

Dementia risk scores have high error rates

June 14 2023, by Lori Solomon



Current dementia risk scores have high error rates and limited clinical utility for estimating 10-year risk, according to a study published online June 13 in *JAMA Network Open*.

Mika Kivimäki, Ph.D., from University College London, and colleagues evaluated the clinical value associated with four widely used dementia risk scores in estimating 10-year dementia risk. The analysis included 465,929 U.K. Biobank participants without dementia at baseline (2006 to 2010) and validation in 4,865 participants of the Whitehall II study, through linked [electronic health records](#).

The researchers found that if the threshold for a positive test result was calibrated to achieve a 5 percent false-positive rate, all four risk scores detected 9 to 16 percent of incident dementia and missed 84 to 91 percent (failure rate). For a model that included age only, the corresponding failure rate was 84 percent.

When calibrated to detect at least half of future incident dementia, the ratio of true to [false positives](#) ranged from 1 to 66 for the Cardiovascular Risk Factors, Aging and Dementia (CAIDE) *APOE*-supplemented clinical score, 1 to 116 for the Australian National University Alzheimer Disease Risk Index (ANU-ADRI), and 1 to 43 for the model using age alone. For the CAIDE clinical version, the C statistic was 0.66 versus 0.73 for the CAIDE-*APOE*-supplemented, 0.68 for the Brief Dementia Screening Indicator, 0.59 for ANU-ADRI, and 0.79 for age alone. Similar performance was seen in the Whitehall II study cohort.

"These findings suggest that the scores were of limited value in targeting people for [dementia](#) prevention," the authors write.

More information: Mika Kivimäki et al, Estimating Dementia Risk Using Multifactorial Prediction Models, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.18132](https://doi.org/10.1001/jamanetworkopen.2023.18132)

Copyright © 2023 [HealthDay](#). All rights reserved.

Citation: Dementia risk scores have high error rates (2023, June 14) retrieved 28 April 2024 from <https://medicalxpress.com/news/2023-06-dementia-scores-high-error.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.