Games to counter onset of illnesses in older folk

The older you get, the more likely that you will have a fall. And it can be deadly. Falls among the elderly often happen because of a disconnect between the brain and the body, said researchers from Nanyang Technological University (NTU)’s Research Centre of Excellence in Active Living for the Elderly.

So, they are trying to delay that process and detect signs of its onset, but in a fun way.

They have come up with a number of games which not only train the mind but incorporate certain tests used to detect conditions such as Parkinson’s and dementia.

A farming game played on a tablet, for instance, requires users to drag both their index fingers in a specific direction to clear virtual weeds. This doubles as a finger synchronisation test commonly used to detect signs of Parkinson’s.

Players also have to trace circles with their finger to turn a virtual irrigation wheel. A tell-tale sign of the disease is if they make progressively smaller movements.

Dr Frank Guan, the centre’s manager, said a lot of technology targets at the elderly focuses on how to care for them after they get sick. “But if we can look earlier and look at preventive technology, then we can detect the signs and help to prevent some of these illnesses from happening or, at least, slow down their progression gradually.”

The team has also developed a table-tennis game which requires players to hit only certain coloured balls and skip others.

It aims to stimulate the player’s mind and to test short-term memory, which research has shown that people suffering from dementia fare worse in.

The games are being tested at Tan Tock Seng Hospital’s geriatric centre, several community centres as well as a Parkinson’s disease centre in Canada.

Temasek Polytechnic’s Centre for Ageing Studies is doing similar research into brain-training games, in collaboration with Japan’s Tohoku University.

It is in the midst of creating an application, which involves matching shapes, for instance, and will be evaluating whether the game improves blood flow to the user’s prefrontal cortex.

This part of the brain is its most evolved region, which plays a role in complex cognitive, emotional, and behavioural functioning.

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