

Urban Forest Therapy in Singapore

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If you are a frequent park visitor, you might have come across other users standing in the midst of trees or by the banks of a pond. They sometimes gather in groups as large as ten and at other times it may just be a cozy pair. Seemingly, doing nothing. Sometimes they have their eyes closed, or stooping to the ground and appear to be scrutinising the earth, or simply sitting quietly under a tree. Describing forest therapy using our human-defined mode of communication - specifically using language and words, often does not make much sense. Because forest therapy is an immersion in nature, it builds connections to nature and is experiential. It requires one to be in the moment, present in nature, and to feel. Participants themselves, sometimes find it hard to put into words what they had experienced. But one thing is for sure: forest therapy helped them to relax, de-stress and often, enabled them to feel happier and more positive. A mental and emotional boost, you may say. And scientific research backs this up.



Taking in the Forest Atmosphere

The Japanese have been practising forest therapy since the 1980s and it has been integral to preventive healthcare and medicine in Japan (Hansen et al., 2017). They call it Shinrin-Yoku (森林浴). Literally, it translates to 'forest bathing'. It refers to a practice whereby individuals 'take in the forest atmosphere' through conscious engagement of the senses (Tsunetsugu et al., 2010).

Imagine stepping into a hot bath. First, the heat receptors in the skin of your toes are fired up. You sense the warmth of the water. The sensations arising from the shock of the water and the temperature travel up your body, much like electricity. And you feel the sensations. You inch yourself slowly into the tub and immerse. You notice how your body gradually accepts the warm temperature. Perhaps, you begin to notice the smell of bath soap, and the faint underlying notes of clean water. Perhaps, you begin to notice the soft touch and gentleness of the water around you. Perhaps, you begin to notice the touch of the tub against your skin. And when you eventually submerge head-in, you notice the sounds of water, drowning out the cacophony of city sounds that you have been used to.

During forest bathing (with clothes on) or forest therapy, you notice the smells of nature and how they evoke other sensations in you. Perhaps you begin to feel the touch of the wind against your skin. Or hear the sounds of the crickets which have always been present in the background. And perhaps you start to notice in the world of nature, there exists various art forms differing in textures, colours and structures. Using your senses, you have slipped into 'a bath', immersed in nature's world and 'taken in the forest atmosphere'.

On a guided forest therapy walk, a certified guide facilitates the session by offering specific and purposefully crafted activities. These gentle activities provide opportunities and methods for participants to interact and connect with nature, without which they may not normally do so. The types of activities vary and a trained guide will know how to offer 'open' activities so that participants can interact with nature maximally and comfortably in their own individual ways.





Research on Forest Therapy and the Effects of Nature

A search on existing scientific research literature results in numerous hits and publications. These mounting research data shows evidence on the health benefits arising from forest therapy and highlighting the potential of forest therapy as a preventive medicine.

Forest therapy was shown to effectively reduce stress levels, as measured by the increased activity of parasympathetic nervous system and decreased activity of sympathetic nervous system (Lee et al., 2011; Song et al., 2015; Li, Q., 2018). Pulse rates and salivary cortisol levels which were used as indicators of stress, were also reported to decrease due to forest therapy (Ochiai et al., 2015).

Forest therapy was also demonstrated to boost the immune system as measured by increased activity of natural killer (NK) cells (Li, et al., 2008). In the same study, the researchers also found that this increased activity in NK cells was maintained for at least seven days post-walk.

Several other studies support other positive effects of forest therapy. These included reducing blood pressures, improving sleep patterns, reducing blood glucose levels and evoking more creativity, reasoning skills and better moods (Hansen et al., 2017, Li Q., 2018).

Forest Therapy in Singapore

The existing research on forest therapy lends suitability of the practice for an urban society that is dealing with modern-day health problems, including stress and anxiety. The Willis Towers Watson's 2015/2016 Global Staying@Work survey observed that stress was the number one health issue for workers in Singapore, with 56 per cent of employers stating it as their top health concern. Similarly, the Aon's APAC Benefits Strategy Study 2017 observed that 72 per cent of employers viewed employee's mental stress issues as a concern. It is also a known fact that Singaporean students face high stress and anxiety. The Organisation for Economic Cooperation and Development (OECD), which conducts the triennial tests called the Programme for International Student Assessment (Pisa), observed that Singapore students suffer

from high anxiety levels, with 86 per cent of Singapore students worrying about poor grades in school versus 66 per cent in other OECD countries.

Based on my personal experience, over the last eight months, leading forest therapy in Singapore, participants' comments made during sharing circles (conducted as part of guided forest therapy walks, where participants gather after each activity to share what they have noticed) and their programme evaluation have been encouraging. These forest therapy sessions were open to the general public, rather than being targeted at specific populations. Program evaluation was recorded as general feedback on the sessions. While the evaluation was not intended to be data for scientific research, the findings on 100 per cent of respondents who agreed to "I feel more relaxed, positive and happier after the session" does appear promising. There must be something entrenched in forest therapy that is worth further investigation. Could it be the opportunity to slow down? Could it be the fractal patterns in nature that were working on our brains? Or could it be specific volatile chemicals emitted by our tropical trees that were boosting our moods? Three common observations are shared below.

Participants became more observant and sensitive to nature's intricacies. They began to notice and appreciate new insights to nature - ranging from realisation of life within grass lawns to how no two trees are the same. In the process, participants also opened their minds to new perspectives. It had been very common to hear from individuals about new insights they gleamed through their interactions with nature. These insights covered a wide spectrum, ranging from work life, family, to topics that are less personal such as product designs. In a way, the participants were re-learning to listen and receive lessons and stories from other beings in nature; beings who have roamed the Earth much longer than human beings.

Episodes of reminiscence whereby participants shared and reflected upon their stories came up during the forest therapy sessions. The wet smell of soil after a rain evoked participants' memories of days in the kampung, days of serving in the army, and days as children at school camps. The sight,

1. Consciously slowing down and taking in the natural atmosphere through our senses. Image by Jack Tan.

2. Silently observe a 'world' within the frame. What are you noticing?

3. Let us make a gift for the forest.



the touch and the taste of pandan leaves brought up memories of the time spent in kitchens making soups and desserts. The gentle touch of flowers reminded individuals of gentleness that were showered upon themselves during better times. Through forest therapy and nature, participants recognised and acknowledged chapters of their lives, stories of which could have often been ‘archived’.

Lastly, and the most frequent observation of all, participants shared and expressed that it brought them immense pleasure to slow down in a natural environment, to be immersed in nature’s silence, and to just be. They spoke about nature’s rhythms, colours and songs. As silly as it may sound, it was almost as if forest therapy ‘permitted’ them to disconnect from their stressors and technology, and ‘gave’ them a time-out for a recharge and reset. The sharing was often reflective and revolved around topics on self-care, stress management and rejuvenation.

Forest Therapy in Singapore: A Way Forward

You may have come to the realisation that forest therapy is significantly different from a usual walk in the park, a hike or a nature walk. And that is rightly so. Forest therapy focuses neither on identification of the plants and living species, nor

reaching an end point or completion of a trail. It is also not a physical exercise or work out to increase cardiovascular activity. Forest therapy focuses on simply being in nature, using our senses to connect with nature, and acknowledging our affiliations to nature. It gives a whole new meaning to ‘Singapore as a biophilic city’. Beyond incorporating nature into our urban environments, making green spaces accessible to people, and increasing diversity of species, forest therapy opens doors to explore relationships with urban nature (including human beings), and to pursue a wholesome way of healing through forest medicine - a term used to refer to the therapeutic effects of nature and forest on human’s health (Li, Q., 2018).

From a research perspective, there are questions to be answered of which, some could be specific to our geographical climate as well as societal cultures. Do our tropical trees emit different volatile compounds or phytoncides from the temperate forests in Japan and Korea? Are there particular combinations of tropical nature patterns and textures that are more effective in delivering the therapeutic benefits? On the physiology and molecular levels, what are the exact mechanisms in which forest therapy is exerting its effects to improve mental wellness and other health benefits? Is there any ethnic prevalence regarding the efficacy of forest therapy? With some studies pointing to the usefulness of forest therapy in reducing blood glucose levels, could forest therapy be one of the measures to help us combat the ‘war on diabetes’?

Forest therapy does not need to be strictly conducted in forests. Smaller green spaces such as city parks and gardens are suitable for forest therapy as well (Li, Q., 2018). Forest therapy also does not require long trails and large parcels of land. In this regard, Singapore may be primed to be conducive for forest therapy. However, forest therapy ideally requires land that is free of man-made noises, land with natural elements that evoke awe and wonder. At the same time, it is ideal to have open lawns along the routes for gathering of individuals for sharing circles, and appropriate undergrowth that provide individuals easy access to trees. From the perspectives of park design,


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forest conservation and land planning, how do we strike a balance between parks usage for forest therapy and other recreational uses which are also important for enhancing quality of life? If the economic value of forest therapy on our health and wellness is significant, shall we be bold and create a national wellness sanctuary or a nature oasis that is specific for forest medicine uses?

The potentials of forest therapy can be far-reaching for urban dwellers. Its benefits on wellness can affect our ageing population, stressed-out working adults, anxious youths, burnt-out caregivers and possibly many more. Just as how there exists a variety of drugs for a particular illness because patients take to the drugs differently, we also need to offer a comprehensive palette of therapies - both curative and preventive, to improve wellness of

our people. Music therapy, art therapy, horticulture therapy could be effective for some, and perhaps forest therapy could be effective for others.

In our land-scarce yet green and lush city state, the active partnering with nature for healing and for wellness has just began. This is a step forward in coming to know our land, our nature and therefore coming to love and respect them. It is a step forward in effective use of our limited land and natural resources. It is also another step forward for our health and wellness. Forest therapy may not be a cure for illnesses, but it is a primer for a positive mindset that goes a long way in managing and overcoming challenges associated with illnesses. As one famous quote from Rachel Carson goes, 'Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts.' 

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4. Opening our senses and noticing nature's intricacies.
5. Exploring different textures of nature.
6. A sharing circle during forest bathing.
7. Forest bathing offers a quiet time to sit in nature and just be.

