

Walking in the circular maze at Pasir Ris Park helps to reduce stress and induce calm. Seats placed amid pleasant surroundings, walkways and shelters against the hot sun increase the time visitors spend in a park. Benches that are made from log falls give a natural feel and help recycle the wood. Trees and shrubs planted at the park bring down surface temperature by 6 deg C and ambient temperature by 1 deg C to 4 deg C.
ST PHOTO: ARIFFIN JAMAR



More time in parks can be a boon for health, studies show

There is improvement in mental well-being even if it's just sitting and admiring landscape

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Spending more time in parks can improve one's health, and the more features a park has, the longer visitors stay, research from a series of studies in Singapore has shown.

These findings are guiding the National Parks Board (NParks) in the management and landscaping of its 400 parks in Singapore.

Among the findings are that adding an aesthetic feature, such as a pond or landscaped area, increases the time a visitor spends by one hour a month.

And spending more time in a park, even if it involves only sitting down and admiring the landscape, improves mental well-being, even for the clinically depressed.

These studies, funded largely by the Ministry of National Development and done in collaboration with researchers from the National University of Singapore (NUS), started about five years ago, with the results published in reputable international journals from 2020.

Ms Sophianne Araib, group director of Parks Central at NParks, said that a decade ago, NParks was building simple recreational facilities and planting fast-growing greenery. But this has since changed. "Today, there is science behind the way we plan and design parks, with focus on health and mental well-being," she added.

Associate Professor Falk Muller-Riemenschneider of the NUS Saw Swee Hock School of Public Health suggested increasing park use could be a cost-effective way to nudge people into exercising and relaxing more.

He and his team have conducted several studies on park use and its association with well-being, with the latest results published in the *Health & Place* journal in May.

This study of 3,435 adults between December 2017 and August 2019 found that, on average, they spent 10 hours in parks a month.

It found that each additional aes-

thetic feature in a park increased usage by almost an hour a month.

The authors said: "A one-hour increase is substantial, and it may be that parks with more... aesthetic features are more appealing destinations to spend time in."

Nearly 400 parks were audited for their size and features. Of 30 features identified, the most common were paths and seats, found in over 90 per cent of the parks. On average, parks here had nine features each.

A lead author of the study, Dr Nicholas Petrunoff of the Saw Swee Hock School of Public Health, referring to another study by the team published last year, said there is a clear correlation between going to parks and better health.

That study followed 80 people who were actively encouraged to use parks over a six-month period, and a control group of 80 others. At the end, those in the intervention group were physically active for 333 minutes a month, compared with 130 minutes previously.

The report concluded that adding water features, forested areas, large playgrounds and open green spaces may have an important impact on park visits and park-based physical activities.

Ms Araib said parks today are more lush and naturalistic. Citing the example of NParks' therapeutic gardens, like the one at Pasir Ris Park, she said such gardens evoke the five senses: sight, sound, smell, touch and taste.

Ms Araib said plants are carefully curated so there are areas that attract butterflies and birds. When *The Straits Times* visited the park, which gets four million visitors a year, a tree was cordoned off to protect a nesting pair of hornbills.

Mr Erwin Chin, 38, said he enjoys being surrounded by nature during his 10km run in the park every day, after a day in the office.

Mr Chua Boon Yong, 58, a support staff member who has been going to the park with his camera most days for the past 20 years, also said he enjoys the natural environment.

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What NParks is doing to increase appeal of parks



A swing for those using wheelchairs, allowing them to enjoy park activities.



Above, left: The therapeutic garden at Pasir Ris Park evokes the five senses – sight, sound, smell, touch and taste. Visitors are encouraged to touch and even pluck and plant the herbs.



Above, right: Playgrounds that make use of natural materials like logs, stones and sand can help encourage creativity, reduce stress and increase cognitive function.



Right, top: Equipment like this, scattered around more than 300 parks, helps improve hand-eye coordination – especially for seniors and those recovering from a stroke.



Right, bottom: A toucan, and mushrooms and toadstools flourishing on a fallen log at Pasir Ris Park – all part of nature.
ST PHOTOS: ARIFFIN JAMAR

Exploring Pasir Ris Park



SCAN TO WATCH



<https://str.sg/park01>

MAKE THEM COOL

Seats and shaded areas are important to encourage more people to frequent parks.

Trees and shrubs bring down surface temperature by 6 deg C and ambient temperature by 1 deg C to 4 deg C.

The National Parks Board (NParks) has put the results from research studies to use in more than just parks, by also greening Housing Board rooftops and carparks to cool these places. It is planting shadier trees along roads, as well as shrubs and undergrowth.

It has also found that greenery increases the output of solar panels, as it prevents them from overheating and so optimises production.

FEATURES TO ENCOURAGE PHYSICAL ACTIVITY

There are playgrounds made with natural elements such as wood, stones and sand that children can mess around in. When these are depleted, they are easily replaced.

Ms Kalthom Latiff, an NParks parks director, said the use of these natural materials "encourages creativity, reduces stress and increases cognitive function."

Wheelchair users are not left out, as there are swings and other equipment that can accommodate wheelchairs.

Larger parks conduct activities almost every week, from botanical art to gardening to crafting with plants. These are in high demand, with senior activity centres booking them way in advance. Prior to Covid-19, NParks was organising over 3,000 programmes a year.

There are also "allotment gardens" where, for slightly more than \$60 a year, people can have a 1m-by-2.5m personal patch to plant what they want. Some planting patches are raised to waist level so seniors do not need to squat to tend to their plants. Demand for the 2,200 such garden patches nationwide far outstrips supply.

GO NATURAL

Not only does mimicking nature create effects pleasant to the eye, it also reduces the manpower needed to maintain the parks as there is no need to cut the grass. So instead of large swathes of turf, there are now more shrubs and undergrowth.

Having such "naturalistic" gardens also attracts wildlife. Pasir Ris Park is home to goshawks, herons, hornbills, sunbirds, otters, chickens and butterflies.

Such "rewilding" will be rolled out progressively over the next three years to more parks and green spaces.

FOCUS ON HEALTH

NParks has nine therapeutic gardens with plants and herbs that evoke the five senses – sight, sound, smell, touch and taste. One study found that even passive exposure to such gardens improves people's mood.

A study NParks did with the National University of Singapore involved 92 people aged 21 to 74, whose moods were recorded by electroencephalogram caps they wore to capture their brain activity.

The 24 clinically depressed and 68 healthy participants were exposed to three different landscapes: busy downtown, residential green area and therapeutic garden.

Measurement of their brain patterns showed therapeutic gardens significantly improved the moods of both groups, helping to restore their mental well-being.

Ms Angelia Sia, deputy director of NParks' Centre for Urban Greenery and Ecology, said NParks will be creating 21 more therapeutic gardens by 2030. These gardens are landscaped to encourage contemplation, with a big tree that focuses the mind.

For information on where the therapeutic gardens are and how to get to them, go to <https://www.nparks.gov.sg/gardens-parks-and-nature/therapeutic-gardens>