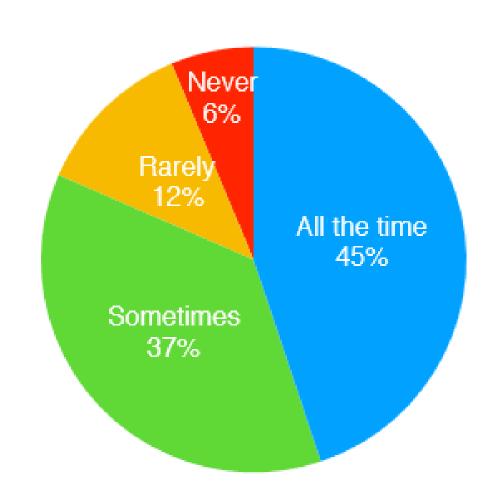


# TAKE A WALK IN THE WOODS: SHINRIN-YOKU (FOREST BATHING)

#### Issue

- 45% of high school students in 2018 survey feel stressed "all the time."1
- High levels of chronic stress impedes academic success, compromises mental health functioning, and fosters risk behavior.
- Chronic stress can lead to mental health issues in emerging adult if not addressed.

How often are you stressed?		
Response	Total	Percentage
All the time	16,101	44.88%
Sometimes	13,146	36.64%
Rarely	4,370	12.18%
Never	2,261	6.30%



What stresses you out the most?		
Response	Total	Percentage
Relationships	9,494	27.22%
Teachers	8,562	24.55%
Other	7,358	21.09%
Parents	4,695	13.46%
College	3,302	9.47%
Friends	1,470	4.21%

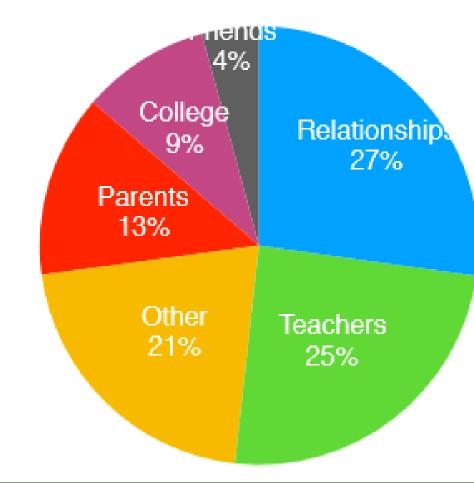


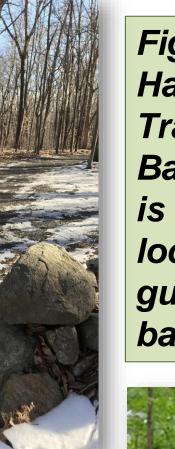
Fig 1. Teens were asked four questions in the stress and mental health poll. Questions included "How often are you stressed?" and "what stresses you out the most?" Figure from globenewswire.com.1

## Objectives

The purpose of this project is reducing overall stress of the Barlow community in order to maintain overall health, as it can improve mood, boost immune function, promote longevity and allow participants to be more productive.

Our goal is to develop a guided forest bathing training and activities at multiple onsite locations for the Barlow High School Community.





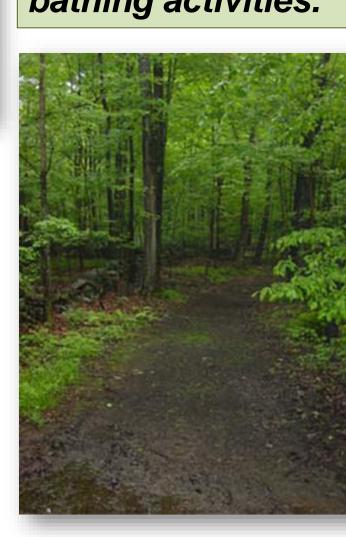


Fig. 2. Peter Hanson Memorial Trail located near Barlow High School is a potential location for the guided forest bathing activities.



### Forest Bathing

- Forest bathing involves finding the right place, where you can visit often, and connect with the wonders of nature
- Natural aromatherapy for relaxing
- Recognized as a stress management activity
- Phytoncides increase immune system function



#### More Nature, Less Stress

- Connect with nature by:
  - Slowing down
  - Breathing deeply
  - > Touching trees and plants
  - Pay attention to details
- "Not to think, but to feel the sun, hear the wind in the trees, feel the breeze."

#### Concept of nature therapy

Stressed state

Restorative effects of nature (forests, flowers, etc.)

Physiological relaxation Immune function recovery

**Preventive medical effect** 

Fig. 3. Concept of Nature Therapy.<sup>2</sup>

### Benefits

Improve mood

Slow heart rate

Fig. 4. Effect of

blood pressure

subjects using

systolic blood

pressure (SBP),

diastolic blood

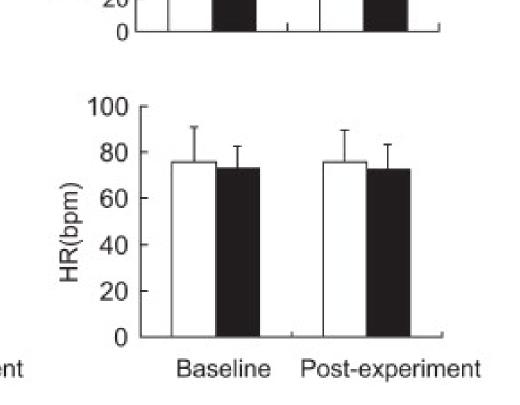
pressure (DBP),

hypertension.<sup>3</sup>

indicators in

forest bathing on

- Lower blood pressure
  - 160 140 120 100 60
- pulse pressure (PP) and heart rate (HR) of 24 subjects with Baseline Post-experiment
- Increase mental strength □ City ■ Forest



## Mental Strength<sup>5</sup>

- Regulating our thoughts
  - > Ignoring self-doubt
  - > Replacing self-criticism with self-compassion
- Managing your emotions
  - > Acknowledging/embracing all emotions (even the uncomfortable ones)
  - > Understanding how our feelings influence the way we think and behave
- Behaving productively
  - > Choosing to take action that will improve our lives
  - Motivation
  - Delayed gratification



## **Next Steps**

- Training project team, Mental Health student advocates, and Redding Garden Club members on how to execute a forest bathing experience
- Develop sites and interactive map using Track Kit GPS & Google Maps
- Develop guided forest bathing guidelines
- Develop QR codes for guided practice to be placed at sites
- Establish awareness of the practice and benefits
- Monitor and collect data

### References

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- 2. Li, Qing. Forest Bathing: How Trees Can Help You Find Health and Happiness. Thorndike Press, a Part of Gale, a Cengage Company, 2018.
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