

Does Age Predict Disease Prognosis over One Year in Rural Patients with Dementia



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BACKGROUND/AIM

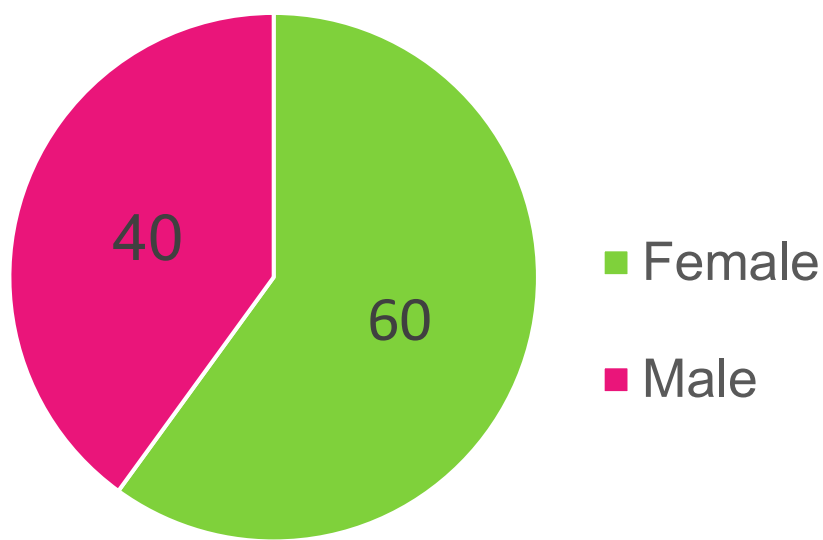
- Dementia is a progressive neurodegenerative condition that poses significant challenges for patients and caregivers, especially in rural areas where access to healthcare is limited.
- Age is a well-established risk factor for dementia onset, however, its role in predicting disease progression remains unclear.
- We aim to study whether age predicts one-year prognosis in rural dementia patients.

METHODS

We conducted a longitudinal analysis using data from the Rural and Remote Memory Clinic (RRMC). Patients underwent baseline and one-year assessments with standardized tools: Mini-Mental State Examination (MMSE), Functional Activities Questionnaire (FAQ), Clinical Dementia Rating Scale (CDR), and Neuropsychiatric Inventory (NPI). Outcomes were compared across three diagnostic groups: Alzheimer's disease (AD), all-type dementia, and no cognitive impairment. Data analysis was performed using SPSS.

Primary Outcomes	Secondary Outcomes
1 Year Cognitive Outcome(MMSE1)	1 Year NPI1
1 Year Functional Outcome(FAQ1)	1 Year Dementia severity(CDR1)

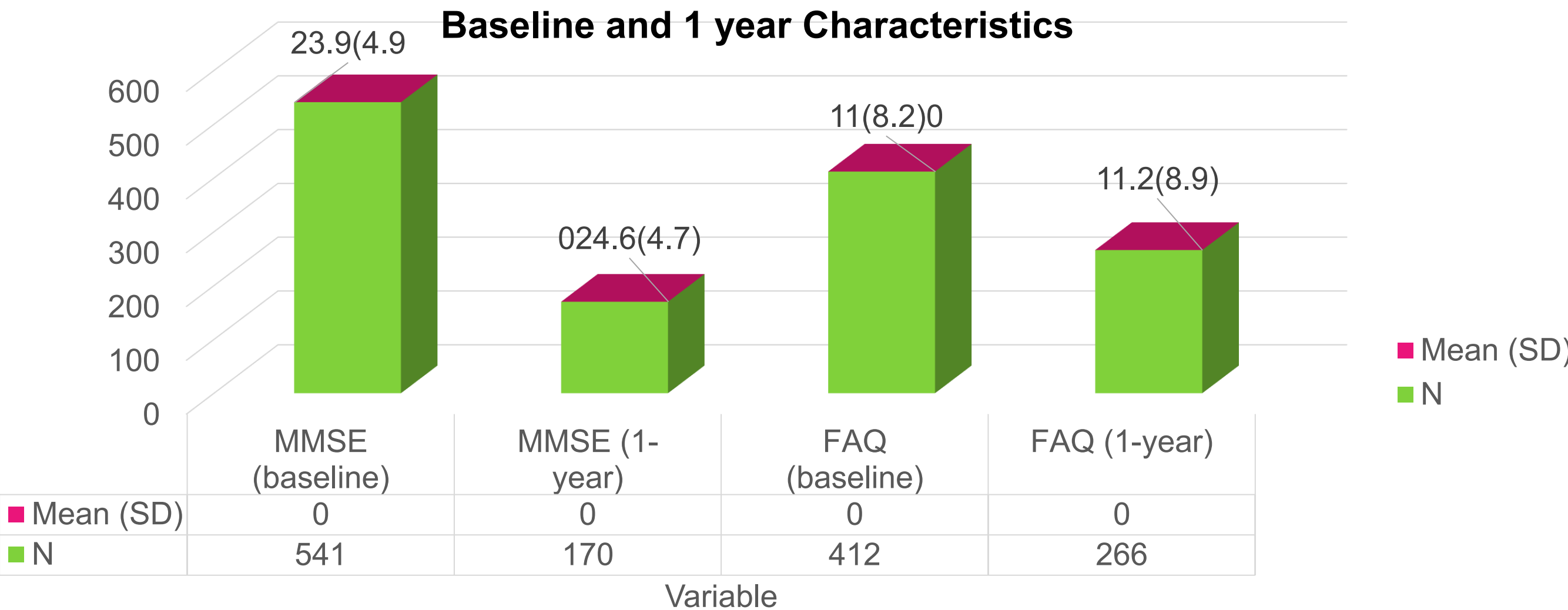
Sex Distribution: In Percentage



Age Distribution:

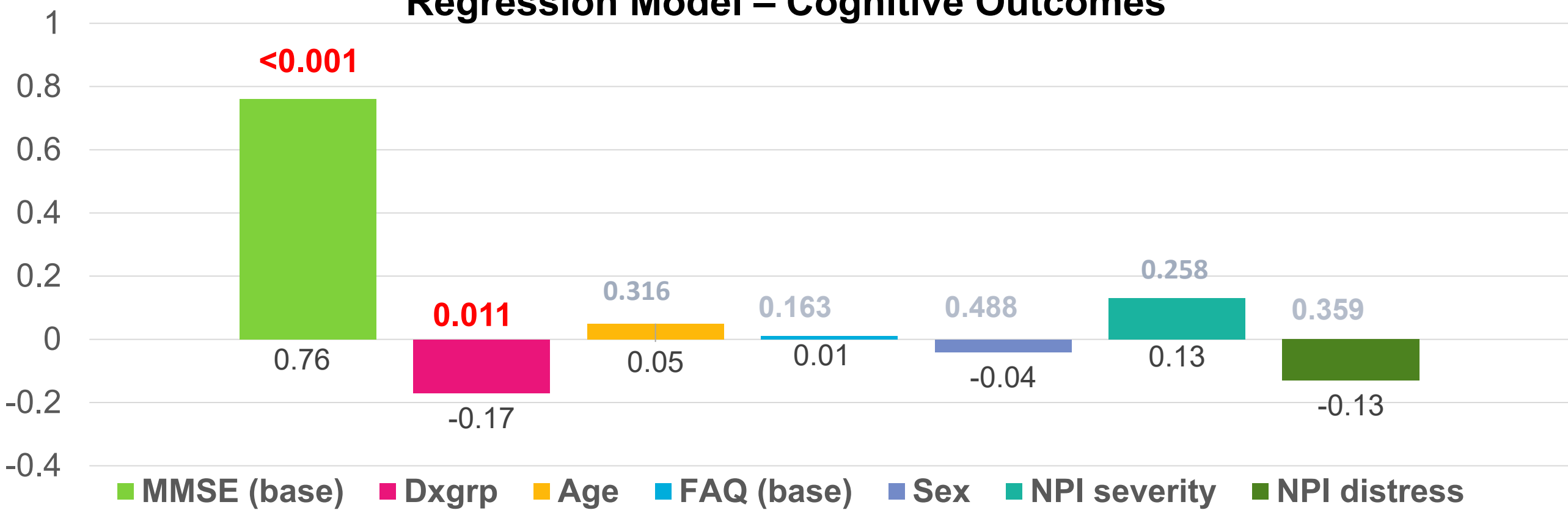
statistic	Value(years)
Mean	70.1
SD	11.5

RESULTS

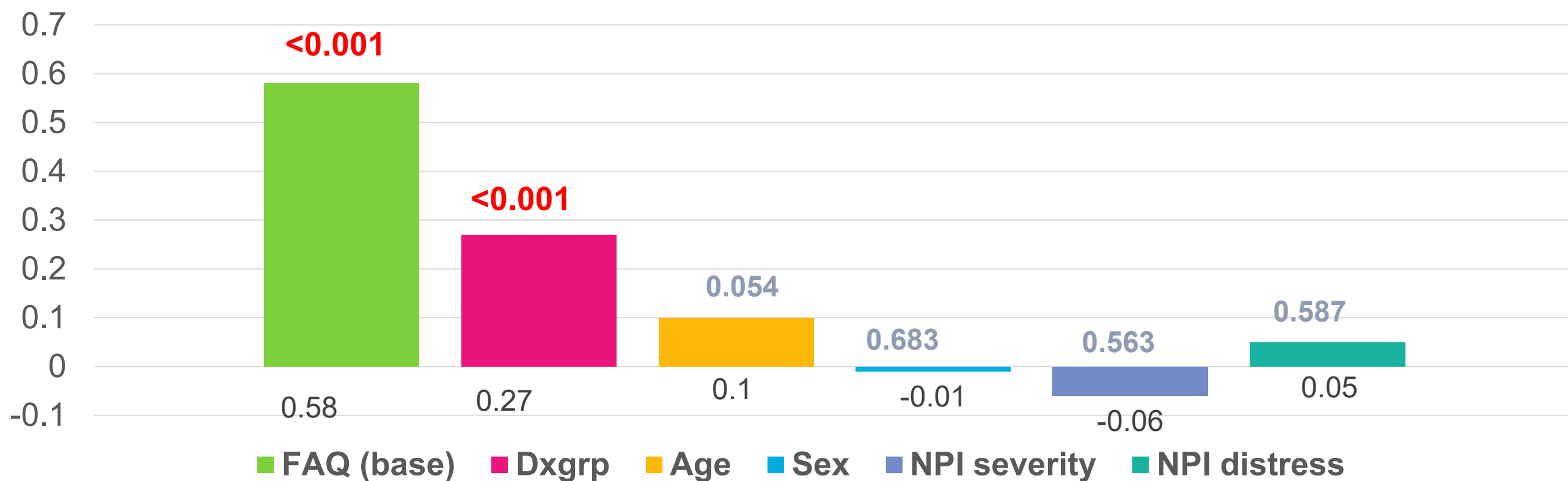


A total of 673 participants were included (mean age was 70.1 years and Standard deviation (SD)11.51), of which 611 had valid data. Age did not significantly predict cognitive ($p = 0.316$) or functional ($p = 0.054$) outcomes. Baseline MMSE scores strongly predicted cognitive outcomes (p value less than 0.001), and baseline FAQ scores predicted functional outcomes ($p < 0.001$). Diagnostic group (AD vs. non-AD) was an important predictor of both cognitive ($p = 0.012$) and functional ($p < 0.001$) trajectories. Neuropsychiatric symptoms and sex showed no substantial associations.

Regression Model – Cognitive Outcomes



Regression Model – Function Outcomes



Summary:

Predictor	Beta	P-value	Significant(y/N)
MMSE baseline	0.800	<0.001	Y
Dx group	-0.153	0.011	Y
Age	0.053	0.316	N
FAQ	0.034	0.613	N
Sex	-0.035	0.488	N

CONCLUSIONS

- Age is not a significant predictor in this population of cognitive or functional decline measured over 1 year..
- Baseline cognitive (MMSE) and functional (FAQ) scores are strong predictors of outcome.
- Diagnostic group (AD vs. non-AD) significantly affects prognosis.
- Neuropsychiatric symptoms and sex are not significant predictors.

Early, comprehensive assessment is critical—especially in rural populations. Focus on baseline cognition and function, and diagnostic subtype, for prognosis and care planning. Age alone should not guide short-term management or expectations for progression.

FUTURE DIRECTIONS

Future studies should include long-term follow-up and the examination of additional biomarkers or social factors.

REFERENCES

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