

Palatometry in the treatment of phonological and articulation disorders

In US children, the most common sound requiring remediation would be /r/ (Schmidt, 2007). Achieving the correct airflow used in the production of sibilants, as well as gaining auditory and tactile distinctions between alveolar and velar stops are also frequent causes for speech intervention. Because accurate productions of these sounds are not readily visible to the listener, they can be particularly difficult for some children, and even adults to achieve. **Palatometry provides the ability to “visualize articulatory tongue-to-hard palate contact in real time” (Schmidt, 2007, p. 73) Palatometry has been successful in assessing and treating a wide variety of articulation and phonological disorders.** A brief summary of some of the most recently published research regarding the remediation of articulation disorders will follow.

Schmidt, A. (2007). Evaluating a new clinical palatometry system. *Advances in Speech-Language Pathology*, 9(1), 73-81.

Schmidt (2007) reports the use of Palatometry in the treatment of 13 children ages 7-12 with varying speech sound disorders, who had failed to respond to traditional articulation therapy measures for at least one sound. Of these, six were reported to present primarily with articulation difficulties in the absence of hearing loss, cleft lip or palate, Apraxia of speech, low muscle tone or syndromes. 4 of these 6 participants required further remediation for only the /r/ sound. One required treatment for /s/ and /z/ and one required treatment for /k/, /g/, /ŋ/, and r/. One participant was unable to finish treatment due to transportation issues, but did show marked improvement. The remaining 5 participants were successful in using palatometry to acquire accurate production of their target sounds within 1-20 sessions and were able to maintain these skills a year later.

Carter, P., & Edwards, S. (2004). EPG therapy for children with long-standing speech disorders: predictions and outcomes. *Clinical Linguistics & Phonetics*, 18(6-8), 359-372.

Carter and Edwards (2004) reported the use of palatometry in treating ten children ages 7-14 with various persistent articulation disorders including two

with Apraxia of speech. Target sounds included /t/, /d/, /k/, /g/, /s/, and /z/. **Treatment consisted of 10 weekly 30-minute sessions using palatometry. All of the participants demonstrated significant improvement in target sound productions.**

Dent, H., Gibbon, F., & Hardcastle, W. (1995). The application of EPG to the remediation of speech disorders in school aged children and young adults. *European journal of disorders of communication: the journal of the College of Speech and Language Therapists, London*, 30, 264-277.

Dent, Gibbon, and Hardcastle (1995) reported the use of palatometry in treating 23 children and young adults ranging in age from 7;11 (years;months) to 20;7 with a variety of speech production difficulties. All of the participants had received previous speech therapy with either little success, or had failed to show recent progression. Treatment for each of the participants fell into one of three categories: establishing new lingual patterns, inhibiting abnormal lingual patterns, or modifying existing lingual patterns. 18 of the 23 participants responded successfully to treatment.

Gibbon, F., & Paterson, L. (2006). A survey of speech and language therapists' views on electropalatography therapy outcomes in Scotland. *Child Language Teaching & Therapy*, 22(3), 275-292.

In 2006, Gibbon and Paterson surveyed speech-language therapists in Scotland who used palatometry to treat children with articulation disorders over the course of 10 years. **The results indicated that speech-language therapists judged that the majority of participants had improved their articulation, and almost all had increased awareness of their own articulation difficulties.**