

## Articulatory characteristics of sibilant production in typically developing children

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This paper presents articulatory data from the electropalatographic (EPG) analysis of sibilant productions in ten typically developing Scottish English children. Although sibilant production in children is well documented using acoustic analysis techniques (e.g. Nissen & Fox, 2005; Stuart-Smith, Timmins & Wrench, 2003; Li, 2012; Reidy, Beckman & Edwards, 2017) there is little research on sibilant production in this population using articulatory analysis techniques (such as EPG or Ultrasound). While both techniques provide detailed information regarding lingual articulation, EPG is more suited to the analysis of sibilant production as it allows the investigation of lingual placement alongside width and length of the grooved tongue configuration.

Some typical EPG data exists for sibilant production in children, but is often limited to the investigation of /s/ only, and in children older than 6 years (see Cheng, Murdoch, Goozee & Scott, 2007).

This paper will present descriptive articulatory data on tongue placement and groove patterns across 10 repetitions of WI sibilants in 'sun' and 'sheep' from ten typically developing children between 3;8 and 7;1 years (mean: 6;1, SD: 1.0), alongside similar data from 10 typically developing adults. Therefore, this study will present EPG patterns for typically developing children younger than previously reported. Measurements of lingual articulation (COG, variability) will be presented alongside an overall pattern analysis (using an original descriptive taxonomy) and perceptual measurements.

The results support findings from previous research using acoustic analysis that typical children present with a variety of phonetic realisations for target /s/ (Li, Edwards & Beckman, 2007), and presents articulation patterns previously unidentified. This work contributes to the increasing body of work using instrumentation to understand developmental trajectories in typical speech (Li et al., 2007).

### References

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