Reduced listening effort in noise with StereoZoom™

To investigate listening and memory effort with StereoZoom via:
- Objective EEG measurement
- Subjective ratings

Changes in the alpha frequency band (8–12 Hz) reflect changes in listening effort.

StereoZoom: wirelessly connected binaural, directional microphone technology to improve speech intelligibility in loud background noise.

Comparison of listening effort of:
- Phonak SPILN
- Competitor SPILN

Task:
- Word Recall: 2 sentences consecutively - percentage of correctly recalled sentence parts

Measures:
- Recording of brain activity with EEG
- Subjective rating of effort

Results:
1. Objective EEG measurement
   - Lower alpha spectral density in noise with: Phonak SPILN < Competitor SPILN
2. Subjective effort ratings
   - Phonak SPILN < Competitor SPILN

Subjective listening and memory effort ratings correlates with objective EEG findings.

Speech signal easier to understand
Less cafeteria noise to be suppressed by brain
Lower brain activity = lower listening effort

Methodology:

Objective: 20 experienced hearing aid users
Mild to moderate hearing loss
Ø 70.9 years

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