English translation

New technology to help improve memory

Dementia Research Institute (Singapore) Director Associate Professor Nagaendran Kandiah, and PhD student Mr Muhammad Adnan Azam (right). - Image: The Straits Times

A new test kit has been developed to help detect the early stages of dementia.

About 12.5 per cent of the Singapore population has mild cognitive impairment or early dementia. However, diagnosing the condition can be expensive.

In 2021, it was reported that 86,000 people in Singapore were living with dementia. - Image: Unsplash

In this context, ReCognAIze is a powerful and affordable test that can detect this vulnerable condition.

The test was officially approved in February after three years of research and development.

The test, which is powered by artificial intelligence, can detect early signs of memory loss in as little as 15 minutes.

Developed by the Lee Kong Chian School of Medicine at Nanyang Technological University, ReCognAIze uses specially designed neuroscience-based games to assess a person's intelligence, performance, and memory.

Powered by a proprietary algorithm, these games provide users with specific tasks to complete.

Users are required to memorise a grocery list and then select the correct items. They also have to choose the right amount to pay for it.

The handheld device, which runs on a computer, was almost 90 per cent accurate in detecting mild cognitive impairment in its preliminary clinical trials.

"ReCognAIze" was developed by a team led by Associate Professor Nagaendran Kandiah, Director of the centre.

Dementia is a complex disorder characterised by a gradual decline in memory and cognition, including Alzheimer's disease, a neurodegenerative disease.

In 2021, it was reported that 86,000 people in Singapore were living with dementia. This number is predicted to increase to more than 150,000 by 2030, given Singapore's ageing population.

"We know that dementia is definitely a big problem. "We believe that people should not be exposed to that risk," said Dr Muhammad Adnan Azam, a doctoral student at the School of Medicine and a member of the development team.

Commenting on this, Prof Kandiah said: "Early detection of mild cognitive impairment allows patients to make the necessary lifestyle changes to prevent this risk. It can also lead to a reversal of the trend of this risk."

Citing a report by the Lancet Group on Dementia published in August 2024, Prof Kandiah said that this could slow the progression of dementia and reduce the number of people affected by it by up to 45 per cent.

Currently, the cost of an MRI scan is more than $1,000 and takes several hours.

Even a simple test using pen and paper can take three to four hours, said Prof Kandiah.

However, the 'Recognize' device, which has now been installed, will make such tests easier and more accessible to a wider audience, Mr. Kandaiah said.

As part of a comprehensive health assessment, the "ReCognAIze" device will be provided free of charge to patients at two of Osler Health's clinics in Raffles Hotel Arcade, Star Vista, over the next three months.

https://www.tamilmurasu.com.sg/youth/ntu-launches-ai-powered-screening-tool-detect-pre-dementia-15-minutes