

**This paper*

Comparisons were made of the vowel durations of the two groups as well as for each individual vowel using appropriate statistics (ANOVA). Overall, this study provides a compelling evidence that vowel durations of intelligible ES speech are significantly longer than those of laryngeal speech, but these differences are

ratings of the speech samples. This study also included a measure of oral pressures that will not be discussed in detail. ES speakers ($n=10$) and age matched laryngeal controls ($n=10$) were used as participants. Four stop consonants (/p/, /b/, /t/, /d/) and two fricatives (/s/, /f/)

1988). It is known that v

intelligibility of voiceless stops as position moved from front to back (Figure 1).

Figure 1: Average correct responses for each initial stop consonant by vowel duration.

Discussion

The results of the independent study serve to further reinforce the findings that as temporal measures come closer to approximating those of laryngeal speech, intelligibility increases. In voiceless consonant environments (for /t/ and /k/) shortening (and subsequently approximating laryngeal speech values)

correct perception of these sounds.

Additionally, this study found an overall increase in intelligibility of the voiceless consonant sounds as

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