

Online tool found to be effective at assessing dementia risk

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Researchers at UNSW Sydney and Neuroscience Research Australia (NeuRA) have developed and evaluated a tool for assessing dementia risk, with promising initial results.

Currently, over 55 million people are living with [dementia](#) around the world, with that number set to increase to 78 million by 2030, and the focus on dementia research increasingly shifting towards prevention.

The [online tool](#) takes approximately 20 minutes to complete and provides a personalized dementia risk report that patients can discuss with their doctor.

Since developing the risk [tool](#)—known as [CogDRisk](#)—in 2022, the team has been evaluating the success of the tool, by trialing it on four existing datasets, with the results published recently in *The Journal of Prevention of Alzheimer's Disease*.

On their analysis, they found that CogDrisk is effective at predicting dementia.

"There's lots of information about the [risk factors](#) for dementia in the academic literature," says Professor Kaarin Anstey from UNSW's School of Psychology and NeuRA.

"But there's a gap between just knowing the risks and actually being able to assess whether or not you have the risk, and then knowing what to do about it. CogDrisk was developed to address this."

Collating the risk factors for dementia

Unsuccessful clinical trials for dementia treatment have led to urgent calls for dementia prevention.

"Prevention is now recognized by the World Health Organization as one of the key areas of research. Alzheimer's Disease International and most of the National Dementia action plans include [dementia risk](#) reduction," says Prof. Anstey.

But while there are a lot of different studies on risk factors for dementia across the world, there's not necessarily always agreement on what the risk factors are. To address this problem, the team used [statistical methods](#) to combine all the risk factors cited in the existing literature.

"So we did a [systematic review](#), to get all the different risk factors for dementia—those which were robust, and those which were modifiable and could be assessed through a self-report instrument," says Prof. Anstey.

Some of the key modifiable risk factors that increase someone's risk of dementia include insufficient physical activity, obesity in middle age, [high blood pressure](#) in middle age, smoking, and poor diet. "That whole process took several years, we published the review, and then we had to develop the risk assessment tool itself."

Assessing the tool on different cohorts

Often risk assessment tools are developed on a single cohort and therefore fit a particular dataset and population, which doesn't work well when applied to other populations.

This study analyzed four different cohorts from existing medical studies, with varying demographics and a total of over 9500 participants.

The cohort data was matched against the key risk and protective factors assessed in the CogDrisk tool, including whether individuals have diabetes, depression and insomnia, information on their diet and eating habits and how much they engaged in physical activity.

The team were then able to match these to a record of dementia cases that developed within the same cohort.

"Our [statistical analysis](#) shows it's a very robust and generalisable tool," says Prof. Anstey. "It works across different countries and different data sets. And it's also quite comprehensive, it includes a lot of the newer risk factors that weren't previously included."

Challenge with predicting dementia and future uses of CogDrisk

Predicting dementia is more difficult than predicting some other diseases, partly because it progresses over two or three decades and there can be a strong genetic component.

"It's a multi-causal disease. But there are some modifiable risk factors. Most people want to know what their risk factors are and want to do something about them once they know," says Prof Anstey. The team who developed the tool are hoping that it can be used in healthcare settings to make it easier for GPs and patients to get information on risk reduction.

"Not only are there lots of risk factors, but dementia itself is very complex, and GPs are very busy. So we're trying to develop ways of making it easier for the public and GPs to get the right information."

Next, Prof. Anstey is looking to translate the online tool into [different languages](#), so it's accessible to more people. "And we're also looking at developing a short form of the tool. So there's a lot of happening in the research translation, as well as language translation space that we're working on."

More information: S. Kootar et al, Validation of the CogDrisk Instrument as Predictive of Dementia in Four General Community-Dwelling Populations, *The Journal Of Prevention of Alzheimer's Disease*

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