

A COMPARATIVE STUDY OF LAUGH ACOUSTICS IN
CHILDREN WITH AND WITHOUT AUTISM

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Studies show that children with autism demonstrate impairments in their emotion-expression abilities. In the current study, one aspect of emotion-related expression was examined in these children: the production of laughter. It was hypothesized that during reciprocal-social interactions, children with autism would have less variable laugh acoustics than nonautistic participants. Furthermore, it was hypothesized that joint attention would mediate the relation between autistic symptoms and both laugh production and laugh acoustics. Participants consisted of 15 children diagnosed with autism (M age = 9.0, SD = .59), and two groups of nonautistic participants. One comparison group was individually matched on chronological age, whereas the second was matched on a measure of receptive-language vocabulary. Laughter was recorded during a series of playful interactions with an examiner. Laugh acoustics for the two groups were subsequently compared. Results showed that children with autism exhibited a more restricted range of laugh sounds than comparison participants matched on either receptive-language vocabulary or chronological age. Children with autism exhibited fewer types of distinct laugh sounds, as well as significantly less “unvoiced” laughter

when compared with either comparison group. No group differences were found for mean fundamental frequency (F_0) values, variability of F_0 , laugh duration, or amount of laughter produced during speech. A mediational model of joint attention was not supported in that joint attention was not correlated with acoustic outcomes for any group.

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