# Shinrin-Yoku (forest bathing): A nature-based mindfulness intervention for school and clinical counselors

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### Cultural Context

- Shinto Indigenous Japanese Religion
- 80,000 shrines in natural places in Japan
- Deities seen as inhabiting nature
- Value of the connection between humans and nature (Bernard, 2018)

### Need for forest bathing

- Karoshi "Death by overwork
- Average 200 deaths per year due to strokes, heart attacks, stress.
- 23% worked 80 hours/month of overtime
- 11.9% worked 100+ hours/month of overtime
- 2016 Japanese law restricts overtime, mandates turning lights off at 10pm (Li, 2018)

### History of Forest Bathing in Japan

- Shinrin Yoku "Taking in the forest atmosphere"
- 1982 Term coined by Director General of the Agency of Agriculture
- 1990 Dr. Qing Li's preliminary investigations
- 2004 Extensive government funded research begins

"Climb the mountains and get their good tidings. Nature's peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy, while cares will drop away from you like the leaves of Autumn."

— John Muir



"We need the tonic of wildness...At the same time that we are earnest to explore and learn all things, we require that all things be mysterious and unexplorable, that land and sea be indefinitely wild, unsurveyed and unfathomed by us because unfathomable. We can never have enough of nature." - Henry David Thoreau

### A typical forest bathing session

- 2 hours is a good time frame, can be less/more
- No goal/destination other than being present
- Take what the forest/environment offer
- Slow down walk .5-1 mile in 2 hours
- Sit still for 15-30 mins
- Engage with as many senses as possible: touch, smell, sight, taste, hearing
- Be curious and explore

Think.... Stroll Saunter Ramble Wander Not... Hike Exercise



## What are the effects?

### • Mood

- Chia-Pin, et al., 2017
  - Used Profile of Mood States with 128 middle-aged and elderly participants after 2 hour forest bathing walk
  - Reduced: "tension-anxiety"
    - "anger-hostility"
    - "fatigue-inertia"
    - "depression-dejection"
    - "confusion-bewilderment"
  - Increased:
    - "vigor-activity"

### What are the effects?

- Hostility and Depression
  - Morita, et al., 2007
    - 498 participants (244 m, 254 f)
    - Healthy adults
    - Tested on forest bathing days and control days, experimental and control groups.
    - The greater the participant's stress, the stronger the result.

#### Sleep

- A 3-day forest bathing trip reset participants' sleep cycles (Li, 2018).
- Afternoon walks increased sleep by approx. 1 hour (Morita, et al., 2011)

### How does forest bathing work?

#### • Restorative effects

- Default mode functioning
- Attention restoration theory
- Increased parasympathetic nervous system activity (Berto, 2014)
- Decreased ruminative thinking (Bratman, Hamilton, Hahn, Daily & Gross, 2015)

### How does forest bathing work?

### Phytoncides/Turpenes

- Chemical messengers released by trees for communication
- Stimulate and calm the human body when breathed in

### Soil Microbacteria

- Increase Natural Killer (NK) cell production when breathed in, stimulate immune function.
- NK production stays higher for 30 days after a 2-hour forest bathing trip (Li, 2018).



Viewing fractal patterns reduces physiological stress

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#### Natural sounds reduce stress (Ross & Mason, 2017)



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Review

#### Shinrin-Yoku (Forest Bathing) and Nature Therapy: A State-of-the-Art Review

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## School counseling application



- Adaptable to all ages
- Keep in mind safety, rules.
- Case example:
  - 16 yo boy in foster care
  - Walks behind high school
  - Began going into forest near group home
  - Helped relieve anxiety
  - Substitute for substance use

# Clinical mental health application

- Talk about it in therapy
- Bring nature into the room
- Practice therapy outdoors
- Consider fit with client's values and life experience
- Most people have some positive associations with nature
- Be mindful of trauma and negative conditioning

### Clinical mental health application

#### • Case example:

- 50 yo man
- Chronic MDD
- Persistent SI
- Multiple severe stressors
- Avid gardener
- Highlighted the value of nature for him already, explained the benefits
- He recalled childhood nature engagement
- Reinforced his explorations in session as self-care and stress reduction
- He steadily increased his motivation for self-care, reduced psychotropic medication



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