Is there association between cognitive decline and reduced walking speed in older adults? Results from the ELSI-BRAZIL

P1-A5

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This study shows that older adults with reduced cognitive capacity exhibit slower walking speed. It contributes to understand the factors affecting functional activities in those with cognitive impairment and underscores the need for strategies to minimize cognitive decline in this population.

BACKGROUND

The reduction in walking speed is a characteristic of aging and has become an important marker for detecting various physiological and functional changes over time.

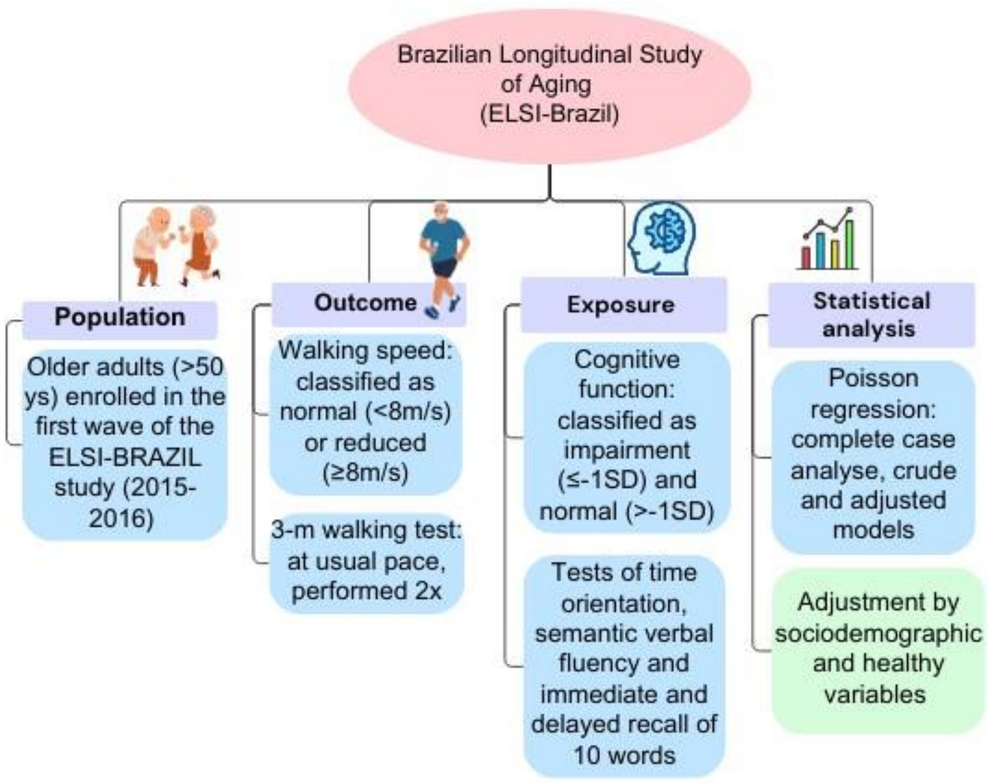
Complex neuropsychological influences on walking are increasingly recognized. However, studies linking cognitive decline and walking speed in older adults do not show consistent results

AIM

The aim of this study was to investigate the association between cognitive and reduced walking speed in older adults.

METHODS

This is a cross-sectional study with data from the Brazilian Longitudinal Study of Aging (ELSI-Brazil), designed to be representative of the Brazilian population aged 50 and older (70 cities across 5 Brazilian regions). The study was approved the Research Ethics Committee (CAAE: 34649814.3.0000.5091).



RESULTS

Of the 9,412 respondents in the ELSI-Brazil survey, 7,244 participants were eligible for the study. The majority were female (53.5%), aged between 50 and 59 years (51.1%), with brown skin color (45.1%), with partners (66.0%), and had 1 to 4 years of education (37.0%). The descriptive analysis of the cognitive and walking speed variables is presented in Table 1.

Table 1. Descriptive analysis of exposures and outcome variables

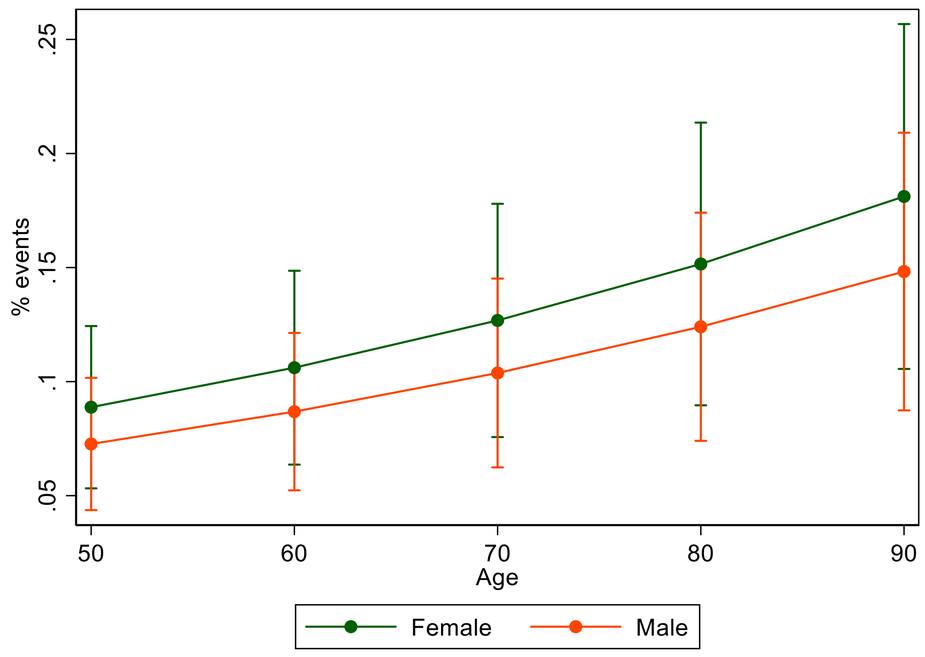
Variable	n	% (CI95%)
Time-orientation		
SD>-1	6266	86.5 (85.4; 87.5)
SD≤-1	978	13.5 (12.4; 14.6)
Verbal Fluency		
SD>-1	6248	86.2 (84.4; 87.7)
SD≤-1	996	13.8 (12.3; 15.6)
Memory score		
SD>-1	6129	84.5 (82.6; 86.3)
SD≤-1	1115	15.5 (13.7; 17.4)
Cognitive function		
SD>-1	6326	87.6 (86.0; 89.0)
SD≤-1	918	12.4 (11.0; 14.0)
Walking speed		
≥0.8 m/s	2658	38.3 (34.1; 42.7)
< 0.8 m/s	4586	61.7 (57.3; 65.9)

*SD: Standard Deviation

RESULTS CONTINUED

The prediction of reduced walking speed according to age and sex is presented in Figure 1

Figure 1 - Proportion of predicted events of reduced walking speed according to age and sex



The results of Poisson regression analysis for the association between cognitive function and walking speed are presented in Table 2.

Table 2. Results of regression analysis

Variable	% (CI95%)	p value	Crude prevalence rate	Adjusted prevalence rate*
Cognitive function		<0.001		
SD>-1	60.1 (55.7; 64.4)		1.00	1.00
SD≤-1	72.8 (67.3; 77.7)		**1.21 (1.13; 1.29)**	**1.18 (1.11; 1.26)**

*Model adjusted by age, sex, skin color, marital status, smoking status, alcohol consumption, physical activity, multimorbidity, depressive symptoms

CONCLUSIONS

The results showed that older adults who experiencing cognitive impairment have an increased prevalence of reduced walking speed, even after adjusting for sociodemographic, health, and behavioral factors.

These findings emphasize the importance of strategies to minimize cognitive decline during aging.

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Conflicts of Interest

None

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