

KU RESEARCHER FINDS MOST, BUT NOT ALL, LATE-TALKING TODDLERS CATCH UP

The world's largest study to date on language emergence has shown that 80 percent of children with language delays at age 2 will catch up by age 7. But this also means that for one in five late-talking toddlers, language delays persist.

The findings are part of a 10-year multiple-study research project directed by Mabel Rice, the Fred and Virginia Merrill Distinguished Professor of Advanced Studies and director of the Center for Biobehavioral Neurosciences in Communication Disorders at the Life Span Institute at the University of Kansas. Funding for Rice's research comes from the National Institute on Deafness and Other Communication Disorders, one of the National Institutes of Health, and totals nearly \$6 million.

Since 2002, Rice has worked with col-

leagues at Curtin University in Perth, Australia, to study the language development of single and twin children in the western part of the country. Their goal is to pinpoint possible environmental, neurodevelopmental or genetic risk factors in children with Specific Language Impairment.

Published in the April issue of the *Journal of Speech, Language and Hearing Research*, the most recent project showed that a late start doesn't necessarily predict ongoing language problems. Beginning with a study of 1,766 toddlers, the researchers found that boys are three times as likely as girls to be late-talking toddlers. Yet when the children were 7 years of age, no differences were found between girls and boys.

"Obviously some kind of mechanism

kicks in for the boys," Rice said. "Between the age of 2 and 7, they actually learn language faster than girls. After age 7, boys and girls stay on the same trajectory."

Rice thinks the findings give a mixed message to parents worried about their child's language development.

"For children who are still late talkers in school, it is important to provide early intervention and enrichment," Rice said. "Parents should contact a speech pathologist if they have any concerns."

According to Rice, by age 2, children should have a vocabulary of about 50 words and be starting to combine those words in two- or three-word sentences. A child with Specific Language Impairment

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SPEECH AND LANGUAGE DEVELOPMENTAL MILESTONES

Speech and language are tools that humans use to communicate or share thoughts, ideas, and emotions. Language is the set of rules, shared by the individuals who are communicating, that allows them to exchange those thoughts, ideas, or emotions.

The most intensive period of speech and language development for humans is during the first three years of life, a period when the brain is developing and maturing. These skills appear to develop best in a world that is rich with sounds, sights, and consistent exposure to the speech and language of others.

There is increasing evidence suggesting

that there are "critical periods" for speech and language development in infants and young children. The ability to learn a language will be more difficult, and perhaps less efficient or effective, if these critical periods are allowed to pass without early exposure to a language.

However, children can vary in their development of speech and language. As research has shown, there is a natural progression or "timetable" for mastery of these skills for each language. The milestones are identifiable skills that can serve as a guide to normal development. Typically, simple skills

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LANGUAGE DEVELOPMENT

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scores within the normal range for nonverbal intelligence and has no hearing loss. Motor skills, social-emotional development and the child's neurological profile are all normal. The only noticeable gap is in language development.

The data in her latest study also show that a mother's education, income, parenting style and mental health does not predict when a child will start to talk. This seems to debunk the widely held belief that parents or a poor home environment are to blame for a late-talking toddler, according to Rice.

"In our large and diverse sample, children in families with limited means have as good a chance at starting to talk as those in families with lots of resources," said Rice.

In the next phase of her research, Rice will study language development in twins, collaborating with a medical geneticist at the University of Nebraska Medical Center, to

look for a genetic basis of Specific Language Impairment.

Rice said the children in the data pool in western Australia are similar to Kansas children, both ethnically and socioeconomically. Rice's studies are, in fact, using the largest language data pool ever collected that is representative of Kansas families.

Rice is one of the 146 scientists from 20 academic departments affiliated with the Life Span Institute at KU. The Life Span Institute is one of the largest research and development programs in the nation for the prevention and treatment of developmental disabilities. The institute includes 13 centers and more than 140 programs and projects located on the Lawrence campus and KU Medical Center in Kansas City, Kan., and in Overland Park and Parsons.

This article can also be viewed online at: <http://www.news.ku.edu/2008/august/20/language.shtml>. Contact Mary-Margaret Simpson, (785) 864-0697; or Karen Henry, (785) 864-0756.

"All-Time Classic" Books for Parents and Children

Preschool to Age 8:

Why Mosquitoes Buzz in People's Ears. Verna Aardema, 1975

Mad About Madeline: the Complete Tales. Ludwig Bemelmans, 1993

The Very Hungry Caterpillar. Eric Carl, 1970

The Snowy Day. Ezra Jack Keats, 1962

Timothy Goes to School. Rosemary Wells, 1981

Abuela. Arthur Dorros, 1991

Age 8 to 12:

The Watsons Go to Birmingham: 1963. Christopher Paul Curtis, 1995.

Ramona Quimby, Age 8. Beverly Cleary, 1981

Mrs. Katz and Tush. Patricia Polacco, 1992

Grandfather's Journey. Allen Say, 1993

Charlotte's Web. EB White, 1952

Tar Beach. Faith Ringgold, 1991

BNCD INVESTIGATOR HIGHLIGHT

Discovering ways to identify language problems early and how best to correct them long has fascinated Mabel Rice, director of the child language doctoral program, the Merrill Advanced Studies Center, and the BNCD at KU.

Among the many research programs she has pursued during the past three decades, Rice has tracked the development of about 400 children -- many of whom are Kansans -- for 10 years, since their language problems were diagnosed around the age of 3 or 4. It is the largest longitudinal record of children with specific language impairment in the United States. The study, which involves top researchers from Iowa, England and Australia, has helped determine how language problems affect children as they age.

"Eventually, the children with language acquisition problems do move beyond



that particular problem, but then there are others," said Rice, who earned her doctorate in speech pathology at KU in 1978. "The language problem creates the impression that the children are socially

immature, although their social awareness is much like their peers."

Among her accomplishments, Rice developed a diagnostic test that helps educators and speech therapists determine which children have language impairments. She has examined the effects of television on children's language skills, and she serves as a children's language consultant for the hit Nickelodeon television program "Dora the Explorer." She also is studying the possible causes of language disability, which may lead to a discovery about genetic influences.

This article was originally published by the *Office of University Relations*. You can read the full text at www.news.ku.edu/2003/03N/MayNews/May7/merrill.html.

Upcoming Events for Parents and Kids!



Stone Nature Center Critters:

This program, held September 18th at the Topeka & Shawnee County Public Library, is designed for

children 5 to 12 years old to meet some of Stone Nature Center's animal residents up close and personal as wildlife rehabilitators help separate animal fact from fiction. Time is 3:45 pm to 4:30 pm and admission is free. For more information:

Call: (785) 580-4565

Zoo Tales:

On September 27th, gather around exhibits as expert Zoo volunteers talk about the Kansas City Zoo's wonderful creatures using hands-on exhibits. Plus visit all your favorite Zoo animals, ride the Endangered Species Carousel, see the animal shows, ride-the-slide in the Peek-A-Boo Tree, and much more! Presentations take place at multiple locations around the Zoo from 10am-3pm. General admission charge to the zoo applies. For more information:

Call: (816) 513-5800 or

See: www.kansascityzoo.org

Haunted History

On October 17th, the Kansas Museum of History in Topeka is hosting Haunted History which includes free games and stories around a bonfire while enjoying popcorn and cider! Flashlight tours of the museum and the nature trail also available for a fee. For more information:

Call: (785) 272-8681 or

See: www.kshs.org/

Halloween Family ConcertFest

On Saturday, October 25th at 2:00 pm, come join the Legacy School of Dance in Yardley Hall of the Johnson County Community College Carlsen Center for the Children's costume parade! All children who attend will receive treat bags and a cookie & punch reception. For more information:

Call: (913) 254-7278

Halloween Concert and Costume Contest:

Kick off the trick or treating festivities downtown with a special concert for young people. Located at the Lawrence Arts Center on October 31st at 4:00 pm. Admission charges do apply. For more information:

Call: (785) 843-2787 or

See: www.lawrenceartscenter.com/

OP Fun Night

Mom and Dad can catch up on some quiet time while the kids participate in a safe, fun-filled night that includes music, movies, crafts and other sports activities! For kids in first through sixth grade, OP Fun Night is held at Tomahawk Ridge Community Center on November 1st, 8th, 15th, & 22nd from 6:30-10:30pm. Admission charge does apply. For more information:

Call: (913) 895-6390 or

See: www.opkansas.org/

Express Yourself!

On November 22nd, students will study portraits in the Spencer Museum of Art's permanent collection which show expressive faces, then paint self-portraits while making funny faces! Times are 10:30am & 1:30pm and admission charges do apply. For more information:

Call: (785) 864-4710

Email: spencer-art@ku.edu or

See: www.spencerart.ku.edu/



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need to be reached before the more complex skills can be learned. There is a general age and time when most children pass through these periods. These milestones help doctors and other health professionals determine when a child may need extra help to learn to speak or to use language.

The following are just a few of the important landmarks which are commonly reached at each age level:

Birth to 5 Months: Turns its head towards a sound source and watches your face when you speak.

6-11 Months: Begins to babble (says "ba-ba-ba" or "ma-ma-ma"), tries to

communicate by actions or gestures, and tries to repeat your sounds.

12-17 Months: Points to objects, pictures, or family members, and tries to imitate simple words.

18-23 Months: Points to simple body parts such as "nose," understands simple verbs such as "eat" or "sleep," and says 8 to 10 words (pronunciation may still be unclear).

2-3 Years: Understands 50 words and is able to say 40 words at 24 months, and begins to use more pronouns such as "you" and "I."

3-4 Years: Identifies colors, strangers are able to understand much of what is said, uses most speech sounds but may distort some of the more difficult

sounds such as *l, r, sh, ch, z,* and *th* (which may not be fully mastered until age 7 or 8), and answers simple questions such as "What do you do when you are hungry?"

4-5 Years: Understands complex questions and uses some irregular past tense verbs such as "ran" or "fell."

5 Years: Understands time sequences (what happened first, second, third, etc.), engages in conversation, and uses compound and complex sentences.

For more information and full text of this article, please visit: <http://www.nidcd.nih.gov/health/voice/speechandlanguage.asp#mychild>. Contact the National Institute of Deafness and Other Communication Disorders (NIDCD) at 1-800-241-1044 or by email at nidcdinfo@nidcd.nih.gov.

Return Service Requested

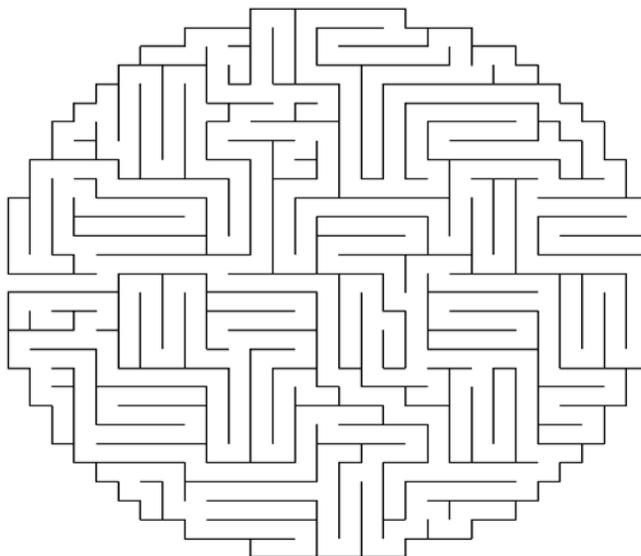


About this Newsletter:

The BNCND newsletter is designed to keep you informed about the ongoing research projects that are being conducted by BNCND researchers at the University of Kansas. Participants who have been part of recent research projects conducted by BNCND 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 BNCND studies will receive this newsletter from time to time to keep them up-to-date about the research activities at the BNCND. If you do not wish to receive future newsletters, please call or e-mail the BNCND to have your name removed from our list. Research at the BNCND is supported in part by grant number 5 P30 DC05803 from the National Institute on Deafness and other Communication Disorders (NIDCD) at the University of Kansas.

Back to School!
Find your way through the maze and make it to the school bus!

START



FINISH

