

Prevalence of Potentially Modifiable Risk Factors in Middle-Aged Persons At-Risk for Alzheimer’s Disease



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Background

- Addressing modifiable medical and lifestyle risk factors in mid-life has the potential to reduce the incidence of Alzheimer’s disease and related dementias (ADRD)
- The Cedars-Sinai Memory & Health Aging Program (MHAP) promotes brain health via personalized risk profiling and risk reduction among asymptomatic adults aged 40 years and older at risk for ADRD

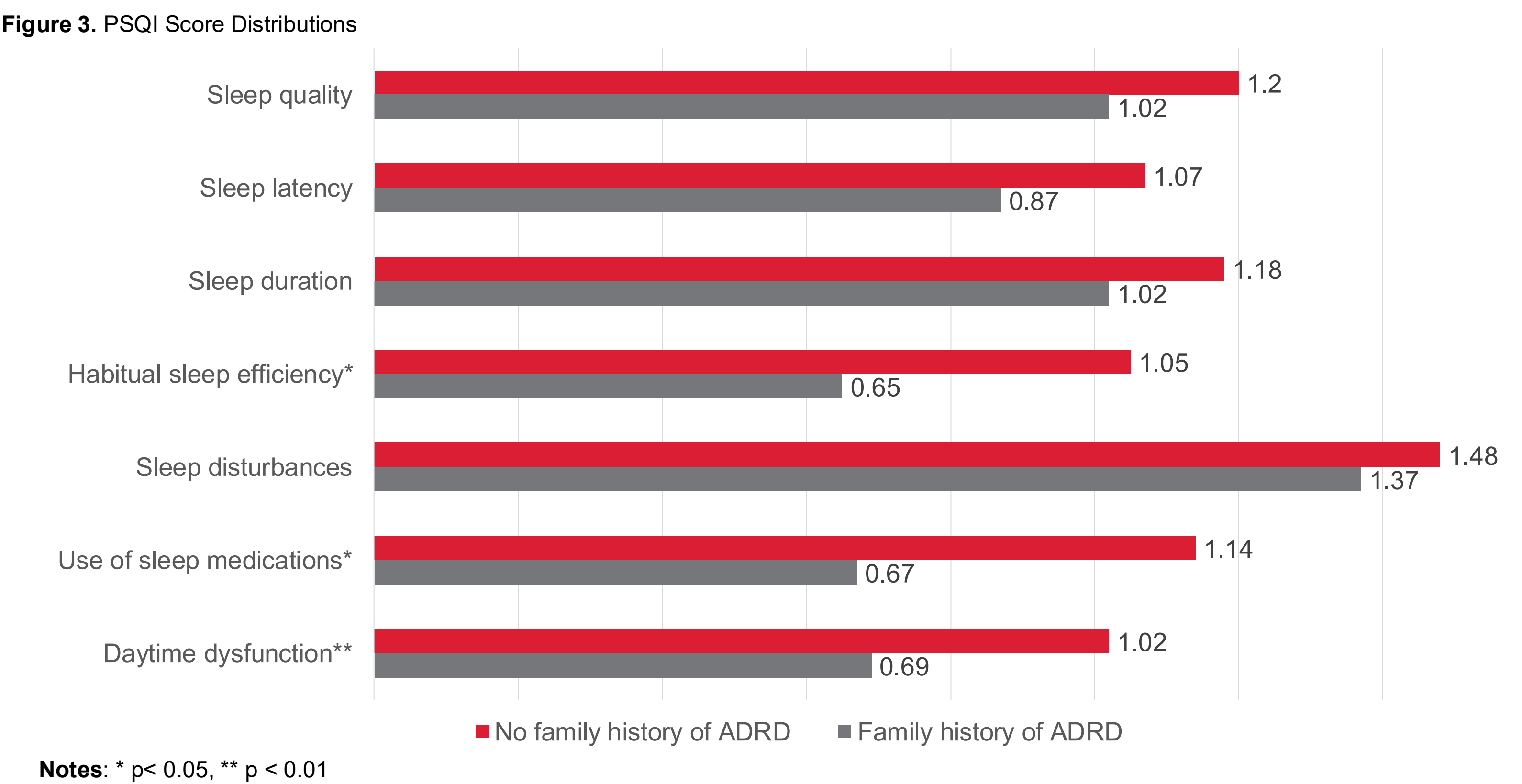
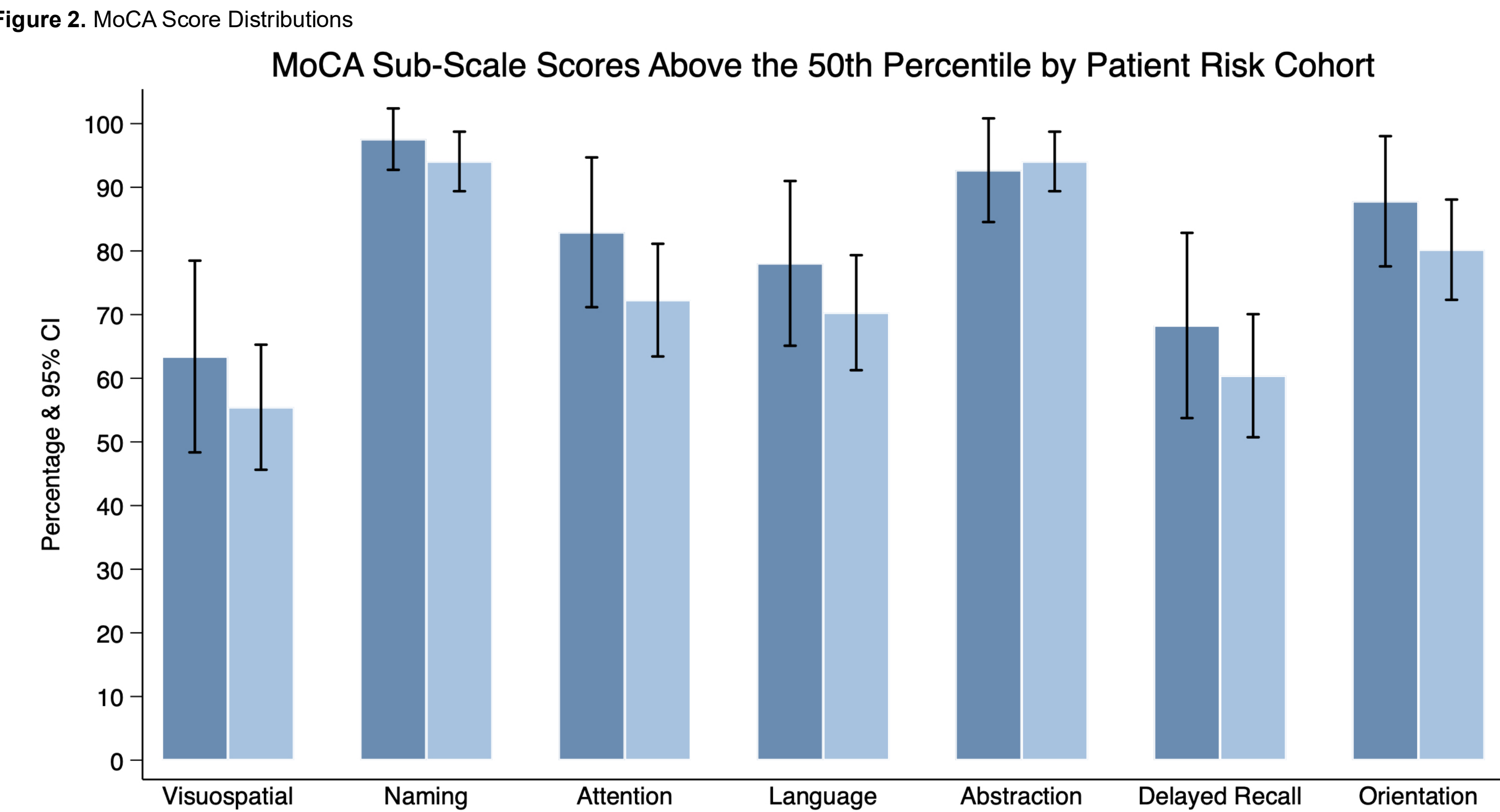
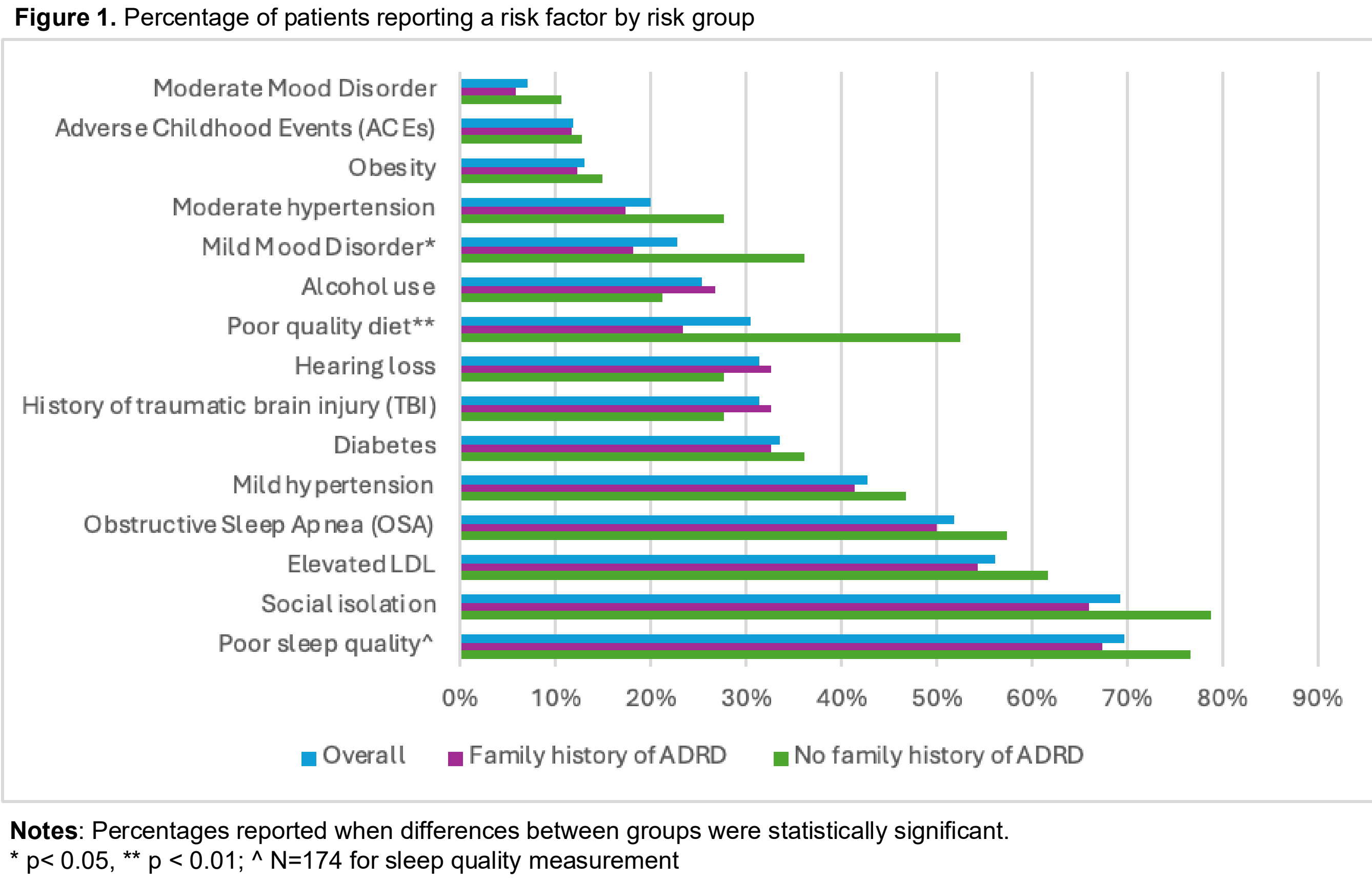
Objectives

- To characterize the population enrolling in a dementia risk reduction program, and summarize the ADRD risk factor prevalence and presence of cognitive issues overall and by family history of dementia

Materials and Methods

- MHAP was launched with an email invitation to Cedars-Sinai Medical Center patients.
- Eligibility required age 40 or older, no cognitive or neurological diagnosis, and presence of two or more ADRD risk factors (for example, hypertension or diabetes and dementia in a first degree relative);
- Persons having previous diagnosis of mild cognitive impairment (MCI) or dementia were ineligible to join the program as they were noted as having existing cognitive limitations
- Participants completed a 90-minute in-person visit assessing ADRD risk factors and cognitive performance.
- We characterize patient risk factors and summarize results of the Montreal Cognitive Assessment (MoCA) and the Pittsburgh Sleep Quality Index (PSQI).

Tables and Figures



Results

- Of 185 enrolled patients, 138 (74.6%) had a family history of dementia in a first-degree relative or carried at least one ApoE4 allele.
- The mean age was 61.8 years; 63.8% were female. Most were White (80.5%) or Asian (9.7%), non-Hispanic (94.6%), and highly educated (87.7% college graduate or higher).
 - Common risk factors included poor sleep quality (74.1%), social isolation (69.2%), elevated LDL/Cholesterol (56.2%), and OSA (51.9%).
 - Compared to those without a family history, those with a family history of ADRD were less likely to report a poor quality diet (22.5% vs. 46.8%, p=0.001) and were less likely to have mild mood disorders (18.1% vs. 36.2%, p=0.11).
 - 36.2% had four or fewer risk factors, 54% had five or fewer risk factors, 73.6% had six or fewer risk factors, and 97.7% had eight or fewer risk risk factors. Patients with no family history reported more risk factors than those with a family history on average (5.9 vs. 4.9, p=0.004).
 - On average, patients scored a 26.0 on the MoCA, with 37.5% suffering from MCI or greater cognitive decline. Subscale scores were similar between groups (all p<0.05).
 - On average, those with a family history of ADRD were less likely to report issue with habitual sleep efficiency (0.65 vs. 1.05, p=0.029), use of sleep medications (0.67 vs. 1.14, p=0.025), and daytime dysfunction (0.69 vs. 1.02, p=0.008). Taken together, those with a family history of ADRD reported better sleep quality overall on the PSQI than those without a family history of ADRD (6.28 vs. 8.14, p<0.001).

Conclusions

- Personalized risk profiling revealed high rates of modifiable ADRD risk factors, including sleep disorders, elevated cholesterol, and low physical and social activity
- Targeted interventions addressing these factors in mid-life may reduce future ADRD risk in at-risk populations