

Treating Autism 'Right The First Time'

Researchers Develop Predictive Profile to Match Autistic Children with Appropriate Therapy

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Autism therapy is bedeviled by unpredictable outcomes. Even with the best behavioral treatments, which are the only ones to have been scientifically demonstrated to work - says Laura Schreibman, professor of psychology and director of the Autism Research Program at UCSD - some children improve dramatically, some only somewhat and others not at all.

Many families try one thing after another, losing precious months before hitting on the therapeutic method best suited for their autistic child. Given the importance of early intervention, Schreibman said, "we need to get it right the first time."

A new study coauthored by Schreibman and recent doctoral graduate Michelle Sherer successfully matches autistic children with an appropriate therapy. Published in the June issue of the American Psychological Association's *Journal of Consulting and Clinical Psychology*, the study is the first to develop and test a predictive profile of children likely to respond to a particular treatment, in this case Pivotal Response Training.

PRT is a child-directed behavioral intervention developed by Schreibman and UC Santa Barbara colleague Robert L. Koegel. Focused on improving a child's motivation and responsiveness, PRT targets language skills, play skills and social behaviors that can be generalized to a natural, non-lab setting.

The researchers began by examining data from 28 children who had participated in previous investigations of PRT. Characteristics of the poorest and most exceptional responders were used to develop the predictive profile. Children expected to do well with PRT were those who showed a moderate to high interest in toys, were tolerant of another person in close proximity, and, relative to those with poor outcomes, had fewer non-verbal stimulatory behaviors (flapping or rocking, for example) and more verbal self-stimulatory behaviors (squeaking or other nonsensical sounds).

A prospective study followed: Six new participants were selected - three who were predicted to respond to PRT and three who were not. Each prospective responder was matched to a non-responder on IQ, language age and symptom severity. Two boys and girl, the responders ranged in chronological age from 3 years, 0 months to 3 years, 5 months. The non-responders were likewise two boys and a girl, aged chronologically from 3 years, 1 month to 5 years, 10 months.

The children received 90 minutes of one-on-one PRT four to five times a week by trained, advanced psychology students who were blind to the hypothesis of the study.

After five weeks, PRT treatment was stopped for the non-responders because they failed to show any improvement, and it was ethically indefensible to continue. They were referred to other programs. (The non-responders' slightly higher chronological age did not appear to be a factor. In fact, the youngest child of this group was among the poorest performing.)

Responders received a total of six months, or approximately 190 hours, of treatment. As predicted, they made significant gains on several measures. Children "R1" and "R2," for example, began the study with no functional communication. By the second month, both were talking during and outside of treatment sessions.

Skeptics might charge that the profile developed by Sherer and Schreibman merely picks out children who will improve with any and all behavioral treatment. An important insight, however, the authors write, is provided by the non-responders who were discontinued from the study. "NR1," for instance, who did not derive any benefit from PRT, made great gains with another method - suggesting the profile is specifically predictive for outcomes with PRT. Subsequent research led by Schreibman is confirming this finding.

"This is just a start in the right direction. It is one profile for one therapy," said Schreibman, author of *Autism* and the forthcoming *The Science and Fiction of Autism* (Harvard University Press, Nov. 2005). "We in the autism community know there is no one-size-fits-all approach. To reduce outcome variability, we need to continue finding predictor variables and to develop a full inventory of tailored treatments."

Schreibman's lab is currently working on adapting its PRT profile so that it can more easily be used in schools and other real-world environments. The authors urge further research to develop profiles for all other behavioral therapies.

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