Canadian Audiologist

The Official Publication of the Canadian Academy of Audiology

The Lancet Puts Forth Landmark Information about Hearing Loss and Dementia

Kelly Tremblay

Published January 22, 2018

In a previous issue of correlation between untreated hearing loss and dementia, recognizing that "correlations" do not mean the same as "causation," was discussed. We also described the importance of surveying the gamut of science to identify converging evidence across studies. Keeping those points in mind, we continue the discussion of hearing loss and dementia by describing the recent *Lancet Commission on dementia prevention, intervention and care.* The purpose of the Lancet Commission was to review the best available evidence and produce recommendations on how to best manage, or even prevent, the dementia epidemic. Twenty-four international experts reviewed and consolidated the large amount of research that has amassed on the topic of dementia risk factors, treatment and care. The Commission conducted a review and meta-analysis and then proposed a novel life-course model of risk, highlighting the opportunity for prevention.

The Lancet Commission reported on what is called population attributable fractions (PAFs). PAFs can be defined as an estimate of the proportion of cases of a certain outcome (e.g., dementia) that could be avoided if exposure to a specific risk factor were eliminated. In other words, how many cases (of dementia) would be prevented if nobody had the risk factor (e.g., midlife hearing loss).

In their summary, the research team estimated that 35 percent of all cases of dementia are attributable to **nine** potentially modifiable risk factors. The key word here is, ***modifiable***. Risk factors are either **modifiable** (you can take measures to change them), or **non-modifiable** (they are assumed to be fixed).

Here the modifiable risk factors are presented within different stages of life.

- Early life – Education to a Maximum of Age 15 (8%)
- Mid-life – Hypertension (2%); Obesity (1%); Hearing Loss (9%)
- Later life – Depression (4%); Diabetes (1%); Physical Inactivity (3%); Smoking (5%); Low Social Contact (2%)

Zooming in on hearing loss (9% of the risk) and low social contact (2% of the risk) is particularly relevant to hearing health professionals. If these risk factors are modifiable then it reaffirms the importance of identifying and treating hearing loss as early as possible. Furthermore, doing so with the goal of enhancing a person's quality of life by improving his or her ability to communicate with others could also improve social contact. Even though there is no evidence that hearing loss or social isolation causes dementia at this time, nor is there evidence that improved hearing or social contact reduces the risk of developing dementia, the Lancet Commission puts forward a plausible hypothesis that deserves formal study. It is possible that hearing loss may add stress to an already vulnerable brain with regard to the changes that occur, and that hearing loss may also increase feelings of social isolation.

The Lancet Commission acknowledged that research in this area is new and other risk factors, not considered in this study, may emerge to be relevant. Also, the potential role the remaining 65% non-modifiable risk factors have on an individual's life span trajectory is not fully known. Nevertheless, I view the Lancet Commission on dementia prevention, intervention and care as a welcomed call to action for more research and additional services in the area of hearing health. Because of this report, moving forward, efforts to minimize hearing loss and social isolation can now be viewed through the lens of improving someone's brain health, as well as their quality of life.

Reference

Livingston G, Sommerlad A, Orgeta V et al. Dementia prevention, intervention, and care. Lancet 2017;390(10113)2673–34.