MEANINGFUL GESTURES: HELPING CHILDREN WITH DEAF-BLINDNESS

She wouldn’t describe it as an “ah-ha” moment as depicted in the movie, The Miracle Worker, when Annie Sullivan finally makes Helen Keller understand that the word she is spelling in Helen’s hand means water. But Nancy Brady, BNCD Investigator, who with Susan Bashinski, developed a successful gesture-based communication strategy for children with deaf-blindness witnessed many quieter but nevertheless deeply gratifying moments.

Brady, BNCD Investigator and assistant professor of speech-language-hearing, and Bashinski, Life Span Institute research assistant professor, are concluding a five-year Department of Education-funded study of nine Kansas children aged 3 to 7 with varying degrees of deafness and blindness. Deaf-blindness is a rare and severe disability affecting only about 12,000 children and youth nationwide, with 134 cases identified in Kansas.

The strategy was adapted from Prelinguistic Milieu Teaching (PMT), an intervention that increases communication—gestures and vocalizations—in children with cognitive disabilities. PMT, and the adapted version developed for the study, are based in part on the way typically developing infants learn to communicate.

PMT involves one-on-one services for the child and a program of parent education. Its purpose is not to make the child talk, but to build the first stage of communication. This will lead to developmental milestones, including language.

PMT builds the child’s motivation and awareness of a communication partner.

“To be able to tell someone—even in gestures—that you are hungry is empowering,” says Brady. “In our

AUDITORY PROCESSING DISORDER: WHAT DOES IT MEAN?

Auditory Processing Disorder (APD) is a complex problem. The term, auditory processing, is used to describe what happens when your brain recognizes and interprets the sounds around you. Humans hear when energy that we recognize as sound travels through the ear and is changed into electrical information that can be interpreted by the brain. The “disorder” part means that something is adversely affecting the processing or interpretation of information.

Children with APD often do not recognize subtle differences between sounds in words, even though the sounds themselves are loud and clear. For example, the request “Tell me how a chair and a couch are alike” may sound to a child with APD like, “Tell me how a couch and a chair are alike.” These kinds of problems are more likely to occur when a person with APD is in a noisy environment or when they are listening to complex information.

The cause of APD is often unknown. In children, auditory processing difficulty may be associated with conditions such as dyslexia, attention deficit disorder, autism, autism spectrum disorder, specific language impairment, pervasive developmental disorder, or developmental delay. Sometimes this term has been misapplied to children who have no hearing or language disorder but have challenges in learning.”
RESEARCH IN DEAF-BLINDNESS

(Deaf-Blindness, Continued from page 1)

clinical experience, we’ve found that young children are much less frustrated when they learn to communicate.”

Brady, Bashinski and team targeted gestures that would be the most functional for children and easily understood by others such as reaching toward something with an open palm. Even such a seemingly natural and obvious requesting gesture had to be taught through a painstaking and individualized process of mostly hand-under-hand prompting using turn-taking with favorite toys.

By the end of the intervention, all nine children of the study had substantially increased their rates of initiated, intentional communication. In addition, new forms of natural gestures were acquired during the course of the intervention.

One child who communicated only once in 40 minutes at the beginning of the study was communicating more than 40 times during this same time period by the end of the intervention.

“It was neat to see that glimmer when the children realized that what they did had a reliable effect on their environment. That is really the whole point of communication,” says Brady.

Brady and Bashinski believe that the gesture-based communication method has great promise and deserves more research, but a practitioner could learn to use it now.

“Speech therapists want something they can take back to the classroom now, not just a lot of theory. They are desperate for anything that works.”

To view this article online, please visit: http://www.bsi.ku.edu/~bsi/files/annualreport2008%20full.pdf.

BNCD INVESTIGATOR HIGHLIGHT

Mabel L. Rice, BNCD Director and Investigator, is an international authority on language disorders in children and the genetics of language acquisition. She directs three programs in the Schiefelbusch Institute of Life Span Studies and maintains an active research lab, carrying out collaborative studies at international levels. She is best known for her research on Specific Language Impairment (SLI).

Most recently, Dr. Rice has been involved with the world’s largest study of language emergence which has shown that 80 percent of children with language delays at age 2 will catch up by age 7.

These findings are part of a 10-year, multiple-study research project directed by Dr. Rice, who helped create the first test to diagnose a condition known as Specific Language Impairment (SLI). SLI affects 7 percent of kindergartners.

Dr. Rice is one of the University of Kansas’ most prolific researchers and grant winners. She is also a Distinguished professor and internationally known scholar and researcher on child language development. On a local level, she currently directs the Center for Biobehavioral Neurosciences in Communication Disorders (BNCD) at the University of Kansas Life Span Institute.

Published last April in the Journal of Speech, Language and Hearing Research, the most recent project showed that a late start doesn’t necessarily predict ongoing language woes. Though the research indicated that boys are three times less likely than girls to have limited vocabularies as toddlers, by age 7, no differences were found between genders.

Dr. Rice will continue her search for a genetic basis of SLI in the next phase of her research. With a medical geneticist at the University of Nebraska Medical Center and colleagues at Curtin University in Perth, Australia, she will study language development in twins.
Upcoming Events for Parents and Kids!

Children's Railroad Activity Day:
Join us on March 8th for an educational and fun Children's Railroad Activity Day! Held at the Great Overland Station, railroad games, learning stations and interactive activities are just some of the fun. Activities run from 1-4 p.m. and there is an admission charge. For more information:
Call: Bette Allen (785) 232-5533 or
Visit: www.greatoverlandstation.com

St. Patrick's Day Parade:
Come join the annual parade on March 17th featuring floats, bands, bagpipers and the St. Patrick's Day Queen and her court! Parade begins at 1 p.m. in Lawrence at 11th & Massachusetts, traveling north across the Kansas River Bridge. No charge for this event. For more information:
Call: (785) 749-6677

Meet the Wizard of Oz Characters!
Every Saturday in April, Dorothy, the Scarecrow, the Tin Man, the Cowardly Lion and Glenda the Good Witch will be appearing at Crown Center. Come get a photo and visit with them from 12-4 p.m. No admission charge. For more information:
Call: (816) 274-8444

Earth Day Parade:
April 18th is Earth Day! The parade will start in Lawrence at Watson Park and travel down Mass St., ending in South Park. The parade begins at 11 a.m. and there will be a celebration in South Park afterwards until 4 p.m. No admission charge. For more information:
Call: (785) 832-3030 or
Visit: http://lawrencerecycles.org/earthday09.shtml

First Saturday Players Present
"Pirates, Pirates, Pirates!"
Great adventures with comic pirates come to life as performed by out 6th Grade and up First Saturday Players group! Bring your 3-8 year olds (and up) to enjoy sing-a-longs and a wonderful introduction into the world of theatre. Showing on May 2nd at 2 p.m. at the Lawrence Arts Center.

Contact:
lacdrama@sunflower.com, or
Visit: www.lawrenceartscenter.com

"KidScape":
An ongoing event at the Johnson County Museum, "KidScape" is the museum's newest hands-on exhibit for kids ages 3-9. Children are able to explore six different environments: bookstore, park, City Hall, hospital, fashion boutique, and theater! Open Tuesday-Saturday from 10 a.m.-4:30 p.m. and Sundays 1-4:30 p.m. Admission is free. For more information:
Call: (913) 631-6709 or
Visit: http://www.jocomuseum.org/kidscape.htm

(Auditory Disorder: Continued from page 1)

Children with auditory processing difficulty typically have normal hearing and intelligence. However, they have also been observed to:
- Have trouble paying attention to and remembering information presented orally
- Have problems carrying out multi-step directions
- Have poor listening skills
- Need more time to process information
- Have low academic performance or behavior problems
- Have language difficulty (e.g., they confuse syllable sequences and have problems developing vocabulary and understanding language)
- Have difficulty with reading, comprehension, spelling and vocabulary

You, a teacher, or a day care provider may be the first person to notice symptoms of auditory processing difficulty in your child, so talking to your child's teacher about school or preschool performance is a good idea.

To determine whether your child has a hearing function problem, an audiologic evaluation is necessary. An audiologist will give tests that can determine the softest sounds and words a person can hear, and other tests to see how well people can recognize sounds in words and sentences.

While the audiologist is trying the to identify the processing problem, they may work as a team with a speech-language pathologist who is focused more on language. The speech-language pathologist can find out how well your child understands and uses language.

Much research is still needed to understand APD problems, related disorders, and the best intervention for each child or adult. Several strategies are available to help children with auditory processing difficulties. Any strategy selected should be used under the guidance of a team of professionals, and the effectiveness of the strategy needs to be evaluated.

Some strategies you may hear about include auditory trainers, environmental modifications, auditory memory enhancement, or auditory integration training.

To view the full article online or for more information, please visit:
About this Newsletter:
The BNCD newsletter is designed to keep you informed about the ongoing research projects that are being conducted by BNCD researchers at the University of Kansas. Participants who have been part of recent research projects conducted by BNCD researchers, parents who have expressed interest in participating in future research, and individuals from organizations such as schools and daycare centers that have an interest in BNCD studies will receive this newsletter from time to time to keep them up-to-date about the research activities at the BNCD. If you do not wish to receive future newsletters, please call or e-mail the BNCD to have your name removed from our list. Research at the BNCD is supported in part by grant number S P30 DC05803 from the National Institute on Deafness and other Communication Disorders (NIDCD) at the University of Kansas.

Sound Games to Play With Your Child!
From Peep and the Big Wide World, a children's website recommended by the American Library Association (ALA). Written by a preschool teacher who specializes in early childhood science, these easy-to-do ideas are fun ways for you and your kids to learn simple science concepts. For more games, visit http://www.peepandthebigworld.com/. For more ALA recommended websites, visit http://www.ala.org.

- Hunting for Sounds Go on a sound hunt with your child. When you hear a sound, but cannot see the source, try to guess what's making the sound. Then track the sound down. Were you right? Start inside the house, listening for common household noises. Make a guess about what's making the sound and then track it down to check.

- Once you've played inside, move outside. Listen for a sound you can hear in your neighborhood, predict what is making the sound and try to follow it to find out if you are right.

- Playing a Tube Tune Collect as many different types of tubes as you can. Toilet paper tubes, paper towel tubes, paper straws, plastic straws, and PVC tubing are some examples. Along with your child, try making different sounds and noises with them using your mouths.

- Can you make some sounds with one tube but not with the others? Do small tubes and large tubes make different sounds? Have a tube concert and play crazy music!