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BASIC AND TRANSLATIONAL RESEARCH

Decades of improvement – Unravelling the factors behind better hearing in Swedish 70-year-olds

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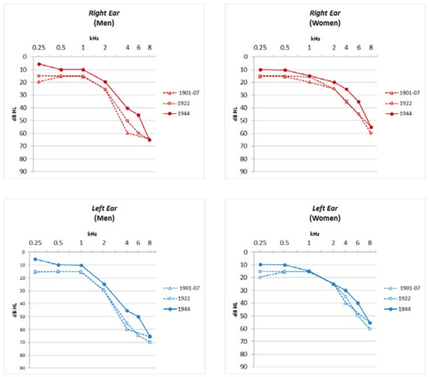
Background

Research conducted in Sweden has found that hearing sensitivity among 70-year-olds has improved significantly during the last half-century.

The most notable change was observed in the male population, where the prevalence of hearing loss decreased from 53% to 28% with the largest effect seen in the higher frequencies. Similarly, among women, the prevalence decreased from 37% to 23%.



Objectives

The reasons for the improved hearing among 70-year-olds in Sweden are still unclear. Therefore, this study aims to investigate modifiable risk factors associated with better hearing among Swedish 70-year-olds.

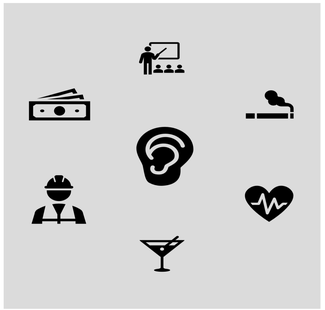
Method and Materials

This ongoing study is part of the Gothenburg H70 Birth Cohort investigation, which aims to examine the health of older populations through epidemiological, multidisciplinary research. The study and preliminary mediation analyses include:

- Two cohorts of 70-year-olds: one born in 1901-1907 (n=674) and another born in 1944 (n=1114).
- The variables socioeconomic status (educational level and main occupation), smoking, alcohol and cardiovascular diseases.
- The outcome PTA4

Results and conclusion

Preliminary mediation analyses suggest that changes in the hearing sensitivity between 70-year-olds over four decades are mediated by educational level, main occupation and smoking habits. Cardiovascular diseases and alcohol had no effect, but results may differ in further analyses with other outcomes and including gender differences.



70-year-olds residing in Gothenburg today have a higher level of education, and occupations associated with a higher socioeconomic status. These occupations typically involve less exposure to noisy environments. Hearing conservation programs in the industry have contributed to less noise exposure as well. Additionally, changes in lifestyle factors like smoking among later born 70-year-olds have positively influenced the hearing.

During almost half a century, Swedish 70-year-olds have shown an improvement in hearing sensitivity. The present study indicates that this improvement is associated with positive changes in socioeconomic status and smoking habits. Understanding how these modifiable factors are related to age-related hearing loss can be valuable in promoting hearing health through preventive measures.

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