

Biomedical/Education Update:

Social scripts for beginning readers

Autistic children can often be taught some social skills through the use of "scripts"—written cues telling them, for instance, how to initiate a conversation or ask for help. However, this approach is of little use to young autistic children with very limited reading skills.

Because early intervention is so important for autistic children, Patricia Krantz and Lynn McClannahan explored the use of one- or two-word written scripts to teach four- and five-year-old autistic children social skills. Their subjects were three boys whose spontaneous language was limited to requests for food or other items.

Before beginning the study, all three children had learned to use notebooks with photographs instructing them to perform various activities. Krantz and McClannahan taught the boys to read the words "look" and "watch me," which were then printed in large type on white cards above or beneath target photos in the notebooks. (For instance, the words "watch me" appeared above a picture of a fireman's hat, and the word "look" below a puzzle.)

A teacher, standing behind a subject, assisted the child in reading an instruction, completing an activity such as putting on a hat or completing a puzzle, and then showing the object or completed task to an observer (another teacher) and saying "look" or "watch me." The first teacher's prompts were gradually faded, and new activities were substituted as the boys mastered the initial activities.

The researchers say that "after learning to use the scripts, the children's verbal elaborations and unscripted interactions increased and were maintained when a new [observer] was introduced." When the scripts were faded, by gradually reducing the size of the cards on which the instructions were printed, the children continued to use their new skills and generalized them to untaught activities.

The researchers say the role of the observers may have been critical, noting that the observers—rather than offering rewards or giving directions—made unpredictable and interesting comments that appeared to stimulate unscripted responses by the children. This, Krantz and McClannahan say, "enabled the children to take some initial steps toward language fluency by occasioning practice opportunities in a context that resembled the shifting content of everyday conversations."

"Social interaction skills for children with autism: a script-fading procedure for beginning read-

ers," Patricia J. Krantz and Lynn E. McClannahan; *Journal of Applied Behavior Analysis*, Vol. 31, No. 2, 1998, pp. 191-202. Address: Patricia J. Krantz, Princeton Child Development Institute, 300 Cold Soil Road, Princeton, NJ 08540.

Fragile X premutation and early menopause: no connection?

Fragile X syndrome is a genetic defect which can cause retardation, physical anomalies, and autistic symptoms. The disorder, which primarily affects boys, is caused by an abnormal area on the X chromosome.

Mothers of children with fragile X syndrome are normal physically and mentally. However, a 1996 study by M. W. Partington and colleagues, who surveyed 203 female fragile X carriers, found that these women began menopause an average of six to eight years earlier than women in the general population. "Twenty-eight percent," the researchers found, "experienced premature ovarian failure... before the age of 40 years."

Of two recent studies, only one supports Partington et al.'s findings. A study by G. S. Conway and colleagues found that "three out of 23 (13 percent) pedigrees with the familial premature ovarian failure and 3 of 106 (3 percent) of women with the sporadic form of premature ovarian failure have [fragile X] premutations, compared with an expected prevalence of 1 in 590."

A. Kenneson and colleagues, however, say their research shows no significant link between fragile X carrier status and early menopause. The researchers screened 216 women who had experienced early menopause, to determine how many of the women were fragile X carriers. They also screened a control group of 107 women who had not experienced early menopause.

Kenneson et al. say the fragile X premutation (the abnormality seen in carriers) was found in only one subject, a member of the control group. "These results indicate that the fragile X premutation is not a major risk factor for early menopause," they say, "and suggest that the risk of premature menopause to fragile X premutation carriers may not be as great as that reported elsewhere."

"Confirmation of early menopause in fragile X carriers," M. W. Partington, D. York Moore, and G. M. Turner; *American Journal of Medical Genetics*, Vol. 64, No. 2, August 9, 1996, pp. 370-372. Address: M. W. Partington, Hunter Genetics, Newcastle, New South Wales, Australia.

"Fragile X premutation screening in women with premature ovarian failure," G. S. Conway,

N. N. Payne, J. Webb, A. Murray, and P. A. Jacobs; *Human Reproduction*, Vol. 13, No. 5, May 1998, pp. 1184-1187. Address: G. S. Conway, Department of Medicine, University College, London, England.

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"Fragile X premutations are not a major cause of early menopause," A. Kenneson, D. W. Cramer, and S. T. Warren; *American Journal of Human Genetics*, Vol. 61, No. 6, December 1997, pp. 1362-1369. Address not listed.

Vitamin E therapy reduces symptoms of tardive dyskinesia

A new report supports earlier research showing that vitamin E is an effective treatment for tardive dyskinesia.

Tardive dyskinesia (TD) is a neurological condition frequently brought on by psychiatric drugs or withdrawal from these drugs. Individuals with TD experience involuntary muscle movements that can interfere with eating, speaking, and breathing.

L. A. Adler and colleagues treated 40 TD patients with vitamin E (1600 IU per day) or a placebo. Treatment lasted for up to 36 weeks. "Using the Abnormal Involuntary Movements Scale score to measure TD severity," the researchers say, "the study found a significant difference in mean AIMS scores, in favor of vitamin E, starting at 10 weeks of treatment and continuing through the full 36 weeks."

The researchers say their findings agree with several other studies (see ARRI 10/2, 8/3, 6/2, 5/1), while disagreeing with a 1997 study which found no significant effect of vitamin E on TD symptoms.

"Long-term treatment effects of vitamin E for tardive dyskinesia," L. A. Adler, R. Edson, P. Lavori, E. Peselow, E. Duncan, M. Rosenthal, and J. Rotrosen; *Biological Psychiatry*, Vol. 43, No. 12, June 15, 1998, pp. 868-872. Address: L. A. Adler, New York Department of Veterans Affairs Medical Center, NYU School of Medicine, New York, NY 10010.

THE SECRET NIGHT WORLD OF CATS...

...is a delightful children's storybook written by Helen Landalf and illustrated by her brother, autistic artist Mark Rimland. For a copy of *The Secret Night World of Cats*, autographed by Mark, send \$20.00 (in California, \$21.25)—cost includes postage and handling—to ARI, 4182 Adams Ave., San Diego, CA 92116. Specify "Cat Book."