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Hello

MULTILINGUALISM AND COGNITIVE PERFORMANCE IN OLDER ADULTS: EVIDENCE FROM INDONESIA

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KEY TAKEAWAY: Multilingualism is independently associated with better global cognition and selective episodic memory domains in older adults in Indonesia, beyond the effects of education



114
Older adults
≥ 60 y.o



3 Language
Groups

Monolingual, bilingual,
and multilingual



Cross-sectional
Study

Outpatient clinics
in Medan, Indonesia



INTRODUCTION

Multilingualism has been proposed as a potential contributor to cognitive reserve, and may be associated with delayed onset of Alzheimer's disease and related dementias. However, evidence across cognitive domains remains inconsistent, and data from Southeast Asian populations are limited.



AIM

To examine the association between multilingualism and cognitive performance in older adults in Indonesia, with a focus on domain-specific effects relevant to early cognitive decline.



METHODS

DESIGN & SETTING



Cross-sectional study in outpatient clinics at Adam Malik Hospital, Medan, Indonesia



PARTICIPANTS

114 elderly aged ≥ 60 years



LANGUAGE STATUS

Monolingual, Bilingual, Multilingual assessed using LEAP-Q



COGNITIVE ASSESSMENTS

- Global Cognition: MoCA-INA
- Memory domains (BCSB-INA):
 - Incidental Memory
 - Immediate Memory
 - Learning
 - Delayed Recall
 - Recognition



ANALYSIS

Multiple linear regression adjusting for age, sex, and education



RESULTS



GLOBAL COGNITION (MoCA-INA) Multilingualism associated with better global cognitive performance $\beta = 2.535$, $p < 0.001$

DOMAIN SPECIFIC MEMORY (BCSB-INA)

Domain	β (Multilingual vs. Monolingual)	p-value	Better Performance with Multilingualism?
Incidental Memory	0.194	0.246	No
Immediate Memory	0.577	0.001	Yes ↑
Learning	0.499	0.004	Yes ↑
Delayed Recall	0.788	0.001	Yes ↑
Recognition	0.142	0.352	No



Regression models explained a substantial proportion of variance in cognitive outcomes (adjusted R^2 : 0.355–0.750).



CONCLUSIONS



Multilingualism was independently associated with **better global cognition** and **episodic memory performance**



Education remained a strong contributing factor across all domains



Multilingualism may **contribute to cognitive reserve** and **support cognitive resilience** in aging populations



REFERENCES



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