Potentially Modifiable Risk Factors for Alzheimer's Disease in Colombia: A Secondary Analysis of the Ministry of Health Databases

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Objectives

With an increasing prevalence, Alzheimer's disease (AD) is the most common cause of dementia. However, a percentage of potentially modifiable cases have been reported. This poster describes the prevalence of four of these potentially modifiable risk factors: hearing loss, diabetes mellitus (DM), obesity, and hypertension.

Methods

Descriptive cross-sectional study with data from 2018-2022, using the Colombian health system database SISPRO. The population of this study consisted of all people within the age range 50-100 with a main diagnosis of AD according to the ICD-10 codes. Subjects were divided by decades, and the prevalence ratio (PR) for the outcome of AD and each of its potentially modifiable risk factors was then calculated and adjusted by age using the Mantel-Haenszel formula.

Results

167.556 cases of AD were identified, with 66.4% being females. Peak age was in octogenarians, and prevalence for people older than 70 was 33.3 cases / 1000 people. The PRs showed a positive association for all risk factors, except obesity. Following age correction, obesity's PR value shifted to positive in males and overall population, but remained negative for females. The highest post-correction PR in the overall population was hypertension (1.44), followed by DM (1.34), hearing loss (1.31) and obesity (1.12). Notably, PRs had a greater magnitude in younger and male age groups.

Table 1. Prevalence of Alzheimer's Disease per 1000 patients stratified by decades.

Age in years	Women	Men	Total
60 - 69	4.1	3.2	3.7
70 - 79	19.9	14.1	17.3
80 +	74.7	46.5	63.0

Table 2. Prevalence ratios for potentially modifiable risk factors in patients 50 years or older with Alzheimer's Disease

Risk factor	Women		Men		Total	
	Not adjusted	Adjusted	Not adjusted	Adjusted	Not adjusted	Adjusted
Hearing loss	2.08	1.30	2.47	1.52	2.17	1.31
Obesity	0.54	0.99	0.76	1.26	0.63	1.12
Diabetes	1.67	1.23	2.03	1.51	1.82	1.34
Hypertension	2.76	1.31	3.26	1.57	3.04	1.44

Conclusions

The results of this study are consistent with the fact that the prevalence of potentially modifiable risk factors is higher within the group of people with AD as their main diagnosis, in comparison to those without this diagnosis.
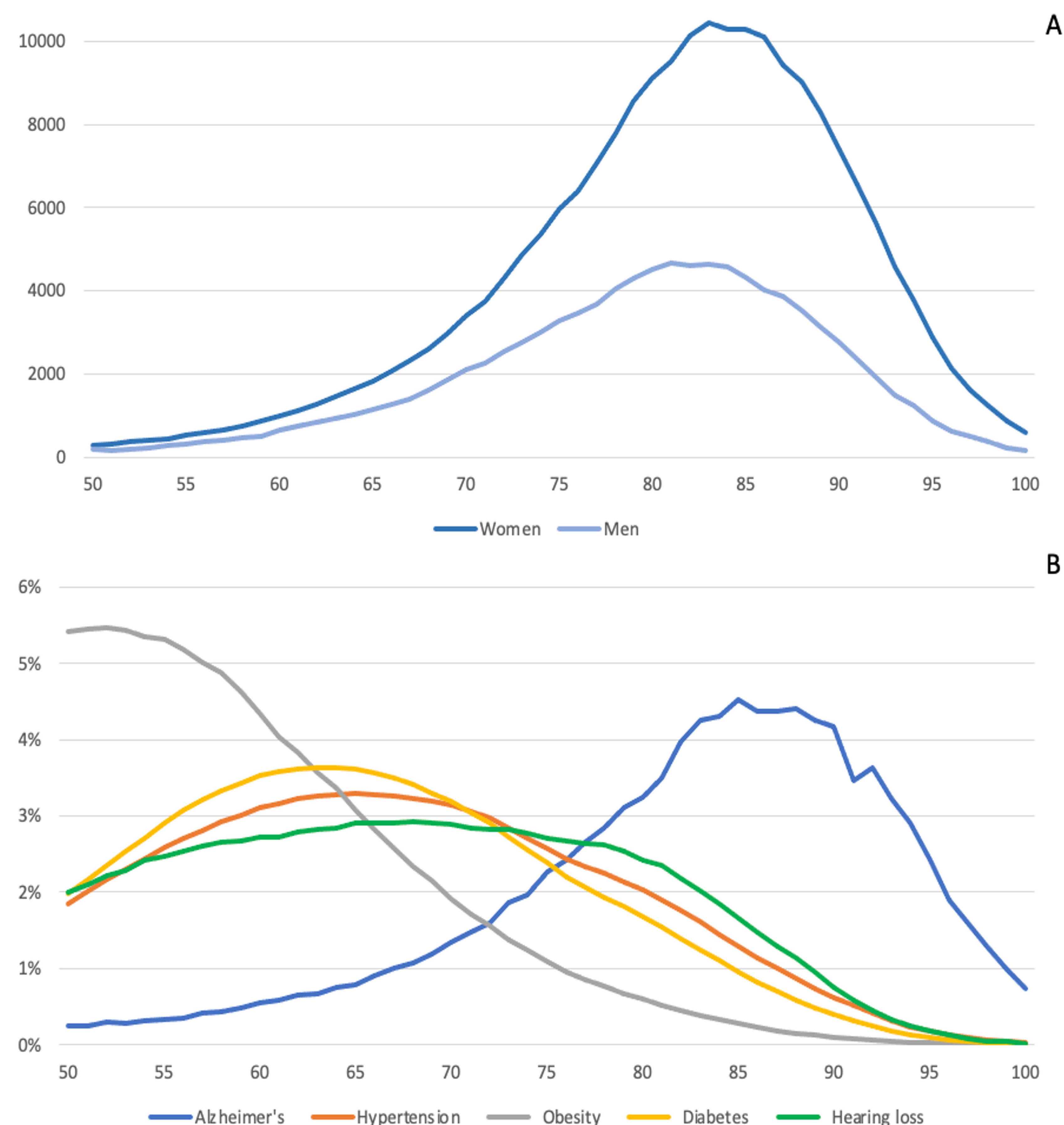

Figure 1. Alzheimer's disease and risk factors reports