

Research Developments

MayInstitute
Shaping Futures. Changing Lives.

A Publication of the May Center for Applied Research

Issue 6, 2004

May Research Focused on Autism and PDD

The May Institute has a long history of conducting research focused on autism and other pervasive developmental disorders (PDD). The first of many research manuscripts authored by May's professional staff in this area was published in 1979.

To date, May professionals have authored 68 manuscripts, including a series of manuals about working with children with autism and severe handicaps that was written in the early '80s by Drs. Stephen Luce and Walter P. Christian, May Institute's President and CEO.

Since then, May Institute research has focused on improving behavior support practices for children with problematic and self-stimulatory behavior and for those needing to improve social and communication skills. We have addressed the importance of effectively assessing and teaching community-based skills such as play, choice-making, toilet training, self-help, and language. We have also conducted research on home-based, preschool, and residential programming, working with parents and transition services across the age continuum.

The research outlined in this issue focuses on our work with autistic children. Our studies confirm that with early, intensive services and frequent progress monitoring, these children can be successfully included in the classroom. We will continue to look for more efficient and effective methods to enable them to lead happier, more productive lives.

Evaluating Methods to Help Children With Autism and PDD Improve Language, Communication Skills

Many children with autism and other pervasive developmental disorders (PDD) often have little or no verbal language and no means of functional communication. One of the initial focuses of early intervention is to help these children improve their effective communication skills at a young age when they are most receptive.

Because it is easier to prompt motor actions than to prompt a verbal response, intervention often begins with teaching children to communicate through nonverbal means such as sign language or a picture exchange communication system (PECS). Research generally supports these methods as effective means to increase communication and facilitate development of verbal language in children with PDD.

At the May Center for School and Home-Based Consultation, current research includes a series of case studies of children with PDD who received instruction in the use of sign language and/or PECS. General conclusions confirm that: 1) both sign language and PECS are valid options for increasing children's communication skills; 2) pairing verbal language with the use of sign language or PECS can help children demonstrate concomitant increases in verbal language; and 3) including parents and other caregivers is essential to successful intervention.

Future May research will focus on further comparing sign language and PECS to teach young children with autism functional communication skills. This research will also look at different factors that may contribute to a child responding better to one communication mode over another, such as the child's level of imitation skills, types of initial signs/symbols taught, or prompting procedures employed.

Early, Intensive Intervention Improves Outcomes

While child development experts agree that early intervention (between birth and age 3) is crucial in promoting positive outcomes for children with autism or other pervasive developmental disorders (PDD), research conducted at the May Institute indicates that more intensive (e.g., more frequent) intervention services also impact developmental outcomes.

Current diagnostic tools enable a diagnosis of PDD before age 2. New studies, however, have established a link between early developmental features in the first year and a later diagnosis of PDD. Specifically, researchers have found a link between



May Institute Behavior Therapist Amit Nadkarni provides home-based early intervention services to 2-year-old Alex.

continued on reverse

Recent Publications

- Luiselli, J.K., Cannon, B., Ellis, J.T., & Sisson, R.W. (2000). Home-based behavioral intervention for young children with autism: A preliminary evaluation of outcome in relation to child age and “intensity” of service delivery. *Autism: The International Journal of Research and Practice*, 4, 426-438.
- Campbell, S., Cannon, B., Ellis, J.T., Lifter, K., Luiselli, J.K., Navalta, C.P., & Taras, M. (1998). The May Center for Early Childhood Education: Description of a continuum of services model for children with autism. *International Journal of Disability, Development and Education*, 45, 173-187.
- Rey J. & Putnam R. (2002). Effective social skills programming. *Exceptional Parent Magazine*, 32, 32-37.
- DiPietro, E. Luiselli, J.K., Campbell, S., O’Malley Cannon, B., Ellis, J.T., & Taras, M. (2002). A parent survey approach to evaluate public school education of children with autism/PDD following center-based behavioral treatment. *Special Services in the Schools*, 18, 119-131.

Early, Intensive Intervention

...continued from front

abnormal rates of head growth in infants and a later diagnosis of PDD. Research such as this provides a potential early warning sign for PDD and increases the likelihood of an early start to intervention.

The May Center for School and Home-Based Consultation provides services to children at the earliest age possible. Many children begin receiving services before their second birthday. While the intensity of services varies between nine and 30 hours per week, depending upon the individual needs of the child, the majority of children receive between 15 and 20 hours of service per week.

Research conducted by the May Institute (Luiselli, Cannon, Ellis & Sisson, 2000) has examined the effects that different levels of intensity of service (nine-30 hours per week) and the age at which intervention began (before or after the age of 3) had on developmental outcomes. All children in the study demonstrated significant changes in many developmental domains (e.g., communication, cognitive, and social-emotional functioning) regardless of their age when intervention was initiated. Children who received the intervention for a longer period of time, however, generally showed better outcomes.

The table below illustrates significant differences in progress for children under 3 years of age receiving intensive in-home services as compared to those over 3 years of age.

Domain	Change-Score	t-score	p value
<i>Under 3 Years</i>			
Communication	21.00 (18.42)*	3.22	.015
Cognitive	21.00 (15.38)	3.86	.006
Social-Emotional	24.00 (21.98)	3.08	.018
<i>Over 3 Years</i>			
Communication	8.25 (10.11)	2.30	.054
Cognitive	11.25 (6.75)	4.71	.002
Social-Emotional	17.25 (12.18)	4.00	.005

*Numbers in parentheses are standard deviations.

The integration of applied research and clinical work at May Institute demonstrates the importance of outcome-based intervention. While effective progress is demonstrated individually within children, it is also important to provide programmatic outcomes that demonstrate the success of the approaches being used and to establish a base of effective educational practices with autism spectrum disorders.

ABOUT MAY INSTITUTE

May Institute is a private, nonprofit organization committed to providing the highest standard of behavioral healthcare, educational, and rehabilitative services. Featured in the book “In Search of America’s Best Nonprofits” (Jossey-Bass, 1997), May Institute has 180 service locations nationwide, and serves tens of thousands of individuals and families each year. An active center of research and training, we maintain affiliations with 39 universities, hospitals, and agencies worldwide, and have a Professional Advisory Board comprised of leading authorities in the field.

EDITORIAL STAFF

James K. Luiselli, Ed.D., ABPP, BCBA • Pamela M. Bush, VP of Communications • Patricia S. Ladew, Editor • Juanita Class, Designer

Contributing Writers: James T. Ellis, Ph.D. • Jessica R. Everett, Ph.D. • Robert F. Putnam, Ph.D., BCBA

MayInstitute
Shaping Futures. Changing Lives.

One Commerce Way
Norwood, MA 02062

Nonprofit Org.
U.S. Postage
PAID
Norwood, MA
Permit No. 84