

## Jitter, Shimmer and HNR classification within gender, tones and vowels in healthy voices

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### Abstract

A statistical analysis of the Jitter, Shimmer and Harmonic to Noise Ratio parameters was applied to classify and compare genders, vowels and tones of healthy voices. Different type of speech records has used for the comparison, namely records with sustained vowels /a/, /i/ and /u/ at High, Low and Neutral tones. A gender comparison has made denoting differences only in Jitter parameter. The parameters determined in recorded vowels /a/, /i/ and /u/ has also compared and the Kruskal Wallis statistical test showed differences for parameters rap, Shim, ShdB, apq3, apq5 and HNR. High, Low and Neutral tones has compared using the same statistical test denoting statistical differences for all Jitter, Shimmer and HNR parameters. A statistical classification of the mean and standard values for these parameters on healthy voices is also presented.

Keywords: Jitter; Shimmer; Harmonic-to-Noise Ratio (HNR); Vocal Acoustic Analysis.

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