Six "mood rings," which changed color according to body temperature, were placed on the hands of each participant. The researchers measured the children's hand movements without the rings, with the rings, and when the rings were gradually removed.

During the no-rings condition, the children engaged in high levels of self-stimulating hand movements. "The sensory change procedure," Mason and Newsom report, "reduced stereotypy by 80 to 90% for all three participants."

Further, they report, two of the children did not substitute other self-stimulating behaviors. The third child manipulated the rings, but much less than he had engaged in his previous hand movements. The children maintained low levels of self-stimulation when the rings were gradually removed.

"The rings procedure," they conclude, "was a rapidly effective technique for reducing stereotyped behavior, as well as being a benign and inconspicuous one requiring no adult attention after the rings were in place." They caution that they only studied short-term effects of the procedure.

"The application of sensory change to reduce stereotyped behavior," Susan Ann Mason and Crighton D. Newsom; *Research in Developmental Disabilities*, Vol. 11, 1990, pp. 257-271. Address: Susan Ann Mason, Department of Special Education, Benjamin Building, University of Maryland, College Park, MD 20742.

Temple Grandin on holding therapy

The subject of a recently released motion picture, *Backstreet Dreams*—and much controversy—holding therapy consists of the mother of an autistic child hugging the child closely for long periods of time, despite the child's often violent attempts to escape.

According to some clinical reports, holding therapy produces significant beneficial results in some autistic children. Proponent Martha Welch believes it restores a missing maternal-infant bond, while others believe it is either an aversive treatment or a means of providing cerebellar stimulation and vigorous exercise (see ARRI 1/1 and 1/3).

Recovered autistic woman Temple Grandin, who has studied and written extensively about autism, believes—based on research, as well as her own experiences and those of other autistic adults—that "the beneficial effects of holding in some children are mainly due to desensitization of the autistic child's nervous system to touch. It is a physiological sensory process which has nothing to do with mother bonding or anger."

Criticizing the forceful nature of holding therapy, Grandin argues that similar benefits can be obtained through more gentle sensory therapy which can desensitize the autistic individual to touch. She cites research indicating that swinging can stimulate speech production; that spinning may reduce hyperactivity; that vibration can be used to lessen self-stimulation; that gentle stroking with different textures of cloth can reduce hypersensitivity to touch; and that "deep pressure therapy" (for instance, rolling children in mats or blankets) is often calming. Vestibular and sensory stimulation, she says, also can improve behavior.

Holding therapy probably works best, Grandin says, "on individuals with tactile oversensitivity;" but she believes that sensory therapy achieves the same results in a more gentle, less stressful manner, without mothers being "made to suffer guilt" about a supposed missing bond with their children.

"An autistic person's view of holding therapy," Temple Grandin; *Communication*, Vol. 23, No. 3, December 1989. Address: Temple Grandin, 2918 Silver Plume Dr., #C-3, Fort Collins, CO 80526.

Study volunteers sought

Families with autistic children at least six years of age are needed for a continuing UCLA research investigation of biological and genetic markers in autism. The researchers need families where both biological parents and at least one more child, in addition to the autistic child, can participate. Each family member will spend four to five hours being interviewed, taking cognitive tests, and having a small blood sample taken. Families will be compensated in the amount of \$20.00 for local travel expenses. For more details, please call Dr. Susan Smalley at (213) 206-7528. At the present time, they are able to recruit English speaking subjects only.