Measuring Auditory Sensitivity Over the Age

Carla Peixoto, Lúcia de Sousa, João Paulo Teixeira

Instituto Politécnico de Bragança, Escola Superior de Tecnologia e Gestão, Campus de Santa Apolónia Apartado 134 5301-857 Bragança, Portugal

Abstract

This study consisted in the development of an audiogram software program using the soundboard of the computer and with the audiogram measure the sensitivity lost over the age. The audiogram tests were performed to 35 subjects belonging to the female and male gender, aged between 10 and 88 years. Some of the subjects with more advanced age had hearing problems over the course of age. However, none of them was carrying any type of hearing aid. Fig 1 shows the comparison of the average sensitivity over the decades of age. As conclusion it can be said that the developed audiogram has sensibility enough to measure the human ear sensitivity over the audible range of frequencies. As a result of the performed test to subjects, as expected, the lost of sensitivity over the age was confirmed and measured.

![Hearing sensitivity graph](image)

Fig. 1 – Average hearing sensitivity lost over decades of age.

Keywords: Ear, sound, Hearing sensitivity, Audiogram.