OPINION

Hear this: Listening device helps children with autism

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In a classroom buzzing with noise, children with autism — especially those who also have hearing problems — can find it challenging to tune in.

A study published earlier this year found that **6 percent of children with hearing problems** have autism, compared with 1 percent of the general population. Still, there is little research exploring devices that improve hearing in these children.

A new study, published 30 October in *The Journal of Pediatrics*, reports that a wireless radio-frequency listening device helps children with autism **hear teachers talk**, which in turn improves their social interactions and learning.

With this kind of system, a teacher wears a wireless microphone, usually on her lapel. A transmitter relays her voice to a receiver and earpiece worn by the child.

In the study, 20 children with autism and 20 controls, aged 8 to 15 years, participated in a battery of hearing surveys and tests. All of the children with autism can speak and have an intelligence quotient above 70.

The children with autism struggled more with hearing overall compared with the controls. Specifically, they had trouble detecting changes in tone, hearing people talk in a noisy room and integrating sounds from both ears. Both groups improved on the hearing tests when wearing the listening device, but the autism group showed greater improvement.

In a six-week trial that followed, eight of the children with autism wore the hearing device for up to

seven hours a day in two-week increments.

After each two-week trial, the children reported that the device had improved both their listening and communication abilities. Evaluations from their teachers at the end of the six weeks confirm this and indicate that the children behaved better in the classroom and were more attentive than before.

The device may not work for children with autism who do not like the feel of the equipment on their ears, but overall, it is a welcome help for this underserved group of children.

For example, **interviews with parents of three children** who have both autism and hearing loss indicate that doctors often don't take into account the challenges specific to this subset of children. According to this report, published 1 November in the *Journal of Deaf Studies and Deaf Education*, some tests for autism rely on hearing — such as responding to one's name.

In one case of a boy with autism, a sign-language interpreter relayed information to the boy during the evaluation even though he had never used an interpreter before. Not surprisingly, the boy did not understand this translation of the therapist's instructions, according to his parent.

All three families turned to the Internet and their children's schools for support from teachers, other families and professionals with knowledge about their children's disorders.

Many families rely on visual supports, including the **Picture Exchange Communication System**, a tool commonly used for **nonverbal children with autism**, to interact with their children. Still, more research is needed to develop therapies that are intended specifically to help children with both hearing loss and autism, the researchers say.