Relation between speaking space of the /s/ sound and freeway space in dentate and edentate subjects.

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The purpose of this study is to assess the relation between the speaking space of the /s/ sound and the freeway space in two subject groups. One group had natural dentition (Group I, n = 61) and the other comprised complete denture wearers (Group II, n = 33). The analysis was done by means of a jaw-tracking device (K6-I Diagnostic System, Myotronics Research Inc., Seattle, WA, USA). Freeway space was determined by asking the subjects to occlude from the postural rest position. Speaking space of /s/ was measured during the pronunciation of the word "seis" and comprised the mean distance from the /s/ speaking position to maximal intercuspation. A weak correlation was found between the speaking space of /s/ and the freeway space in Group I (r = 0.41, p < 0.01), but in Group II, the correlation was stronger (r = 0.75, p < 0.01). The speaking space of /s/ and freeway space were different in Group I, but statistically similar in Group II (paired t-test, alpha = 0.05). It can be suggested that anatomic changes following prosthetic procedures caused a functional adaptation which resulted in more similar values for the speaking space of /s/ and the freeway space.

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