Tackling Hearing Health Inequalities

Tackling Hearing Health Inequalities: The Importance of a Life-Course Approach and the Vicious Cycle among Socioeconomic Position and Hearing Loss

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Aim

- To examine the mechanisms and to explain the relationship between socioeconomic inequalities and hearing health in a life-course perspective.
- To formulate a theoretical framework for the prevention, identification and management of hearing health inequalities, through a Conceptual Model for Hearing Health Inequalities (HHI Model).

Introduction

Hearing loss (HL) is a major global health challenge and the most prevalent sensory disorder, as approximately 15% of the adult population has some degree of hearing loss and almost 7% of the world's population –half a billion people- has disabling hearing loss (hearing threshold of 41 decibels or greater in the better ear). HL has a negative impact in people's life, as has been associated with negative physical, social, cognitive, economic and emotional consequences. Besides, the negative impact that has in healthy ageing is not negligible, as the one third of people above 65 live with disabling hearing loss [1].

There is evidence for a number of modifiable factors in its aetiology so that up to 50% of cases of HL could be prevented or delayed. Currently, the modifiable factors linked to socioeconomic inequalities in hearing health are not well defined in the literature [2]. This study attempts to describe these mechanisms, starting from birth to older adulthood.

Methods

The methodology for this study was a review of research literature in which hearing loss was related to health inequalities, either as a determinant or as a health outcome. A database search (PubMED, Scopus, PsychINFO) was conducted using the keywords "hearing AND inequalities", "hearing AND disparities" and "hearing AND determinants" in Title/Abstract. Age group 45 and above was used as a search filter. After review of titles and abstracts of 160 articles that met these criteria, 72 articles were finally selected for review and inclusion in the integrative review, which form the theoretical framework of the conceptual model.

Results

According to the HHI Model (Figure 1), children born to parents from a lower socioeconomic background tend to experience more illness and injuries and the antibiotic drugs use may affect hearing health. In turn, consequences of HL in children can include impairment in language skills and lower educational achievement compared to children with normal hearing [3]. This is a predictor of educational and social inequality in later life, as a lower educational level limits employment opportunities, relegating them to lower level, poorly paid jobs in early adulthood. Manual jobs tend to be those with higher levels of noise exposure, that contribute to the deterioration of hearing ability, along with a possible faster deterioration in the overall physical health of lower occupational grades [4].

Results (continue)

The lower educational status is also related to lower health literacy, which is a common issue among people of lower socioeconomic position [5]. That can explain why individuals of a lower socioeconomic position adopt an unhealthy lifestyle, with higher levels of smoking and alcohol consumption, higher body mass index (BMI) and lower levels of physical activity which are all risk factors for HL.

Occupation and income may also affect access to hearing health services and hearing aids use [6]. Not only financial barriers (direct/indirect) but also self-diagnosis may influence the initiation of help-seeking for hearing difficulties and consequently the hearing aid acquisition and use in middle adulthood.

Hearing health inequalities in middle adulthood can then affect the retirement status and income of older adults, by impacting their ability to continue working or to advance occupationally [7]. Lastly, there is potential for HL to cause additive adverse impacts on lower socioeconomic groups' health, affecting not only hearing ability but also the social participation, due to reduction in speech understanding [8]. These difficulties in communication can negatively affect the use of and communication in health services and thus the management of health conditions comorbid with HL.

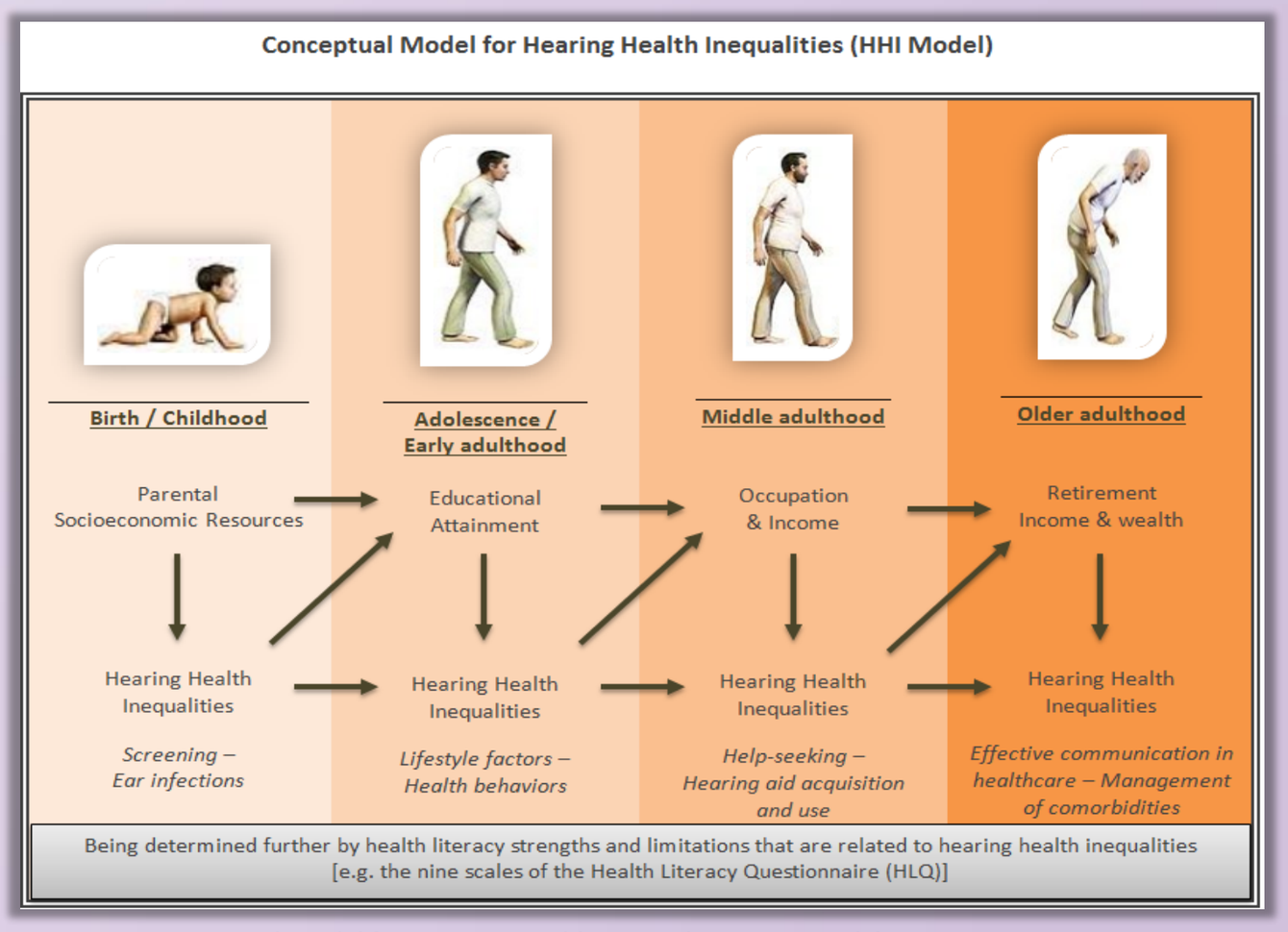

Figure 1. Conceptual Model for Hearing Health Inequalities (HHI Model)

Discussion

People of lower socioeconomic position may face a double burden: first, increased levels of health impairments and, second, lower quality of life after their health impairment occurrence [9]. Besides, the hearing health inequalities accumulate, so the lower a person's socioeconomic position during the life-course, the more the accumulative hearing deterioration. We can thus understand how the low socioeconomic position and HL form a vicious cycle, with each causing the other, as HL may be both a consequence and a causal contributor of socioeconomic disparity. The Hearing Health Inequalities Model (HHI Model) identifies determinants of hearing loss using a life-course approach, having important implications for the current and future directions in hearing health equity research and action.

Summary

- There are lot modifiable determinants of age-related hearing loss, in several stages across the life span, thus a substantial proportion could be prevented or delayed.
- Tackling socioeconomic inequalities in hearing health during the life-course could significantly improve the hearing health of populations.
- The Hearing Health Inequalities Model (HHI Model) could be used as a useful tool for the prevention, identification and management of hearing health inequalities and for policy formulation aimed at hearing loss risk reduction.

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Acknowledgments

This research was funded by the NIHR Manchester Biomedical Research Centre. The views expressed are those of the author(s) and not necessarily those of the NHS, the NIHR or the Department of Health