Patterns and levels of intensity in young children with autism spectrum disorder

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Abstract: This study explored how young children with Autism Spectrum Disorder (ASD) use speech intensity (perceived as loudness) when they produce words and sounds during communication with clinicians and the children's parents. Children with ASD often have atypical prosody when compared to children without ASD. One area of prosody is intensity, which is perceived by listeners as loudness (sounds are considered "softer" or "louder"). There has been little research that investigates the intensity levels of children with ASD and how this contributes to their atypical prosody. We looked at differences in this acoustic measure (a) among children diagnosed with ASD, and (b) between children with ASD and a control group of children without ASD. When looking at acoustic measurements of children with ASD, we predicted that there would be significant differences in speech intensity and the patterns of intensity compared to those of typically developing children. This is because children with ASD often have abrupt, unpredictable intonation that can be clinically described as louder, idiosyncratic bursts of speech sounds compared to those of typical developing children. Understanding intensity patterns could help speech-language pathologists develop practices that can help children with ASD achieve the desired intensity variability to produce speech sounds similar to those of typically developing children.

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