

New study seeks to improve nutritional guidance for cognitive health

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The interplay between the food we eat and our overall cognitive performance is a topic of increasing interest to people throughout the world. And while some studies have reported benefits of healthy diet

patterns on cognitive performance, the results of these individual studies remain inconsistent.

A [new study](#) published in *Frontiers in Nutrition* seeks to address this gap by harmonizing data from multiple U.S. and European studies in order to provide researchers with a better understanding of nutritional guidance for cognitive support.

The objective of the study is to describe a protocol to conduct what's called a "retrospective harmonization" study on [dietary intake](#) and cognitive health using individual data from large prospective European and U.S. studies.

The recommendations resulting from the project can be used to support the evidence base considered by future Dietary Guidelines Advisory Committees, which review evidence in support of the Dietary Guidelines for Americans. That guidance, which is updated every five years, impacts U.S. federal nutrition programs like the school lunch program and food packages for the Special Supplemental Nutrition Program for Women, Infants and Children (WIC), as well as provides guidance for the U.S. population as a whole.

Additionally, this study can serve as a guide for combining individual-level data from research studies about the relationship between diet patterns and cognition. The approach aims to leverage existing data to identify factors associated with both cognition and dementia.

With advancing age, [cognitive decline](#) becomes evident, significantly affecting [independent living](#) and serving as a hallmark of Alzheimer's disease and other dementias. Identifying interventions to prevent or delay cognitive decline is therefore a critical global public health priority.

Because diets can be modified, there is hope that research like this will add to the understanding of how to prevent or reduce the severity of dementia. The results will help develop the evidence base related to the prevention of or slowing down the progression of cognitive decline in middle-aged and older adults that may be considered by future Dietary Guidelines Advisory Committees.

"Over the last several years, there has been increasing interest in how dietary intake influences cognitive outcomes and the prevention of dementia, but reaching conclusions about dietary recommendations remains difficult due to disharmony among various studies," says lead author and University of Minnesota doctoral candidate So Yun Yi.

"By describing a protocol to harmonize individual participant data collected in multiple cohort studies and [clinical trials](#), this study seeks to address these challenges.

"In addition to an improved understanding of dietary guidelines, we believe this work will be useful to other researchers who could apply the harmonization process to their own research, and down the road, lead to improvements in overall public health outcomes."

"Research study designs vary, especially in the methods used to collect the data, such as using different instruments to assess dietary intake and cognitive function," says co-author and SPH Professor Lyn Steffen. "To ensure that we are combining similar exposures and outcomes in a [meta-analysis](#), it is important to harmonize or standardize the individual level data that make up a diet pattern or cognitive function."

More information: Amaia Ayala-Garcia et al, Diet patterns associated with cognitive decline: methods to harmonize data from European and

US cohort studies, *Frontiers in Nutrition* (2024). DOI: [10.3389/fnut.2024.1379531](https://doi.org/10.3389/fnut.2024.1379531)

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