

Children understand familiar voices better than those of strangers

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Familiar voices can improve spoken language processing among school-age children, according to a study by NYU's Steinhardt School of Culture, Education, and Human Development. However, the advantage of hearing a familiar voice only helps children to process and understand words they already know well, not new words that aren't in their vocabularies.

The findings, which were published online in August in the *Journal of Child Language*, suggest that [children](#) store information about a speaker to retrieve and harness at a later time, similar to what has been found for adult listeners.

Research has shown that when adults are familiar with someone's voice,

they can more accurately – and even more quickly – process and understand what the person is saying. This concept, known as the familiar talker advantage, comes into play in situations where it is difficult to hear. For example, in a loud or crowded room, adults can better understand those whose voices they already know.

However, little research has been done in children to see how they process familiar versus unfamiliar voices. Children are still acquiring language and their skills are less honed than adults, yet they are more adversely affected by [background noise](#). If children also experience an advantage when hearing familiar voices, it is possible that the improvement in [language processing](#) could free up cognitive resources for other tasks.

"Most adults are good at adapting to the way people speak," says Susannah Levi, assistant professor of communicative sciences and disorders at NYU Steinhardt and the study's author. "It's helpful to know that [adults](#) have an advantage with familiar speakers, because if you learn how a person talks, you can use that information to your benefit. We were interested in seeing if and when the advantage develops in children."

The current study explored whether the familiar talker advantage is found in children ages seven to 12. Forty-one children participated in the study, first listening to a series of [words](#) and repeating them to give researchers a baseline for how accurately each child identified words.

The children then spent five days learning the voices of three German-English [bilingual speakers](#), represented by cartoon characters in a computer program. The characters spoke a series of single words, and the children learned to identify the characters by their voices.

Finally, the children completed tasks in which they heard words spoken

by six German-English bilingual speakers, and were asked to repeat the words. Three of the six speakers were the voices of the characters they had already learned.

Half of the words used in the task were common words children would likely know and use (such as cat, book, and hug), and half were less familiar or even unknown (such as loathe, sage, and void). The study used recordings of bilingual speakers to allow the researchers to test whether children acclimated to the speakers' accents.

The study revealed that children could more accurately repeat the words spoken by familiar voices, demonstrating that their spoken language processing improved with familiar speakers. However, this improvement was limited to the words children were likely to know, and the familiarity was not useful for words they didn't know.

"It didn't matter who the children heard speak an unfamiliar word – a familiar voice or a stranger – because they were just as likely or unlikely to understand what was said," says Levi.

Children with the poorest performance at the baseline testing showed the greatest benefit of hearing familiar speakers. In addition, despite learning three voices with German accents, the accents did not provide an advantage to the children when they heard unfamiliar German-accented voices.

Levi noted that the findings may have implications for children learning in environments with background noise.

"Adults and children can process language really well in quiet environments or with headphones on. But most of life, including classroom learning, is done in environments that aren't silent," Levi says. "This study shows that children were able to integrate knowledge of what

a person sounds like and use this to their advantage. A potential benefit is that when there's background noise and kids are listening to a familiar voice, like a teacher's, kids use the familiarity to their advantage."

Provided by New York University

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