

## SPEECH INTELLIGIBILITY AND SOUND FREQUENCY DISCRIMINATION IN OPIOID ADDICTS

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**Objectives:** The aim of this study is to assess the relationship between the use of opioid drugs and speech intelligibility and discrimination of sound frequencies.

**Methods:** 44 opioid addicts (10 women and 34 men) during methadone maintenance treatment were examined. The mean age of participants  $33 \pm 9$  years; the average duration of addiction: 12 years. The Polish Sentence Test (PTZ) for speech intelligibility measurements was used. The test consists of the presentation of 26 sentences, which were disrupted by the babble-noise. In the study of frequency discrimination experimental method is used. Two signals of different frequencies were presented. The task of the study is to identify the frequency-modulated stimulus (target). The study was conducted in a soundproof booth. The Psychoacoustics and Speech Workstations by Tucker Davis Technologies was used.

**Results:** The difference in speech intelligibility and frequency discrimination between opioid addicts and healthy ones was found. The average value of the intensity of speech sounds in noise (Signal-to-Noise Ratio - SNR) in opioid addicts was -3.7 dB and in healthy ones was -5.6 dB. There was no correlation between the duration of addiction and the speech intelligibility in noise or frequency discrimination.

**Conclusion:** The influence of taking opioids for speech intelligibility and frequency discrimination was found.