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Shannon (2023) used UK biobank data to assess the relationship between Mediterranean (Med) diet adherence and dementia using a cox proportional regression model of two diet screening tools.

Objective

To investigate associations between Med diet adherence and incidence of dementia, and explore the interaction between diet and genetic risk for dementia.



Intervention/ Comparators

Low, medium and high adherence to Med diet based on MEDAS and PRYAMID scores (both diet assessment Patient Reported Outcomes (PRO) tools).

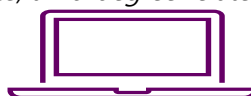


Data from UK Biobank (n = 60,298)

Mean (SD) follow up of 9.1 (1.7) years. **Cox proportional hazard regression model.** Adjusted for: age, sex, socioeconomic status, education, smoking status, sleep duration, physical activity, energy intake, alleles, third-degree relatedness, ancestry.

Data analysis

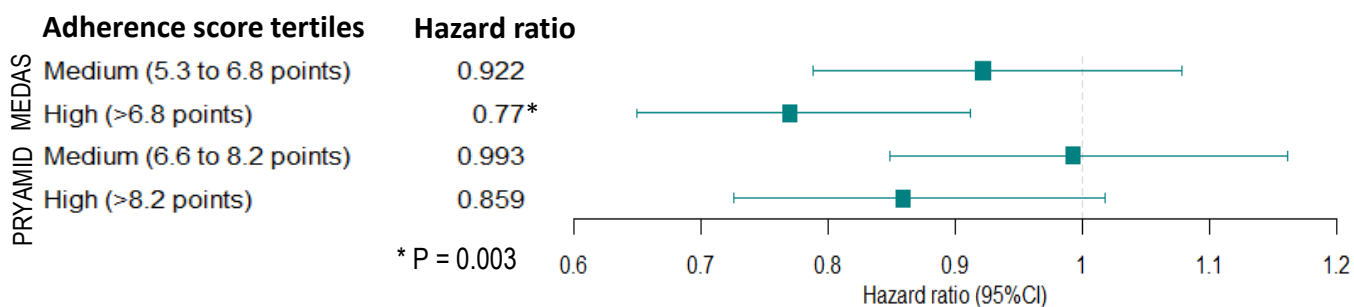
Model



KEY RESULTS

- Higher Med diet adherence was significantly associated with a lower dementia risk (MEDAS 6.9% and PRYAMID 4.2% reduction, both $P < 0.05$, based on hazard ratio per one point increase in Med diet score).
- However, when dividing the scores into adherence categories, only one of the screening tools found a significant association when comparing high and moderate to low adherence scores (graph below).
- People with or without the APOE genotype (genetic risk factor for dementia) had a similar association between Med diet adherence and dementia, suggesting the association is independent of genetic risk.

Association between Med diet adherence and the risk of dementia: Medium and high adherence vs. low adherence



- Previous studies on the topic have reported on a much lower number of participants. This study uses a large sample size from a reliable data source, making it well placed to detect even a weak effect of Med diet on dementia.
- The authors found an association between Med diet adherence and lower dementia risk, but the strength of the results is weakened by the variation in the size and statistical significance of the effect from the adherence category analysis.
- The study also demonstrates the importance of using multiple PRO tools in research studies, as different tools measure the same outcome with varying levels of sensitivity, which may affect results.