Naturaleza cercana y Salud humana: de la evidencia a la acción!

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CONGRESO NACIONAL DE PARQUES Y JARDINES PÚBLICOS
LOS PARQUES Y JARDINES, SISTEMAS NATURALES DE SALUD
2023 February

Spain.info

Terra Cast Products

City of Kelowna

European Best Destinations

Parks are the Roots of Wellness

Research Trends

Evidence to Action

Partnerships

Parks = Whole Health Solution

What is the Evidence?

Green Cities: Good Health

www.greenhealth.washington.edu

Sponsors:

USDA Forest Service,
(U&CF Program + Pacific NW Research)
University of Washington
NGO partners

Thanks!
to U of WA students:
Katrina Flora
Mary Ann Rozance
Sarah Krueger

Research Reviews & Summaries

Urban Forestry/Urban Greening Research

Green Cities: Good Health

INTRODUCTION RESOURCES FUTURE RESEARCH REFERENCES

- Community Building
- Local Economics
- Place Attachment & Meaning
- Crime & Fear
- Safe Streets
- Active Living
- Reduced Risk
- Wellness & Physiology
- Healing & Therapy
- Mental Health & Function
- Work & Learning
- Culture & Equity
- Lifecycle & Gender

Local Economics

RSS Feed Print

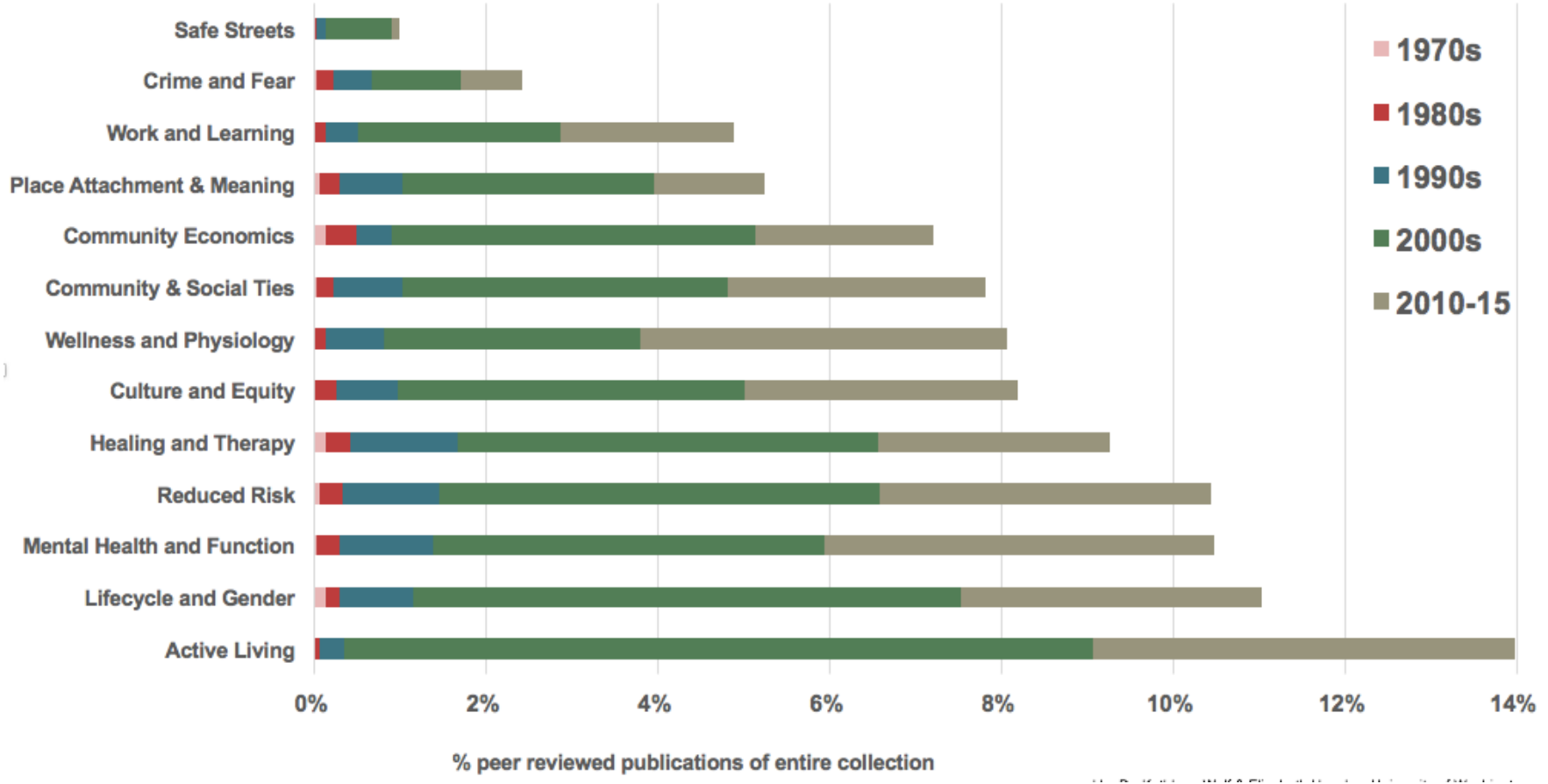
Trees in cities are not grown and managed for products that can be bought and sold on markets, but they do provide many intangible services and functions! This article serves two purposes. First, it introduces valuation methods that are used to convert intangible benefits to dollar sums.[1,2] Then, it shows how nonmarket valuations can support local decision-making.

street trees boost market value of houses, providing tax revenue for communities

Fast Facts

- The presence of larger trees in yards and as street trees can add from 3% to 15% to home values throughout neighborhoods.
- Averaging the market effect of street trees on all house values across Portland, Oregon yields a total value of $1.35 billion, potentially increasing annual property tax revenues $15.3 million.[9]
- A study found 7% higher rental rates for commercial offices having high quality landscapes.[14]
- Shoppers claim that they will spend 9% to 12% more for goods and services in central business districts having high quality tree canopy.[34]
- Shoppers indicate that they will travel greater distance and a longer time to visit a district having high quality trees, and spend more time there once they arrive.[34]

Green Cities: Good Health > 4,500 peer reviewed publications



Urban Trees & Human Health: A Scoping Review

Purpose:

To carefully collect and synthesize the peer-reviewed evidence concerning urban trees and human health

Health Canada Santé Canada

Canada
Natural Resources Canada
Canadian Forest Service

Wolf et al. 2020. Urban Trees and Human Health: A Scoping Review. *Int J Environ Res Public Health*

What are Top Level Messages?

General Wellness

credit: Kew Royal Botanic Gardens

Therapy & Treatment

credit: yourlifechoices.com.au

Dosage

nature places & programming

STRESS

20-30 min session

Hunter et al. 2019. Frontiers in Psychology

DEPRESSION BLOOD PRESSURE

> 30 min per week

Shanahan et al. 2016 Scientific Reports

DEPRESSION

1 garden visit per week (peak 4-5)

Cox et al. 2017 International Journal of Environmental Research & Public Health

HIGH WELL BEING

120 min per week (peak 200-300)

White et al. 2019 Scientific Reports

Nearby Nature is Necessary at All Ages

Nutrition

nearby nature is also essential

Guy Kramer

credit: safeFood

nutritious
home meals

credit: Food Business News

nice meal
at a restaurant

credit: Getty Image

memorable
feast

Evidence to Action!

Forest Pre-Schools

- pre-kindergarten
- state certified in WA state
- academic and developmental benefits
- formal & informal learning

Children & Nature Network

THE STATISTICS on CHILDREN & NATURE

Promote Walking!

Walking Programs
children
elders
families

Walking Meetings

creativity, energy, communication, health

BLOEDEL
RESERVE
Strolls for Well-Being

Strolls at Home

Shinrin-yoku; Japan
Forest Bathing / Forest Therapy

Thanks to Dr. Suzanne Bartlett-Hackenmiller (Ob-Gyn) for images

What is it?

- Slow, mindful walk, intentional focus on natural surroundings (often biodiversity)
- Certified guides urge participants to take in surroundings through one's senses
- Extensive research, 1982 to now

Forest Therapy

Many Mental & Physical Health Benefits

Wen et al. 2019. Medical empirical research on forest bathing (Shinrin-yoku): a systematic review. *Environmental Health and Preventive Medicine*

- Cholesterol
- Blood glucose
- Heart rate
- Blood pressure
- Sympathetic (fight-or-flight) nerve activity
- Depression, anxiety, sleep
- Subjective experience of chronic pain
- Heart rate variability (HRV)
- Salivary cortisol and salivary alpha-amylase
- Natural Killer (NK) levels and activity

Nature Systems for Forest Therapy/Bathing

- local to regional system of sites & associated services
- trained certified guides
- trail & parcel census & certification
- economic development

Parks Prescription

Rx for Health

Date: _____

Dr: _____

Name: _____

I recommend:

☐ Walking ☐ Other: _____

_____ minutes a day

_____ days per week

* Health Canada suggests moderate activity of 30 minutes per day | 5 days a week

Benefits of daily activity

- Improve overall physical and mental health
- Maintain a healthy weight
- Reduce the risk of diabetes and other chronic conditions
- Lower cholesterol levels
- Manage stress and anxiety

Signature: _____

doctors of bc

walk with a doc
educate. exercise. empower.

credit: healthy central florida

credit: CNN.com

Healthcare Partnerships

- The Woodlands/Conroe, Texas, USA
- Wm Goodrich Jones State Forest
- Lone Star Family Health Center
- parks prescription
- doctors collecting data

Mental Health and Function

Mental Health Challenges

MedCity News

Canopy Strategic Partners

Mental health

'A high-risk perfect storm': loneliness and financial despair take toll on US mental health

Lockdowns have caused uncertainty, isolation, grief and economic despair, leading to a sharp rise in calls to helplines

Nina Lakhani

Fri 24 Apr 2020
07.00 EDT

The Guardian

mental health

▲ 'In the first wave people were anxious, but now in the second wave people are feeling depressed and isolated, especially very poor people and those in violent situations.' Photograph: Justin Paget/Getty Images

CDC Details COVID-19's Massive Mental Health Impact

— Young adults, people of color, essential workers, and adult caregivers particularly affected

by Elizabeth Hlavinka, Staff Writer, MedPage Today
August 14, 2020

credit: iStockphoto

Peter Titmuss / Universal Images Group via Getty Images

credit: UFCW

credit: Westend61/Getty Images

credit: Johnson and Johnson

Climate Crisis & Extreme Events

derecho

wildfire/bushfire

extreme heat

flooding

hurricane/typhoon

solastalgia: emotional or existential distress from environmental change

Walking in Nature Changes the Brain

rumination: Negative self-referential thoughts, heightened risk for depression and other mental illnesses

90-min walk in a natural setting *decreased*

- decreased self-reported rumination
- improved mental processing
- no effects from built environment walks

Look4ward.com

Bratman et al. 2015. *Proceedings of the National Academy of Sciences of the USA*

Attention Restoration Theory

- directed attention
- cognitive fatigue
- outcomes? frustration, impulsive, aggression

Rachel & Stephen Kaplan, University of MI

ART Design Elements

- being away
- ‘soft’ fascination
- extent
- compatibility

Rachel & Stephen Kaplan, University of MI

Biodiversity & Mental Health

ecological landscapes – additional mental heath benefit

- less depression, anxiety & stress:
  - less depression – more than 20% cover
  - less anxiety – more than 30% cover
  - less stress – more than 20% cover

Cox et al. 2017. BioScience 67, 147-155

Nearby Nature in the Community

Nature & Health
Translations to Urban Planning

Sponsored by
USDA Forest Service

American Planning Association

University of Maryland, Environmental Finance Center

University of Washington, College of the Environment

US Forest Service

City of Chicago

The Guardian

Taylor Quality Guitars

Austin 2nd Street

Green Schoolyards America

Nature-Based System in Cities & Communities

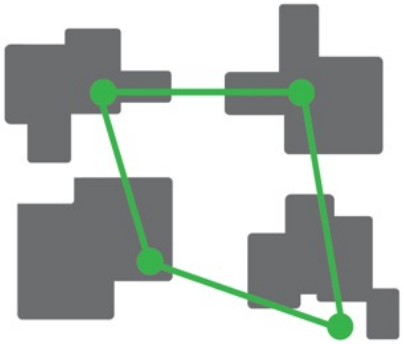
equivalent
to other
city systems

NEARBY NATURE
FOR HUMAN HEALTH
SITES TO
SYSTEMS

Nature Sacred

perceptual linkage

Nested with Links



Fill in the Squares

Hub & Spoke

The 3-30-300 Rule for Urban Forestry and Greener Cities

By Cecil Konijnendijk

BIOPHILIC CITIES JOURNAL, VOL. 4 NO. 2

- 3 trees visible from every home
- 30% canopy cover in neighborhood USA Today
- access to park or green space within 300 yards

Washington Post

Nearby Nature for Whole Health!

Evidence to Action

Programs & Policy

Partnerships

Thank you!