

Kids with nonverbal autism may still understand much spoken language

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About a third of children with autism aren't able to speak—but that

doesn't mean they're unable to listen and comprehend, a new study reports.

About 1 in 4 [kids](#) and teens who have autism and are minimally verbal understand significantly more [language](#) than they're able to produce, said lead researcher Yanru Chen, a postdoctoral associate with the Center for Autism Research Excellence at Boston University.

The study also revealed that children with better motor and [social skills](#) had a greater chance of understanding what people are saying, even if they can't speak themselves.

"Our findings highlight the importance of supporting language comprehension development in [these] individuals," Chen said.

"Clinicians and therapists should consider these skills when planning and implementing interventions, providing instructions that are simple and clear enough to understand so [they] can get the most out of the interventions."

She said incorporating social and motor skills training in these language interventions may also be of benefit.

"This could potentially optimize the overall outcomes of the interventions by integrating several closely linked areas of development," Chen said.

She presented the study findings Wednesday at a meeting of the International Society for Autism Research ([INSAR](#)), in Stockholm, Sweden.

It's one of a number of studies focused on minimally verbal people with autism, said Connie Kasari, INSAR's president-elect and a founding member of the Center for Autism Research and Treatment at the

University of California, Los Angeles.

"It's becoming a real interest area, which I think is great because for so long these individuals were excluded from research studies because they couldn't communicate," Kasari said. "It's discriminatory and restrictive when you don't let people have access to research that could potentially help them."

For this study, Chen and her colleagues analyzed data on nearly 1,600 kids with autism and low verbal skills, with an average age of about 9 years old.

The researchers looked at whether children with autism who scored low on "expressive" language—the ability to speak—would also score low on the "receptive" ability to understand what's being said to them.

"We used both parent reports and standardized language measures in our study and found that parent reports were more appropriate for capturing the language variations in [these] individuals than standardized measures," Chen said.

In all, 25% of the kids demonstrated better receptive than expressive language skills.

The kids with better receptive skills also appeared to have better [motor skills](#) and social skills than the others, researchers found.

It makes sense that some kids who can't speak still might understand what's being said, Chen said.

"Understanding language is often a stepping stone to producing language. One cannot produce spoken language without understanding the meaning of the language," she said.

And it also makes sense that motor and social skills could be associated with a better ability to understand spoken language, said Dr. Caroline Martinez, an assistant clinical professor of behavioral pediatrics with Mount Sinai Health System in New York City.

"We tend to focus on the expressive production of language, but effective understanding of language is linked to a lot of other skills," Martinez said. "Languages in many settings have been found to be the most stable predictor of a variety of different skills, in terms of social skills and educational skills and academic achievement and adaptive or independent functioning."

Part of the reason that doctors focus on a child's expressive ability is that it's easier to gauge than their ability to understand language.

"Babies start babbling at about 6 months old and then, hopefully, around a year they're saying a couple of words," Martinez said. "That's something that's very easy for pediatrician to ask a parent, whereas the receptive language milestones early on tend to be a lot more subtle."

Parents should keep an eye for certain milestones in receptive language, Martinez said,

- Babies younger than 6 months should be responding consistently to [different sounds](#), turning their heads to find the source.
- By 6 months, babies should start responding to their names, and responding emotionally to different tones of voice from their parents.
- At 1 year, babies should recognize simple everyday words for objects, and be able to follow some simple commands, like "come here."
- By a year-and-a-half, children should be able to point to body parts when asked "where is your nose?" or "where are your

eyes?"

Researchers aren't certain at this time what prevents some kids with [autism](#) from making the leap from understanding speech to speaking themselves.

"Our lab is testing some hypotheses, including how oral motor functioning, gross motor development and brain responses to speech and sounds may influence ... individuals' abilities to speak," Chen said.

She noted that even though some of these kids understand speech, "their language comprehension skills still fell behind what we expect to see in typical development."

"Our study suggests it is much better to simplify the language you use," Chen said. "Try using minimal instructions, showing, demonstration or visual aids to facilitate communication."

Meanwhile, Kasari said this research could inform efforts to develop technology or other systems that could help these kids communicate with others.

"Clearly, people want to communicate. They want their needs met. They want to be able to comment on things in their world, and so giving somebody access to communication so that they can express their thoughts and desires and wishes is really important," she said.

The results also highlight the importance of individually weighing each child's specific skill set, Kasari said.

"If you assessed these different things, like how much you understand and how much you can express, it gives you some sense of what kind of interventions should be targeted or personalized for that individual,"

Kasari said. "For kids who have higher receptive language, you want to use that strength."

Findings presented at meetings are considered preliminary until published in a peer-reviewed journal.

More information: The American Speech-Language-Hearing Association has more about [minimally verbal children with autism](#).

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