

The importance of evaluation in adults between 45 and 65 years old

Abstract

Hearing loss is a public health problem that affects the individual's communication that requires a multidisciplinary evaluation and an intervention as soon as possible to improve his/her quality of life.

Volume 6 Issue 1 - 2021

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Received: January 02, 2021 | **Published:** January 19, 2021

Introduction

The world population is aging related to increased life expectancy and falling fertility levels. In 2000, the Brazilian population over 60 was only 5%; it is assumed that in 2050 it will be 18%.¹ Projections indicate that in 2025, it will occupy the 6th place among the countries with the oldest in the world (OMS). We are experiencing a progressive increase in cases of dementia in the world and this increase is even more significant in developing countries. The number of people with dementia is expected to increase to 66 million by 2030, and 131 million by 2050,² driven by rising numbers of older adults.³ Thus, with the increase in life expectancy, there is a concern with the quality of life of the elderly population, creating new demands for specialized intervention, as is the case of Speech Therapy. Facing the reality, we must not think of when we are going to grow, but how we are going to grow.

With aging, there is a decline in physiological and sensory functions. Among the sensory changes caused by advancing age, is presbycusis, hearing loss due to aging (from English, Age Related Hearing Loss, ARHL-Rosenhall, 2003), which affects the peripheral auditory system, and leads to a decline in communication capacity, which leads the elderly to social isolation and deprivation of information sources and, consequently, to social and emotional changes. Hearing loss is the third most prevalent chronic disease and the fourth leading cause of disability.^{4,5} This significant increase in hearing loss occurs in the elderly population, in which one in three adults over 65 years of age presents disabling hearing loss.⁶ Prevention is better than cure and underlies the growing interest in modifiable risk factors. In published work on dementia risk, midlife has been defined as 45–65 years and later life as older than 65 years.

Researching and debating dementias is fundamental in a world where people live more and more. As we do not have the cure, for the declining in the clinical picture of mental skills such as memory and language, prevention is still the best medicine. One of the factors associated with dementia, is hearing loss, which is related to cognition and memory. We have used the prevalence of hearing loss

in individuals older than 55 years because this age was the youngest mean age in which presence of hearing loss was shown to increase dementia risk. Hearing loss is therefore grouped with the midlife risk factors, but evidence suggests that it continues to increase dementia risk in later life.

Studies show that the prevalence of hearing loss in individuals diagnosed with dementia is higher than that observed in elderly people without dementia and it is believed that hearing loss prominently promotes dementia.⁷ If there is a real causal relationship between hearing loss and MCI, it will provide insights for preventing dementia in clinical settings. The use of hearing aids seems to reduce adverse health outcomes due to loneliness.⁸ Another hypothesis is that hearing loss leads to social isolation, which has been shown to contribute to dementia.^{9,10}

It is known that 65% of the risks for the development of dementias are not modifiable, among which we can mention the age. The older you are, the greater your risk of developing dementia. The 35% of modifiable factors include improving childhood education, physical exercise, maintaining social engagement, reducing or quitting smoking, intervening in hearing loss, controlling depression, diabetes, hypertension and obesity.¹¹

Among, education, depression, social isolation and hearing loss can be highlighted. In turn, social isolation can be observed in the hearing impaired, mainly the elderly, prior to the speech therapy intervention, through the fitting of hearing aids. There is a reversal of the picture, when they become users of sound amplification devices. The treatment of hearing loss causes individuals to remain involved in social activities.¹² This benefit is not only seen by users, but also by family members, who are benefited, since family relationships seem to be more preserved.

Regarding hearing loss, due to the results obtained in several studies, the UK National Institute of Health and Care Excellence (NICE) and the US National Institutes of Health (NIH) decides to include social isolation and peripheral hearing loss as potentially modifiable risks for the development of dementia in its guidelines

because of the 35% of these possible modifiable risks, hearing loss accounts for 9.1% and social isolation for 2%.

As already explained, although the precise mechanisms by which hearing loss causes an adverse cognitive state are not clear, several potential mechanisms have been proposed. First, hearing deprivation can cause decreased socialization and increased depression, as well as a decline in cognitive function, which can result in CCL or dementia.¹⁰ In addition, it is possible that hearing loss causes cognitive resources, working memory, to operate with greater demand to process altered sound information, which creates an excessive cognitive load on upper cortical functions, leading to cognitive decline and dementia.¹³ Hearing impairment can also modify the auditory pathway and the brain, which causes cognitive decline and dementia.¹⁴

Alternatively, studies suggest that hearing impairment and cognitive decline share a common neurodegenerative process, which leads to both hearing loss and CCL / dementia.¹⁵ Studies have shown that hearing loss precedes the occurrence of MCI and dementia, and there are studies that have shown that the use of hearing aids is associated with better cognition, regardless of social isolation and depression.

Improving the hearing capacity of the entire population can fundamentally reduce the prevalence of hearing loss and reduces the risk of dementia. The implementation of the population strategy, however, is challenging, since public awareness of hearing loss as an important risk factor for MCI and dementia is low among the elderly compared to others, such as physical activity.¹⁴ Several studies have investigated the impact of hearing aid use on cognition.^{7,16–18}

The Lancet Commission on Dementia Prevention, Intervention and Care¹⁹ presented emerging knowledge on what to work for and what to do for preventing and controlling dementia. It is a commission that works particularly on health systems in developed countries. This commission extended the risk models for dementia to include hearing loss from a new review and meta-analysis as well as social isolation. Cohort studies that have investigated the effects of hearing loss, even mild, are relatively new, demonstrating the risk of cognitive decline and dementia in cognitively normal individuals, however presenting a basic hearing loss.

Conclusion

Meta-analysis studies have shown that hearing loss is associated with an increased risk of MCI and dementia among the elderly. Future intervention studies are needed to assess whether treatment of hearing loss can reduce the risk of MCI and dementia in older adults. Measures should also be taken to improve hearing ability among the elderly to further prevent MCI and dementia. According to the World Health Organization (WHO) there is a relationship between the appearance of cognitive impairment or dementia with risk factors related to lifestyle, such as depression and social isolation. The good news is that, even so, the treatment of hearing loss can have the potential to prevent the onset or delay the progress of dementia. Some of the proven benefits concerning the hearing loss treatment, for example, are decreased signs of depression, reduced social isolation, improved short-term memory and enhanced executive function. Even with the fact that we all age, we can enjoy aging healthy.

It is very important to detect the hearing loss as early as possible. Hearing screening programs should be implemented for adults 45–65 years of age that allow rehabilitation with hearing aid fitting. At this age, adults have more social life and may not be retired yet. In

addition, being younger they have greater manual dexterity, better visual acuity, better health and so on which greatly facilitates the successful fitting of hearing aids.

Acknowledgments

None.

Conflicts of interest

Author declare that there is no conflict of interest.

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