

# **THE PERCEPTUAL ASSESSMENT OF SPEECH BREATHING PATTERNS IN HEALTHY SUBJECTS**

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Up till now, it is unclear which is the appropriate method to assess respiratory function during speech tasks. This study examined whether perceptual (visual) assessment is a reliable tool to assess breathing patterns. Furthermore the frequency of occurrence of the different breathing patterns in normal speakers was evaluated in rest and during speech. Finally, the reliability of perceptual evaluation of breathing control was examined.

For this study, 85 participants (38 males and 47 females) aged between 20 and 65 years with a healthy voice and a normal pitch regarding age and sex were recruited for this experiment. The subjects were video recorded (in profile and “en face”) while they performed five tasks (breathing in rest, automated speech, reading 5 short sentences on, comfortable pitch and loudness, reading the same sentences at 75 dB level, reading 5 long sentences). Three experienced judges blindly evaluated the recordings and assigned a breathing type to each subject and task.

Concerning the identification of breathing types kappa analyses showed a low inter- and intra-judge reliability. Regarding the frequency of occurrence of breathing type in rest, the type ‘undetermined’ was indicated most frequently. The assessment of the speaking tasks showed that the costal type was most frequently assigned.

Taking into account the low interrater reliability, conclusions about breathing patterns are at least a matter of discussion. The study showed poor reliability within this methodology. Further research is necessary for developing a reliable protocol for analyzing breathing types and breathing management in general.