

Number of teeth and cognitive function in Chilean Older Adults: findings from MAUCO Cohort

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Greater number of teeth is associated with higher cognitive function in older Chilean adults. These findings underscore the importance of incorporating oral health into dementia-prevention and healthy aging strategies.

INTRODUCTIONMETHODSRESULTS

- Studies suggest that greater number of teeth may be associated with better cognitive function, potentially through pathways related to nutrition and masticatory stimulation
 - However, evidence from Latin America remains limited
- Cross-sectional analysis (n=2,514) among participants ≥60 years, enrolled in Maule Cohort Study (MAUCO)
 - Number of teeth** was assessed during oral examination
 - Cognitive function:**
 - Addenbrooke’s Cognitive Examination–Revised (ACE-R)
 - Mini-Mental State Examination (MMSE)
 - Multivariable linear regression (β and 95% CI) adjusted for potential confounders² and stratifying by sex

- Participants with higher number of teeth [≥20 vs. 0 teeth] had statistically significantly higher cognitive scores (β [95% CI]: 5.74 [3.75, 7.74] ACE-R; 1.27 [0.69, 1.86] MMSE; all p-trend <0.001)
- The associations were more pronounced among women (ACE-R: β [95% CI]: 7.43 [4.81, 10.06] women vs 3.04 [-0.08, 6.17] men), with statistically significant interaction by sex (p-interaction = 0.018)

Table 1. Multivariable-adjusted associations between number of teeth and cognitive function

	Number of teeth	ACE-R	MMSE
		β (95% CI)	β (95% CI)
All participants ²	0	0.00 (Ref)	0.00 (Ref)
	1–9	2.79 (1.00, 4.57)	0.68 (0.15, 1.20)
	10–19	4.37 (2.56, 6.17)	0.92 (0.39, 1.46)
	≥20	5.74 (3.75, 7.74)	1.27 (0.69, 1.86)
	P-trend	<0.001	<0.001
Men	0	0.00 (Ref)	0.00 (Ref)
	1–9	0.63 (-2.36, 3.61)	0.90 (0.24, 1.56)
	10–19	1.24 (-1.66, 4.14)	1.51 (0.81, 2.21)
	≥20	3.04 (-0.08, 6.17)	1.55 (0.76, 2.34)
	P-trend	0.027	0.149
Women	0	0.00 (Ref)	0.00 (Ref)
	1–9	3.91 (1.70, 6.12)	0.90 (0.24, 1.56)
	10–19	6.35 (4.02, 8.68)	1.51 (0.81, 2.21)
	≥20	7.43 (4.81, 10.06)	1.55 (0.76, 2.34)
	P-trend	<0.001	<0.001
P-interaction		0.018	0.042

²Model adjusted for age (continuous), sex (female; male), education level (≤8 years; 9–11 years; ≥12 years), residence (urban; rural), smoking status (never; former; current), alcohol consumption (never; former; current), body mass index (underweight; normal; overweight; obese), and comorbidity count (0, 1, 2, ≥3).

CONCLUSIONS

- Number of teeth was associated with higher cognitive function scores, with evidence of monotonic positive dose-response relationships
- The positive associations were more pronounced among women, older age, and those with lower educational attainment
- Further longitudinal and mechanistic studies are needed to clarify the temporal sequence and biological pathways linking oral health to cognitive decline across diverse populations