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To cite this article: Laurence Nachin, Sophie Rasson, Emmett Phil Coriat & Yasuhiro Kotera (2022): Roles and impacts of the forest therapy guide: recommendations from practice, International Journal of Spa and Wellness, DOI: [10.1080/24721735.2022.2145418](https://doi.org/10.1080/24721735.2022.2145418)

To link to this article: <https://doi.org/10.1080/24721735.2022.2145418>



Published online: 14 Nov 2022.



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## Roles and impacts of the forest therapy guide: recommendations from practice

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### ABSTRACT

Over the last decade many studies have reported on the health benefits of practices derived from Japanese shinrin-yoku grouped under the term “forest therapy”. However, very few mentioned the roles and potential impacts of the guide on participants experience during a forest therapy session. Based on professional experience, this opinion piece aims to clarify the practice of guided forest therapy and highlight the guide's contribution. By creating a space of trust and safety to facilitate sensory connection to nature and sharing of experience, guides play an essential role in the participants' experience. They promote embodiment, nature connectedness, and social connectedness that we believe are key factors enhancing the health benefits of the experience.

### KEYWORDS

Shinrin-yoku; forest therapy; guide; health; nature connectedness; social connectedness

## Introduction

The impact of nature on health and well-being has been extensively studied for the last 5–10 years showing positive physiological and psychological effects (Kotera et al., 2021; Oh et al., 2017). Several studies have shown decreases in pulse rate and cortisol levels and increases of heart rate variability when spending time in nature, thereby revealing an activation of the parasympathetic nervous system and transition of the body to a relaxing state (Park et al., 2014). Many studies also report increases in positive emotions and decreases in stress felt after an intervention in the forest (Oh et al., 2017; Shanahan et al., 2019). These positive effects of nature contact on mental health can be equally observed on people with psychological problems and on healthy populations (Kotera & Fido, 2022; Shanahan et al., 2019). Hence, different nature-based programs have been developed in many studies and have showed positive outcomes both for preventive and therapeutic purposes (Bang et al., 2016, 2017, 2018; Song et al., 2020).

It is however difficult to compare studies, as types of interventions can vary widely from one to the other even though they are sometimes labelled with the same name (Kotera et al., 2022). In recent years the terms “forest bathing” or “forest therapy” can be found in many scientific publications to describe very different types of intervention: a simple walk in the forest, a sensory immersion, physical activities, alone or in a group,

with or without a guide. The term “forest bathing” is an approximate translation of the Japanese word “shinrin-yoku”, developed in the 80’s. Shinrin-yoku means “to bath in the atmosphere of the forest” or “to soak in the forest with the help of the senses” (Miyazaki, 2018). The health benefits of this practice have been studied in Japan since the 1990s (Li, 2019; Miyazaki et al., 2014; Park et al., 2014).

Forest bathing has become popular in western countries during the last few years and refers to both guided and unguided experiences (Kotera et al., 2022). There are now various derived practices, grouped in this article under the term “forest therapy”, where a practitioner-guide leads a group or an individual and offers a sensory experience in nature. Two important aspects of these practices are: (i) they often occur in group and (ii) they are guided. However, in many of the scientific articles that evaluate these practices, the presence or absence of a guide is rarely mentioned, and when it is, the guide’s role is not described adequately nor is the guide’s potential role or impact on health outcomes investigated. Igawahara et al. (2007) suggested that walking with a guide produces stronger therapeutic and relaxation effects than does walking without a guide. Two studies from 2021 showed that forest therapy programs were associated with positive change in emotional state and social interactions, and performed better than non- or self-guided programs on mitigating negative emotions and improving positive moods (Kim & Shin, 2021; Yu et al., 2021). On the contrary, no difference in the psychological benefits from a guided versus unguided nature immersion exposure could be observed in a study done with students (Lim et al., 2020).

In this article, we aim to clarify the concept of guided forest therapy as a practice derived from the original Japanese practice of shinrin-yoku and discuss the importance of the guide’s role and its impact on the participant experience based on our professional experiences. We are writing as the scientific committee of the International Federation of French-speaking forest therapy practitioner-guides, with membership of 60 across seven countries (<http://en-chemin-vers.eu>).

## The practice of guided forest therapy

Guided forest therapy is a planned, thoughtful experience tailored to the participants and facilitated by a guide. It is a slow, sensory and guided walk over a short distance on a scouted trail. The guide includes sequences of sensory contact with nature (sensory invitations) and time to share what is being experienced (sharing). It consists of a multisensorial immersion in nature promoting physical, mental (including psychological, cognitive and emotional), relational and even sometimes spiritual health (Hansen et al., 2017; Hansen & Jones, 2020; Stier-Jarmer et al., 2021). By opening the senses to the surrounding nature, forest therapy invites to full presence in the place and the moment (embodiment) without a defined goal or the search for immediate results (Braun & Kotera, 2022). Participants enter into a relationship with the stimulation source of the senses and thus with the life around them (nature connectedness). This sensory activation can trigger a physical or emotional reaction and each person will react individually to a common sensory stimulus. It can therefore also lead to a connection with oneself (self-connectedness). In a group, the experience is punctuated with periods for sharing that create a relationship between participants (social connectedness). According to Dr. Qing Li (2018), forest bathing “bridges the gap between us and the natural world. And when we are in

harmony with the natural world we can begin to heal.” (p. 15). A recent study proposes a six-steps process explaining the beneficial effects of nature on psycho-physiological health: the first step being the stimulation of the senses resulting in positive emotions leading to a beneficial physical, physiological, mental and even behavioural change (Oh et al., 2020).

## The guide in a forest therapy experience

The Britannica dictionary gives us three definitions of the word “guide” as a noun: (i) a person who leads or directs other people on a journey; (ii) a person who shows and explains the interesting things in a place, (iii) a person who helps to direct another person’s behaviour, life, career, etc. In other words, a guide can have many roles and might even switch from one role to another when guiding the same group. In 1985, Cohen described different types of guides from pathfinder to mentor, animator, tour leader and teacher. In each case, the guide is the interface between the inside and the outside, between the group and the environment and needs knowledge, skills and practical experience to act and react in the right way (Zillinger & Nilsson, 2023).

In the context of forest therapy, we will show that the guide has different roles that can be divided into three categories and that each contributes to the positive impact of nature on human health (Table 1).

## Safety and trust

It is intuitively understood that a threatening environment is not conducive to relaxation and wellness. Staats and Hartig (2004) studied the influence of social context on psychological restoration during simulated walks. They showed that the feeling of safety is a prerequisite for an environment to enable recovery. By his/her presence, knowledge and expertise the guide fosters the creation of this essential safe space.

For this purpose, each forest bath is meticulously prepared. Guides scout out on the ground, design and adapt the trail that will be followed according to the natural environment. They must be aware of the potential hazards, such as for example, the presence of toxic plants or the risk of falling branches. In addition, the trail will be selected based on participant profile so that risk of the losing footing or the physical effort required are minimised.

Based on our experience, the presence of the guide creates a safe space for the participants. The guide welcomes and pays attention to everyone as well as to the group. The guide gives practical advice in terms of clothing and takes care of comfort and practical questions. These aspects are especially relevant for participants that are new to the

**Table 1.** Forest therapy guide’s key roles and impact.

Role of the guide	Tools	Impact on participants
Create a safe space	Trail scouting & selection and session facilitation	Feeling of trust & safety
Engage senses	Sensory invitations	Embodiment & nature connectedness
Foster sharing of lived experience	Various collective sharing techniques	Social connectedness

practice or are not familiar with spending time in natural environments. It is this space that forms the framework of safety and trust in which each participant will be able to feel embodiment and live their own experience.

### *Nature connectedness and engagement*

One role of the guide during a forest therapy experience is to encourage the participants to interact with nature, not only in a passive mode but through active sensory interactions, which allows for nature connectedness (relationship with the nature) to develop through an embodied experience (being fully present in the moment).

A study with 2096 adult participants showed that nature connectedness and engaging with nature through simple activities were key factors positively affecting mental health and well-being (Richardson et al., 2021). Other studies revealed that engagement with nature through sensory or emotional contact appeared to be the pathway to nature connectedness (Lumber et al., 2017; Richardson et al., 2022). Participants in a walking program where engagement was stimulated through different awareness propositions (like focus on senses) reported a higher satisfaction of the environment where the walks took place compared with participants following the same walking program but without engagement activities (Duvall, 2012). A multi-continent meta-analysis from 2014 demonstrated the connection between nature connectedness and the feeling of happiness (Capaldi et al., 2014).

During a forest therapy session, the guide will facilitate engagement and nature connectedness with the help of “sensory invitations”. These are suggestions or proposals to experience the natural environment through one’s senses. These invitations are designed in harmony with the surrounding natural environment and allow participants to slow down and open their senses by observing, listening, touching, tasting, smelling but also breathing and feeling their body in the present moment (Clarke et al., 2021). A study comparing self-guided forest bathing and forest therapy experiences showed that self-guided participants experienced mainly sounds as healing factors (Kim & Shin, 2021). Therefore, the guide plays an important role in eliciting nature connection via other senses that can expand the experience to make it more powerful and healing. It is for example well established that smells are deeply connected with our memory of past experiences (Herz, 2016). A multisensory virtual experiment showed the importance of olfactory stimuli in stress reduction (Hedblom et al., 2019).

With sensory invitations, the guide facilitates a transition from people’s day-to-day rhythm to that of the natural environment. The sensory and emotional relationship between the participant and nature is restored. Nature is no longer just a setting in which the participant evolves but a partner. The feeling of connectedness, of being an integral part of the place can appear.

As for “safety and trust” the impact of the guide in facilitating embodiment and nature connectedness might vary depending on participant experience. Kim and Shin (2021) observed that self-guided participants reported having more opportunity for introspection and self-reflection than guided participants in their forest therapy program. In a review study, Naor and Mayseless (2020) showed the importance of silence and solitude in wilderness solo experience for self-reflection and the feeling of connection. A recent study on 40 adults showed that solo experience in nature offers multiple pathways to

well-being and was linked to nature connectedness for most participants (Petersen et al., 2021). However, the authors observed that depending on the participants experience it could also feel like a solitary confinement instead of a positive experience. To balance time for solo and group experience during a session is therefore an important aspect of the guide's role, and this balance depends on an assessment of participants' profile.

Thanks to their expertise and experience guides can adapt the sensory invitations and the language used during forest therapy to the participants, or to specific intentions (particular themes, specific needs of certain populations). In so adapting the session, the guide promotes engagement and furthers the health benefits of a nature immersion.

### **Social aspect**

In the walking program cited earlier (Duvall, 2012), engagement by actively noticing was an important element for satisfaction. In addition, the results showed that walkers who shared their experience of noticing had a satisfaction rate superior to those who did not. This suggests that the social behaviour of sharing enhanced the positive effects of the engagement walk. The sharing of feelings and experiences during a forest therapy program also helped participants be more open to each other and increased cohesion in the group (Kim & Shin, 2021). A study exploring the therapeutic effects of an urban forest therapy program on middle-aged women showed self-healing processes through interactions with nature but also with the guides and other group members (Lee et al., 2019). Forest experience programs for children resulted in increased sociability and creativity (Cho et al., 2011, 2016; Lee, 2016), suggesting again the importance of the social aspect of the practice.

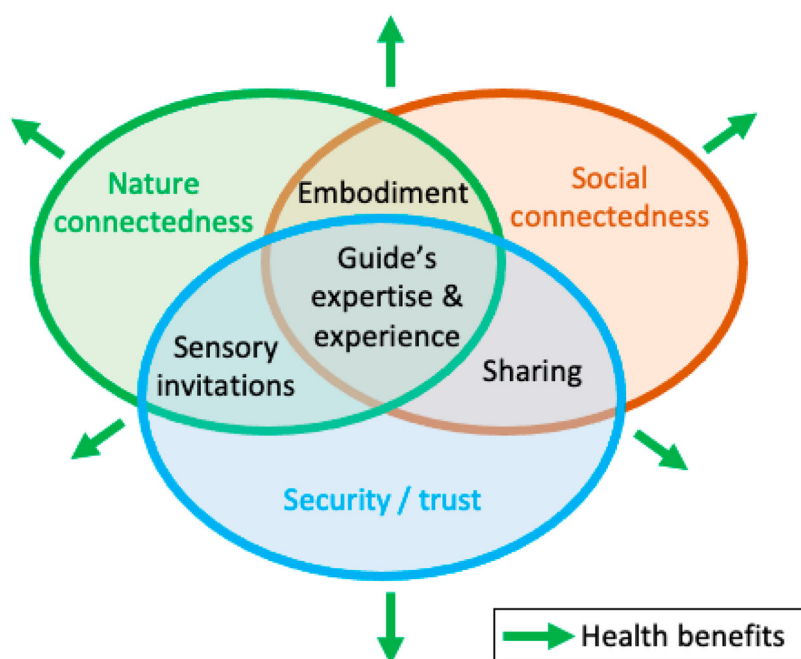
During a forest therapy experience, the guide ensures that each participant feels part of the group. The guide also facilitates the integration of a lived experience which allow participants to name their individual experience and express their emotions. The guide plays therefore a crucial role by creating a space of security, trust and non-judgment essential for this process to be beneficial.

On another level, community forest therapy activities allow participation of people with different sociocultural background, creating an opportunity to share a common sensory and emotional experience in a neutral environment while contributing to social sustainability.

### **Conclusion**

Guided forest therapy practices have evolved from the Japanese practice *shinrin-yoku* over the last decade in western countries. Concomitantly, organisations to train guides have appeared and a new profession has emerged: forest therapy practitioner-guide. In this article, we discussed the importance of the guide in fostering health benefits of such nature immersions. Through their different roles guides will create an environment of security, trust, connection and group cohesion that enhances both the physiological and psychological effects of nature on human health. Our model is presented in Figure 1.

As an expert with practical and theoretical knowledge the guide provides the essential base of trust and security necessary for the participants to enter in sensory



**Figure 1.** Health beneficial process during a guided forest therapy experience. Based on their expertise and experience, guides create an environment of safety and trust, and build three pillars that support the forest therapy experience: (i) sensory invitations, (ii) sharing techniques and (iii) embodiment. Taken individually and in combination with each other these pillars promote connection to nature, to ourself and others leading to increased health benefits.

contact with nature and feel the freedom to express themselves authentically. The nature connectedness and authentic sharing of lived experience will then act as a positive feedback loop increasing the group cohesion and trust allowing participants to engage fully in the forest bathing experience. In short, through their expertise, guides enhance connectedness to nature, self and others (social), leading to expanded physiological, psychological-emotional and relational health benefits. We claim these benefits accrue when a guide facilitates a combination of sensory invitations with the sharing of one's own nature interactions, in a space of kindness and security.

This paper is based on our experience as forest therapy guides and presents limitations. Many questions remain: is the presence of a guide always beneficial? Do benefits vary depending on the participant profiles, on the natural environment? Does the guide have the same impact for all practices grouped under the term "forest therapy"? Further studies are needed on at least two levels (i) to evaluate the guide's contributions by objective measurements (i.e biomarkers) and by subjective measurements from the participants perspective; and (ii) to establish quality standards for guiding this practice. We propose that the three aspects of the guide's role presented here could be a first step in establishing specifications for guided forest therapy, on the path towards harmonisation of the practice. Such specifications should include security and trust, nature connectedness and social cohesion.

## Acknowledgements

The authors thank all the members of the organisation En Chemin Vers for sharing their field experiences of guiding. We are especially thankful to our colleagues, forest therapy practitioner-guides and part of the scientific committee, Priscille Cazin, Anne Bolle and Jacques Girerd as well as Erik Lundberg from the university of Gothenburg for fruitful discussions and their valuable comments in the preparation of this manuscript.

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Notes on contributors

**Laurence Nachin**, PhD in microbiology and cellular biology, worked for many years as a researcher in the public and private sector. She has lived in Sweden since 2002, where she spends a lot of time in the forest to resource herself, as she was already doing in her native Limousin in France. In 2017, she discovered shinrin-yoku. Love at first sight: she became a certified forest therapy guide and founded Sense in Nature in 2019. Today she works for the (re)connection of humans to nature and its integration into the thinking process in order to promote sensitive, enlightened and life-inspired decisions. She sees this connection as the essential basis for the evolution of a sustainable world and a harmonious life between all beings of our beautiful planet.

**Sophie Rasson** Medical doctor, Sophie is psychiatrist and practices in Aubagne, France. She is also graduated in functional nutrition, micro-nutrition and is certified forest therapy guide since 2019. She is involved in preventive and curative mental health care for adolescents and adults, especially relating to eating disorders, addictions, and stress related diseases.

**Emmett Phil Coriat** is a pharmacist, forest therapy practitioner-guide and social entrepreneur. He is also co-founder of Prescri-Nature, a nature prescription program establishing nature time as the new pillar of public health. The program is supported by more than 45,000 healthcare professionals in French Canada. After a 25-year career in healthcare technological innovation where he specialised in market access of novel biotech drugs and devices, Emmett founded Natural Leadership, a social enterprise developing nature-based programs for organisations to tackle the global burnout epidemic while proposing concrete solutions to team dynamics, adaptability and leadership for today's reality. It advocates nature (re)connection as a key pillar towards regenerative leadership and redefining what success looks like for all stakeholders, starting with our planet.

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