

# Auditory profile from patients followed-up in a Cognitive Neurology Clinic

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## Introduction:

Hearing loss in the elderly is currently considered one of the major factors that contribute to the emergence and severity of cognitive decline in the population over 60 years of age. Presbycusis is a phenomenon that has a prevalence of about 30% in this population. Hearing loss in the elderly compromises the individual's communication, quality of life and family and social participation.

## Objective:

This study aimed to assess the audiometric profile of patients with cognitive decline diagnosis, neurodegenerative diseases, dementia, amongst others.

## Methods:

- 1

**Ethic:** study approved by the ethical committee in research from the institution under record 42167215.0.0.0000.5149.
- 2

**Data collection:** Oct. 2019 - Feb. 2021
  - Research on airway auditory thresholds;
  - Application of the HHIE-S SSQ-12 questionnaires;
  - Place of collection - Hospital Bias Fortes attached to the HC-UFMG.
- 3

**Sample:**
  - 61 participants with a mean age of 70 years (DV=10.69);
  - 29 male (47.5%) - mean age of 72 years (DV=11.18);
  - 32 female (52.5%) - mean age of 70 years (DV=10.7).
- 4

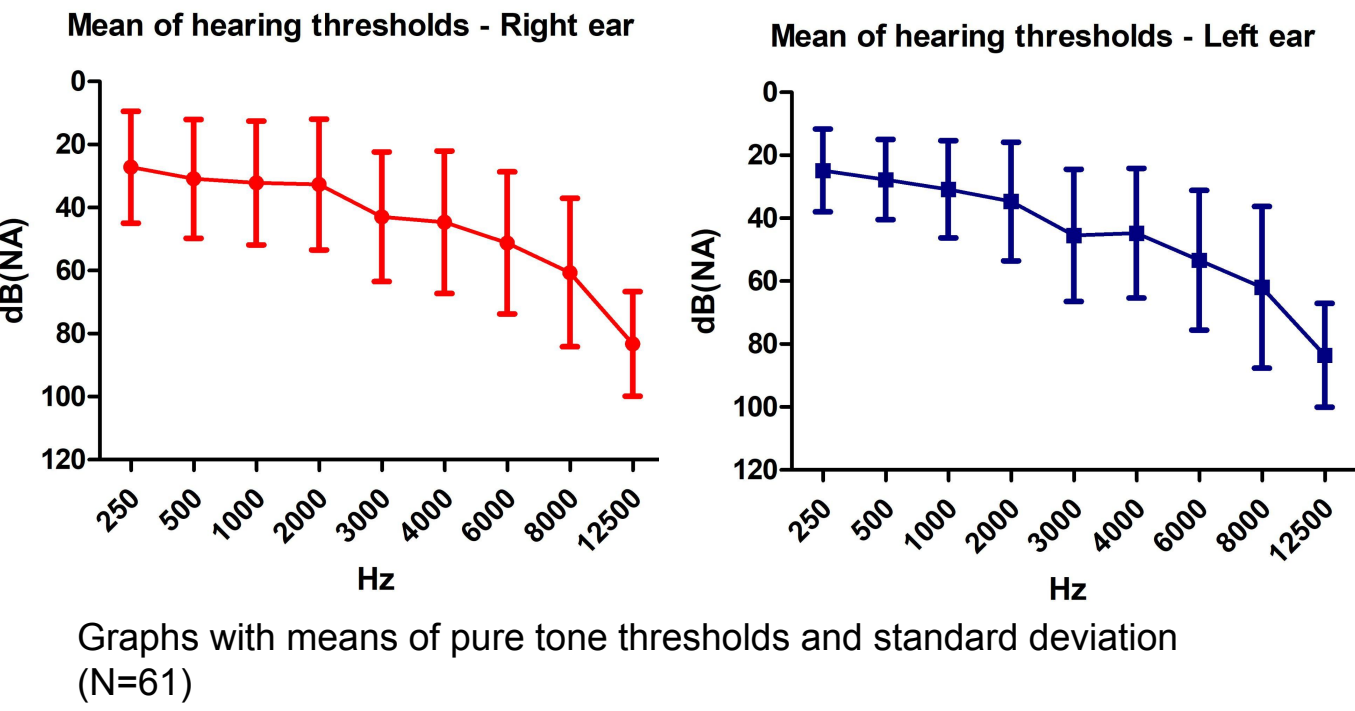
**Statistical analysis:**
  - Descriptive Analysis;
  - Fisher's exact Mann-Whitney statistical tests;
  - Statistically significant values less than or equal to 0.05.

## Results:

Degree of hearing loss (OMS)	
Normal hearing	26 (42,5%)
Light	22 (36,1%)
Moderate	9 (14,8%)
Severe	2 (3,3%)
Deep	2 (3,3%)
Total	61 (100%)
Unilateral	11 (18%)
Bilateral	28 (45,9%)
Total	39 (63,9%)

Audiometric configuration		
	Right ear	Left ear
Horizontal	9 (14,8%)	5 (8,2%)
Downward	47 (77,0%)	47 (77,0%)
In U	3 (4,9%)	4 (6,6%)
In U Inverted	2 (3,3%)	5 (8,2%)
Total	61 (100%)	61 (100%)

\* Tables referring to sample distribution regarding the degree of hearing loss and audiometric configuration.



From the total sample 39 (63,9%) presented hearing loss which had significant association with tinnitus complaints (p=0.02), dizziness (p=0.03) and difficulty understanding speech in background noise (p=0.03). Statistically significant associations were also observed between audiometric results and SSQ12 scores (p=0.03), specially hearing for speech domain in the questionnaire (p=0.009).

**Conclusion:** Sample results showed hearing loss as a present and undiagnosed condition in these patients. Data show there is significant impact in patient communication related to speech perception which in turn may compromise cognitive performance and overall life quality for the individuals.

## References:

Veras, Renato Peixoto and Mattos, Leila Couto. Audiologia do envelhecimento: revisão da literatura e perspectivas atuais. Revista Brasileira de Otorrinolaringologia. 2007, v. 73, n. 1 , pp. 128-134. Epub 16 May 2007. ISSN 0034-7299. <https://doi.org/10.1590/S0034-72992007000100021>.

Regan J, Frison E, Collin F, Dawes P, Hann M, et all; SENSE-Cog Trial Development Team. Individualised sensory intervention to improve quality of life in people with dementia and their companions (SENSE-Cog trial): study protocol for a randomised controlled trial. Trials. 2019 Jan 25;20(1):80. doi: 10.1186/s13063-018-2973-0. PMID: 30683150; PMCID: PMC6347775.