

Activities with plants can boost the elderly's well-being: Study

Local study shows horticultural therapy's benefits; NParks using research in design of therapeutic gardens

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Plants and gardening have more than just a relaxing effect on man, research here has found.

Participating in activities such as gardening or guided walks in parks improves the mental health and well-being of the elderly, said a local study.

This is the first study that shows that joining a guided group activity involving plants reduces a type of component in the blood associated with inflammatory diseases, such as depression, dementia and cancer. Such activities also help maintain levels of another component that supports the brain and prevents it from degenerating.

"The main implication of this study is that the elderly can use various parks in Singapore as therapeutic venues and conduct therapeutic

horticulture, which has a biological effect on their bodies to prevent chronic diseases," said Associate Professor Roger Ho from the National University of Singapore, the study's principal investigator.

The study, published last month in the *International Journal of Environmental Research and Public Health*, is jointly done by the National University Health System (Yong Loo Lin School of Medicine) and National Parks Board (NParks).

A total of 59 older adults, between the ages of 61 and 77, were recruited, with about half randomly assigned to receive horticultural therapy and the other half in the control group.

Those selected to receive horticultural therapy went for 15 one-hour sessions, with activities such as indoor gardening, growing, maintaining and harvesting vegetables and herbs, and guided walks in parks.

The sessions were conducted

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weekly for three months, and monthly for the next three months in 2015.

Both the horticultural therapy and control groups had psychosocial assessments and blood samples taken at the start of the study, as well as three months and six months later.

The blood samples were taken to measure certain components in the blood, such as those that may have protective functions, while the psychosocial measures examined aspects like cognitive function, depression, anxiety, psychological well-being, social connectedness and satisfaction with life.

The study concluded that therapeutic horticulture can enhance the well-being of older adults.

Horticultural therapy is well established around the world and, in some countries, it has been introduced in educational institutions, including kindergartens and special-needs schools, said mental health expert Kua Ee Heok, one of the researchers behind the study.

He said horticultural therapy is well accepted in medical care facili-

ties, especially in rehabilitation hospitals, psychiatric services, palliative care and aged homes, as a means of providing patients with carefully designed gardening activities to improve their quality of life.

In 2015, then Minister for National Development Khaw Boon Wan said NParks set out to ensure that 80 per cent of homes here are within a 10-minute walk from a park, as "green spaces promote physical and mental well-being". This will be raised to 90 per cent by 2030.

NParks said it is using such research studies to guide the design of therapeutic gardens in Singapore.

The first therapeutic garden was developed at HortPark in consultation with Prof Kua. It has different zones, with one featuring soothing water features; another has a range of scented plants and a gardening area accessible to wheelchair users.

There are now three more of such gardens in the heartland – Bishan-Ang Mo Kio Park, Tiong Bahru Park and Choa Chu Kang Park.

"The positive findings from the completed study show that NParks is heading in the right direction, but our work does not stop here," said Mr Sim Cheng Hai, group director of Centre for Urban Greenery and Ecology at NParks.

"For example, we are initiating research to understand the effects of different landscape characteristics on brain activity, with the aim of identifying specific landscape design attributes that can help optimise the well-being of visitors."

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