

Fall History Predicts Adherence To A Multidomain Non-pharmacological Intervention For Older Adults

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INTRODUCTION

- Non-pharmacological interventions (NPIs) address modifiable risk factors in aging and support cognitive health through lifestyle-based changes [1]. These programs also target major public health concerns in later life, including fall prevention, as falls can limit mobility and independence [2,3].
- Beyond physical injury, falls may contribute to social withdrawal, anxiety, and depression [4], potentially interfering with older adults' ability to complete physical and social activities in multidomain programs.
- In NPIs, adherence, defined as sustained participation and completion of intervention activities, is essential for achieving cognitive and functional benefits.
- This study examined whether fall history predicted adherence to the first multidomain non-pharmacological intervention for the prevention of cognitive decline in older adults in Panama.

For more information about the first non-pharmacological intervention program for the prevention of cognitive decline in Panamá, visit our previous poster presented at AAIC 2025:



METHODS

- This 4-month intervention program enrolled 64 community-dwelling adults aged 60-80 years.
- Baseline assessments included sociodemographic, clinical, and health history measures, including fall history.
- Adherence was defined as completion of the intervention protocol, which included group cognitive training and exercise sessions, use of a computerized cognitive program, and weekly individual walks.
- Binary logistic regression examined whether fall history predicted non-adherence.
- A chi-square test of independence assessed the association between recurrent falling (recurrent vs. non-recurrent) and adherence. Associations between adherence and sociodemographic, cognitive, and functional variables were also explored.

RESULTS

- 43 of 64 participants (67.2%) completed the intervention (attrition: 32.8%, n = 21).
- Each additional fall in the previous 12 months increased the odds of non-adherence by 68% (OR = 1.68, 95% CI: 1.01–2.77, p = .044).
- Recurrent fallers were more likely to be non-adherent than non-recurrent fallers ($\chi^2(1) = 5.44$, p = .020).
- No sociodemographic, cognitive, or functional variables were significantly associated with adherence.

Table 1. Binary Logistic Regression Predicting Non-Adherence from Fall History

Variable	B (SE)	OR [95% CI]	p
Number of Falls (past 12 months)	0.516 (0.257)	1.68 [1.01–2.77]	.044*

Note. Outcome: Non-adherence (1 = did not complete intervention; 0 = completed intervention). N = 64. Hosmer–Lemeshow p = .278.

CONCLUSION

Older adults with a history of falls were less likely to adhere to a multidomain non-pharmacological intervention. Fall history may serve as an easily identifiable clinical marker for participants at greater risk of non-adherence to intervention programs. Early identification of these individuals could enable tailored support strategies to improve intervention completion, improve potential cognitive and functional benefits, and strengthen the implementation of multidomain prevention programs in Panama and the region.

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