

Research Article

# Prevalence of disabling hearing loss in the elderly

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## Abstract

**Introduction:** Disabling hearing loss refers to hearing thresholds superior than 40 dB in the better ear in the adults. The main cause of hearing loss in the elderly is the age-related hearing loss, also called presbycusis. This type of hearing impairment occurs as individuals grow older and is usually sensorineural hearing disorder greater for high-pitched sounds and affects both ears equally. It is estimated that 466 million people worldwide have disabling hearing loss, one third of which are over 65 years old.

**Objective:** To analyze the prevalence of disabling hearing loss in the elderly of Juiz de Fora. **Methods:** Cross-sectional study with 122 patients. Pure tone audiometry was performed after meticulous physical examination of the external ear.

**Results:** Out of 122 older adults, 85 (69,6%) presented disabling hearing loss.

**Conclusion:** Hearing loss, specially disabling hearing loss, is a frequent condition in the elderly and has a big impact on their quality of life. For that it should be promptly diagnosed so treatment can be initiated.

## Introduction

Hearing loss refers to reduced ability to hear and is defined as hearing thresholds of 25 dB or worse. According to the World Health Organization, hearing loss is classified as mild, moderate, severe or profound if hearing thresholds are above, respectively, 25 dB, 40 dB, 70 dB and 90 dB, but also as sensorineural, conductive or mixed [1,2]. The main cause of hearing loss in the elderly is the age-related hearing loss, also called presbycusis. This type of hearing impairment occurs as individuals grow older and is usually sensorineural hearing disorder greater for high-pitched sounds and affects both ears equally. It is mainly caused by age-related changes in the inner ear, such as loss of inner hair cells and decreased blood supply, but yet the cumulative effect of chronic and repeated noise exposure can be associated. An important detail is that, because the process is gradual, people who have age-related hearing loss may not realize their capability of hearing is diminished [2-5]. Disabling hearing loss, in its turn, is characterized by hearing thresholds superior than 40 dB in the better ear in the adults (Site WHO). It is estimated that 466 million people worldwide – over 5% the world’s population – have disabling hearing loss. One third of these people are over 65 years old (Site WHO). In Juiz de Fora, the

prevalence of disabling hearing loss in the general population was 5,2% in 2011 [6]. Hearing impairment brings an enormous impact on the individual’s ability to communicate with others. Such difficulty can cause loneliness, isolation, frustration, depression and dementia, besides of enormous economic impact [7,8]. The objective of this study was to analyze the prevalence of disabling hearing loss in the elderly of Juiz de Fora.

## Methods

This is a cross-sectional descriptive study, whose prevalence measure was estimated in relation to the number of individuals with disabling hearing loss compared to the total number of individuals investigated, according to age group over 60 years old. The research was approved by Research Ethics Committee of UFJF Committee and was performed at a reference center for elderly patients. All the patients who were recruited signed the Free Informed Consent Form. The sample of this study was comprised of only one group: 122 individuals over 60 years old who agreed to participate on the research. A data collection questionnaire was applied, based on the WHO model (1999) with modifications, including the inclusion of other variables of interest. Pure tone audiometry



was performed in 122 patients after meticulous physical examination of the external ear. Data was collected and compiled. A simple math equation was performed to achieve the prevalence of disabling hearing loss in the sample studied.

## Results

Out of 122 older adults, 85 (69,6%) presented disabling hearing loss.

## Discussion

The prevalence of disabling hearing loss in this sample was bigger than in the general population of elderly people. This may be explained by the fact that all the patients had other health problems– reason why they attend to a reference center.

## Conclusion

Hearing loss, specially disabling hearing loss, is a frequent condition in the elderly and has a big impact on their quality of life. For that it should be promptly diagnosed so treatment can be initiated.

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