

Biomedical/Education Update:

Autistic children make academic gains

A new study by Canadian researcher André Venter and colleagues reveals that the academic performance of autistic children is "considerably stronger than in earlier studies," an indication that early intervention programs are of significant benefit.

Venter et al. tested 58 high-functioning autistic teenagers and adults who had completed at least eight years of school in Canada or the U.S., and found that "subjects in our sample appeared to be doing significantly better in reading and in computations than subjects studied 15-20 years ago...even in our lower-functioning group (IQs 50-69), more than half of the subjects could read and do simple arithmetic," compared to about one-fifth in the earlier studies. The researchers say that while several variables could account for this difference, it seems "more likely to be due to the continuous, structured educational programs in which our subjects all participated. These opportunities were available to only a few persons with autism in the 1960s and 1970s."

Venter and colleagues note, however, that the autistic children's level of academic performance is "still not at the level one would...expect for persons in the borderline to low average of ability." Delays in reading comprehension were particularly severe. (See editorial this issue.)

Nearly half of the subjects were in (or had completed) special education classes, while 17 attended technical or vocational schools or regular classes with full-time aides, and 13 were mainstreamed independently or with part-time aides. One subject had graduated from a university, while another had attended a university but dropped out.

The researchers express optimism that the improvement in academic skills will continue, and that "the same phenomenon will begin to occur for independent social and adaptive skills in the next decade." Progress in those areas was limited for Venter's subjects; only one was living totally independently, while another lived on his own with public assistance and four others were able to live in apartments with minimal supervision. None of the subjects had married, and most needed considerable help from parents or professionals.

The researchers found that early non-verbal IQ, development of functional speech before age five, and severity of early repetitive, restrictive behaviors were accurate predictors of future academic achievement.

Japanese find social improvements

A recent Japanese study also indicates that educational opportunities may indeed lead to greater social and vocational success for autistic individuals.

Ryuji Kobayashi and colleagues conducted a follow-up survey of 201 young

autistic adults who had received intensive ongoing educational intervention. They found that 43 subjects were employed, six were university or junior college students, and five were attending technical schools. While a number of subjects had deteriorated during adolescence, even more had improved markedly in their teenage years.

Kobayashi et al., like Venter and colleagues, believe that the comparatively good outcome of these children—whom Kobayashi calls "autism in the second generation"—is due to intensive intervention.

Like Venter, the Japanese researchers found that higher IQ was a good predictor of a child's outcome. However, Kobayashi and colleagues found that "higher developmental level of speech at the age of 6 years was not necessarily a good predictor, especially in females."

"A follow-up study of high-functioning autistic children," André Venter, Catherine Lord and Eric Schopler, *Journal of Child Psychology and Psychiatry*, Vol. 33, No. 3, 1992, pp. 489-507. Address: Catherine Lord, Greensboro TEACCH Clinic, 2415 Penny Rd., High Point, NC 27265.

—and—

"A follow-up study of 201 children with autism in Kyushu and Yamaguchi areas, Japan," Ryuji Kobayashi, Toyohisa Murata and Kazuhiko Yoshinaga; *Journal of Autism and Developmental Disorders*, Vol. 22, No. 3, 1992, pp. 395-411. Address: Ryuji Kobayashi, Faculty of Education, Oita University, 700 Dannoharu, Oita, 870-11, Japan.

Does exercise help behavior? Not always

Numerous studies over the past decade have shown that autistic or retarded individuals exhibit fewer behavior problems following exercise sessions. A new study indicates, however, that this effect is not universal.

Jan Larson and Raymond Miltenberg exposed six severely retarded adults to 15 minutes of daily jogging, and determined that "there were no consistent changes in problem behaviors." A daily leisure games session, which provided the same level of attention as the jogging program without the physical exertion, also did not appear to have a beneficial effect on behaviors.

While the researchers agree that the usefulness of exercise to reduce undesirable behaviors has been well established by earlier research, they say their data "suggest that there are limits to the effectiveness of antecedent exercise for behavior modification."

"The influence of antecedent exercise on problem behaviors in persons with mental retardation: a failure to replicate," Jan L. Larson and Raymond G. Miltenberger; *Journal of the Association for Persons with Severe Handicaps*, Vol. 17, No. 1, 1992, 40-46. Address: Raymond G. Miltenberger, Department of Psychology, North Dakota State University, Fargo, ND 58105.

Concerns raised about misdiagnosis of mild autism

Israeli researchers say that children with milder autistic symptoms frequently are labeled as learning disabled (LD), leading to inappropriate school placements and medications.

"A child with normal intelligence and an interest in social relationships may well suffer delay in diagnosis or misdiagnosis," Basil Porter et al. say. "The overlap of certain features, such as short attention span and clumsiness, with syndromes more familiar to pediatricians and school psychologists such as attention deficit disorder with hyperactivity, may well result in the dominant social pathology being made to 'fit in' [with] the more familiar syndrome."

The researchers note that incorrect diagnosis can delay placement in special education programs, and lead physicians to prescribe stimulant medications that have "a deleterious effect on the cognitive functioning" of children with autistic symptoms. Further, they note, "adjustment in adolescence may be more difficult for high functioning cases [misdiagnosed as LD] as they become more aware of their social differences from others."

Another concern of Porter et al. is that misdiagnosis may prevent autistic children from being tested for Fragile X syndrome, tuberous sclerosis, or other disorders linked to autism but not LD.

Porter and colleagues suggest that "tools such as the Autistic Behavior Checklist or the Childhood Autism Rating Scale may be useful classroom screening tools for teachers," and that professionals should not rely on a single contact with a child when diagnosing LD, but rather should see the child in a variety of settings.

"Diagnosing the 'strange' child," Basil Porter, Esther Goldstein, Aharon Galil and Cynthia Carel; *Child: Care, Health and Development*, 1992, 18, 57-63. Address: Basil Porter, Zusman Child Development Centre, Soroka University Hospital, Box 151, Beer-sheva, Israel.

Folic acid prevents NTD

The U.S. Public Health Service has issued a recommendation that all women of child-bearing age take supplemental folic acid (4 micrograms daily) to reduce their chances of having children with spina bifida or other neural tube defects (NTDs).

About 2,300 babies with NTDs are born annually. Numerous studies have indicated the usefulness of supplemental folic acid in preventing these disorders. Despite this evidence, the FDA opposes the USPHS recommendation (*NY Times*, 9-15-92).