OPINION, **Q&A**

How to define verbal ability in autistic children

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Many children with autism have difficulties with language, such as **confusing pronouns** or repeating words and sounds. Even those who know as many words as their typical peers often have challenges with intonation and prosody.

In his research, **Stephen Camarata**, professor of hearing and speech sciences at Vanderbilt University in Nashville, Tennessee, has long focused on therapies to improve speech skills in autistic children. But when he turned his attention to the 25 percent or more of autistic children who speak rarely, if at all, he says he was surprised to discover a lack of clear guidance on the treatment or characterization of these children.

Earlier this year, Camarata and his colleagues reported that only 31 studies published from 1960 to 2018 looked at methods to improve speech in minimally verbal children with autism[1]. The methods used to measure skills varied from one study to the next: Some used parent reports, whereas others relied on a range of behavioral and language assessments. Definitions of 'minimally verbal' also varied widely, with one study specifying fewer than 20 intelligible words and another fewer than 5 spontaneous words per day.

Earlier this month, Camarata and his colleagues reported that studies of education programs for parents of minimally verbal autistic children are also sparse, and reflect a variety of educational methods rather than a standardized approach[2].

Camarata spoke to *Spectrum* about the impact these inconsistent methods and definitions have on research and treatment of autism.

Spectrum: Why did you investigate how researchers define verbal ability in autistic children?

Stephen Camarata: Even since the very beginning, in the early 1940s, one of the main subgroups of autism has been 'nonverbal/low verbal.' There have been a couple of position papers from the [nonprofit advocacy group] National Alliance for Autism Research, and at least for the past 10 or 15 years they have highlighted minimally verbal children with autism as a high priority.

Based on that background, we expected there would be pretty extensive literature and protocols to identify these children, how you measure their language production, how you measure progress, things like that. But that was not the case.

S: What was the focus of your review?

SC: We narrowed the topic to: 'I have a child with autism that I want to treat and improve their speaking ability and their pronunciation. How do I do that? What does the literature say?' Nonverbal would be defined as people with no words, minimally verbal would be from 1 to 50 words, and low verbal would be children who are significantly below normative levels on speech and language tests but have more than 50 words.

There are only 31 articles published in the past 50 years that give us information, which is a shock. And they all used different measures and definitions.

S: Do those differences make it difficult to know what interventions work best?

SC: Exactly. You walk away from this with a sense that you don't have that many solid recommendations on what to do. We're not quite at square one, but we're really at an initial phase.

Let's say a colleague in England has a patient who's on the autism spectrum. They want to know if our findings apply to that patient or that family, and they only would know that if we all had similar measures.

S: What would you suggest as a way forward?

SC: The field of speech pathology has a pretty well-worked-out system for measuring different levels of speech, and so adapting those to the unique problems of autism would be a good way forward. At this point we don't know exactly whether one speech measure or another is better, because that work hasn't been done yet. But at the very least we can say, "Hey, these basic descriptors have to be in the studies and in the cases."

My own goal is to do some speech-intervention studies for this population. I really see it as very important to families. One of the main things people ask us clinicians is, "Is my child going to talk? How can I help them talk?" I want to be able to answer that based on the literature. Children with autism tend to talk less anyway, even when they can speak. When they do talk and you can't

understand them, you can think of it as nature's double whammy: The process of supporting communication becomes even more difficult.

S: Can therapies improve speech skills in autistic children?

SC: We can always teach everybody; I want to give a message of hope. No matter where a child falls on the spectrum, and no matter how verbal they are or not, we can always support development and learning.

When there's a knowledge void, things like facilitated communication and **rapid prompting** fill that void. The data is really clear that those treatments aren't evidence based and can actually do harm. When we don't have resources available, the knowledge void gets filled with information that's not evidence based and can lead to non-evidence-based treatments. That's something I worry about a lot.

REFERENCES:

1. Koegel L.K. *et. al. J.Autism Dev. Disord.* Epub ahead of print (2020) **PubMed**
2. Koegel L.K. *et. al. Am. J. Speech Lang. Pathol.* Epub ahead of print (2020) **PubMed**