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# Sleep Variables and Cognitive/MRI Outcomes Analysis Report

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# **Data Summary**

• Total subjects: 522

Total observations: 2088Mean visits per subject: 4.0

## **Model Specifications**

Model 1 (Sociodemographic):

• Predictors: Adjusted\_Age, DX\_1, DX\_2, PTEDUCAT, PTETHCAT\_2, PTGENDER\_1, PTMARRY, PTRACCAT\_1

## Model 2 (Full):

Additional predictors: APOE4, BMI, Medical History

## Cognitive Results

• Total tests: 15

• Significant (FDR): 5 (33.3%)

• Significant (Bonferroni): 1 (6.7%)

• Significant findings by sleep variable:

o MHSleep: 3

NPIK: 1

o NPIKSEV: 1

#### Mri Results

Total tests: 138

• Significant (FDR): 3 (2.2%)

• Significant (Bonferroni): 2 (1.4%)

• Significant findings by sleep variable:

o MHSleep: 2

o NPIKSEV: 1

## Generated Files

#### Tables:

- cognitive\_corrected\_results\_model1.csv
- cognitive\_corrected\_results\_model2.csv
- mri\_corrected\_results\_model1.csv

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- mri corrected results model2.csv
- supplementary\_cognitive\_all\_results\_model1.csv
- supplementary\_cognitive\_all\_results\_model2.csv
- $\bullet \quad supplementary\_cognitive\_diagnostics\_model 1.csv$
- supplementary\_cognitive\_diagnostics\_model2.csv
- supplementary\_mri\_all\_results\_model1.csv
- supplementary\_mri\_all\_results\_model2.csv
- supplementary\_mri\_diagnostics\_model1.csv
- supplementary\_mri\_diagnostics\_model2.csv
- table1\_sample\_characteristics.csv
- table1\_sleep\_prevalence.csv
- table2\_cognitive\_results\_model1.csv
- table2\_cognitive\_results\_model2.csv
- table3\_mri\_results\_model1.csv
- table3 mri results model2.csv
- table4\_model\_comparison.csv

#### Figures:

- main\_results\_model1.pdf
- main\_results\_model2.pdf

#### Model Files:

- cognitive\_outcomes\_MHSleep\_model1.pkl
- cognitive\_outcomes\_MHSleep\_model2.pkl
- cognitive\_outcomes\_NPIKSEV\_model1.pkl
- cognitive\_outcomes\_NPIKSEV\_model2.pkl
- cognitive\_outcomes\_NPIK\_model1.pkl
- cognitive\_outcomes\_NPIK\_model2.pkl
- mri\_outcomes\_MHSleep\_model1.pkl
- mri\_outcomes\_MHSleep\_model2.pkl
- mri\_outcomes\_NPIKSEV\_model1.pkl
- mri\_outcomes\_NPIKSEV\_model2.pkl
- mri\_outcomes\_NPIK\_model1.pkl
- mri\_outcomes\_NPIK\_model2.pkl