

Research finds positive long-term outcomes of cochlear implantation

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Penn State Brandywine Assistant Professor of Psychology Daniela Martin, of Media, is on the frontline of significant, unique research. With the first generation of cochlear implant recipients reaching adulthood, Martin and her colleagues are out to discover the long-term psychological outcomes of this relatively new medical procedure.

A cochlear implant is a small electronic device surgically implanted into the inner ear that provides a sense of sound to those who are profoundly deaf or who are hearing impaired.

Because of today's cochlear implant technology; profoundly deaf [children](#) frequently attend mainstream schools with children who have normal hearing, which wasn't always an option in the past.

Martin said that this integration of [deaf children](#) into mainstream schools is great but "it raises many questions related to the child's social and psychological adjustment. Now you're dealing with a disability status, minority population with specific needs that is integrated into a mainstream environment. That's where our research comes in."

Martin's latest study, co-authored by Bat-Chava and Imperatore, was published in *Child: care, health and development*, and is titled "Long-term improvements in oral [communication skills](#) and quality of peer relations in children with [cochlear implants](#): Parental testimony." The study examines the continuing developments in oral communication skills and peer relationships of 19 implanted children.

Martin said they used a longitudinal interview design, meaning they contacted the parents and implant recipients on various occasions to follow-up with their progression over time. The study follows children for an average of nine years after receiving implants.

The research shows that on average, children improve in oral communication skills and have better peer relationships years after implantation, rather than immediately after. Even implant recipients who performed poorly several years after the procedure continue to improve.

"Since the implants are still very new, we didn't actually know how implanted children would do as young adults in mainstream schools," Martin said. "Now we're finding out for the first time. The message in the years of research that we have done is that the children are doing very well overall."

What helps deaf adolescents cope in middle school? The findings of their study suggest that deaf children should be supported in their early development to build healthy levels of self-esteem and confidence. The degree to which implanted children are accepted by mainstream schools – whether they are understood by their teachers and peers – can also help improve their peer relationships.

Martin hopes this research will help people better serve children with cochlear implants, improving their lives on numerous levels.

"There are people waiting to find out how these children are doing: parents, teachers, school counselors," Martin said. "Our study helps us understand how the needs of these children change as they go from kindergarten to middle and high school. The social environments are very different. The challenges change."

Provided by Pennsylvania State University

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