Biomedical/Education Update:

Early intervention: home programs' success evaluated

Autistic children clearly benefit from early intervention, particularly when therapy is provided at home as well as at school. But what type of therapy is best—and how intensive does therapy need to be? Two articles in the *Journal of Autism and Developmental Disorders* suggest that therapies do not need to be protracted or highly intensive to work, and that there may not be a single "right" approach to intervention.

TEACCH-based home program effective

Sally Ozonoff and Kristina Cathcart evaluated the usefulness of a home program based on the methods of the well-known, North Carolina-based TEACCH program. The researchers provided a home program of TEACCH-based therapy to 11 young children who also continued to attend school programs. Before and after the intervention, subjects were compared to a control group of 11 children attending school programs but not receiving the TEACCH-based training at home.

The TEACCH program included evaluation of each student's strengths and needs, followed by individualized instruction to parents on enhancing their children's cognitive, academic, and prevocational skills. Therapists modeled teaching techniques for parents, who then spent half an hour per day using the same techniques in the home. Therapists conducted 8 to 12 sessions, gradually turning responsibility for home programs over to the parents.

Following four months of intervention, Ozonoff and Cathcart say, "the treatment group made an average of 9.6 months of developmental gain, impressive considering that most subjects were diagnosed not only with autism but also with mental retardation, which would be expected to slow the rate of cognitive growth." The researchers say their study "provides clear evidence that implementation of a TEACCH-based home program is beneficial in improving the cognitive and developmental skills of young children with autism."

In addition, Ozonoff and Cathcart say, their study showed that combining teaching methods does not harm autistic students. Most of their subjects, the researchers say, attended school programs using techniques different than the TEACCH methods. "Despite this disparity of methods," the researchers say, "we found that children who received the extra home therapy improved more than those who attended only their day programs."

Fewer hours just as good?

In a separate study, Stephen J. Sheinkopf and Byrna Siegel evaluated 11 young children who had undergone home-based training patterned after that offered at the Young Autism Program in Los Angeles. The subjects were compared to 11 matched children who received conventional school-based education.

The Young Autism Project uses a 40-hour-per-week program lasting two or more years, but the children Sheinkopf and Siegel studied had received training for an average of only slightly more than one year, and for only around 27 hours per week. In addition, the training was conducted in a community setting, without the support of a university-based program.

In spite of this reduced intensity, the researchers say, "Children exposed to the intensive intervention were higher in IQ at the time of follow-up than were children in the 'standard care' group (a difference of about 25 points)." In addition, the experimental group showed greater improvement in symptom severity than controls, although the difference was modest. "The general implication," the researchers say, "is that intensive home-based behavioral treatment can be implemented successfully in the field, without the direct support of an academic center." An additional finding, they say, was that treatment intensity (hours per week) was not directly related to therapeutic response.

The researchers note that their findings are limited by the fact that they did not directly supervise the therapy received by their subjects, but rather selected subjects based on parents' reports of the type and intensity of therapy the parents had provided.

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"Effectiveness of a home program intervention for young children with autism," Sally Ozonoff and Kristina Cathcart; *Journal of Autism and Developmental Disorders*, Vol. 28, No. 1, 1998, pp. 25-32. Address: Sally Ozonoff, Department of Psychology, 502 Behavioral Science Building, University of Utah, Salt Lake City, UT 84112.

—and—

"Home-based behavioral treatment of young children with autism," Stephen J. Sheinkopf and Bryna Siegel; *Journal of Autism and Developmental Disorders*, Vol. 28, No. 1, 1998, pp. 15-23. Address: Stephen Sheinkopf, Department of Psychology, Psychology Annex, University of Miami, Coral Gables, FL 33124.

New anticonvulsant helpful in Rett syndrome

Rett syndrome is a progressive developmental disability that, with rare exceptions, affects only girls. Symptoms of Rett syndrome include autistic behaviors (in early stages), seizures, mental retardation, increasing motor problems, breath-holding, and peculiar hand-washing, hand-wringing, or clapping motions.

Although few treatments have proven useful in the treatment of Rett syndrome, one study indicates that a new anticonvulsant, lamotrigine, may reduce seizures in girls with Rett and improve their behavior. Other studies, however, reveal that the drug can cause serious side effects.

Y. Stenbom and colleagues tested lamotrigine on twelve girls with either classical Rett syndrome or milder variants of the disorder. The researchers measured the effects of the drug on seizure frequency and motor functioning. (In subjects already taking anticonvulsants, lamotrigine was administered along with the other anticonvulsants.)

Of three girls who suffered from seizures, the researchers say, two responded "relatively well" to lamotrigine treatment. One of these subjects, in addition to experiencing fewer seizures, stopped having severe tantrums. The researchers evaluated the motor functioning of the other eight subjects before and after treatment and found that four of these subjects responded well to the drug, becoming "happier, more alert, [and] more able to concentrate," as well as more responsive to social contact.

Three subjects withdrew from the study after developing rashes and/or tremors, but no serious side effects were seen. However, other studies have associated lamotrigine with severe and potentially life-threatening skin eruptions. In addition, at least one case of acute liver failure has been reported in a child taking the drug. Lamotrigine is not approved for use in individuals less than 16 years old.

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"Lamotrigine in Rett syndrome: treatment experience from a pilot study," Y. Stenbom, B. Tonnby, and B. Hagberg; *European Child and Adolescent Psychiatry*, Vol. 7, No. 1, 1998, pp. 49-52. Address: Y. Stenbom, Department of Child and Adolescent Psychiatry, Huddinge University Hospital, S-14186 Huddinge, Sweden.

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