Urban Nature & Human Wellness: Mental Health

Kathleen L. Wolf
Research Social Scientist
University of Washington
Seattle USA
USDA Forest Service International Programs promotes sustainable forest management and biodiversity conservation internationally.

World Health Organization: definition of health

A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (1946)
Social Determinants of Health
Literature review of research about nearby nature & human health
Los líderes y planeadores comunitarios deben planear y diseñar con la naturaleza para mejorar el bienestar y la calidad de vida.

Riquezas de la Naturaleza:
Los beneficios económicos y en la salud de vivir de cerca de la naturaleza.
Las experiencias en sitios naturales comienzan con las experiencias de la vida y de la muerte.

**BERÉN**

**NIÑOS Y ADOLESCENTES**

**ADULTOS**

**ADULTOS MAYORES**

Las investigaciones sobre los beneficios de la naturaleza en niños, adolescentes y adultos mayores, resaltan la importancia de la naturaleza en la vida cotidiana. Las experiencias en sitios naturales pueden ser importantes durante toda la vida, de la cuna a la sepultura.
Urban Trees & Green Space for Mental Health

**general wellness:**
- school performance
- stress reduction
- attention restoration
- creativity
- job burnout prevention

**therapy:**
- attention deficit
- emotional therapy
- depression reduction
- dementia & cognitive disorders
Data Story: Nature for Human Health Benefits Across the Life Cycle
Classroom Views & Stress

Classroom Views & Stress high school student response

Fig. 2. Attention scores at the end of class activity and break (Means and SE).

Fig. 3. Physiological stress at the end of class activity and break (Mean and SE).
ADHD and nature contact

• 96 children aged 7-12 diagnosed ADD or ADHD
• Parents gave postactivity attentional functioning ratings (PAAF) –

• 4 measures:
  • Can’t stay focused on unappealing tasks (homework or chores)
  • Can’t complete tasks
  • Can’t listen and follow directions
  • Easily distracted

Faber Taylor. 2001. *Environment & Behavior*
ADHD and nature contact

- 17 children aged 7-12 with diagnosed ADHD
- 20-minute guided walks
  - Park
  - Neighborhood
  - Downtown
- Pre-walk puzzles
- Post-walk cognitive test

Faber Taylor & Kuo. 2009. *Journal of Attention Disorders*
physically disabled & tree climbing!
recreational tree climbing – youth therapy
Green High School Campuses

- cafeteria & classroom window views with greater quantities of trees and shrubs
- positively associated with:
  - standardized test scores,
  - graduation rates
  - %s of students planning to attend a four-year college
  - fewer occurrences of criminal behavior

Matsuoka. 2010. Landscape & Urban Planning

credit: NBC News
Attention Restoration Theory
Rachel & Stephen Kaplan, U of MI
busyness

multi-tasking

‘out of balance’
directed attention
fatigue . . . .
Workplace Nature & Attention Recovery

**Well-being**
- desk workers without view of nature reported 23% more ailments in prior 6 months

**Job Satisfaction**
- less frustrated and more patient
- higher overall job satisfaction and enthusiasm

ART Design
Elements
- being away
- ‘soft’ fascination
- extent
- compatibility
Nature and Creativity
nature and creativity

http://daycare.sulekha.com
Give Your Ideas Some Legs

creative test – analogy generation

conditions: sit inside, treadmill walk, walk outside, wheelchair outside

walking outside produced most novel & highest quality analogies – walking opens up free flow of ideas

Oppezzo & Schwartz. 2014. Journal of Experimental Psychology
Nature & Creative Professionals

focused interviews, Denmark
makes us more curious
supports flexible thinking
recharges directed-attention

aids 2 phases of the creative process:
Preparation phase and Incubation phase
sensory dimensions: space & serene

Plambech & Konijnendijk van den Bosch. 2015.
Urban Forestry & Urban Greening
Physical Activity & Depression Reduction

Review of 13 high quality studies
- exercise recommended for mild to moderate depression
- people who are willing & motivated
- associated meditation and mindfulness are important

Improving Depression

20 adults with major depression walk in a park setting and a built setting

- 50-minute walks one week apart

before-after testing:

- Mood: Positive and Negative Affect (PANAS)
- Cognition: Backward Digit Span (BDS)

Berman et al. 2012. Journal of Affective Disorders

cognitive and affective improvements after walking in a nature setting
Effects of nature window view on recovery from surgery (Roger Ulrich, 1984)

- Shorter stays
- Less pain
- Fewer minor complications
- Better emotional well-being
Legacy Good Samaritan Medical Center
Stenzel Healing Garden 1997
Rehabilitation Institute of Oregon
Hospital Staff – Respite and Support
Nature: A stress coping resource for employees 24-7

image credit: Teresia Hazen
Alzheimer’s Disease & Dementia
Provide wander gardens & horticulture therapy

• 10.5% reduction in amount of medications used in dementia facility
• 30% fewer falls, accompanied by a reduction in fall severity

Detweiler et al. 2009. *American Journal of Alzheimer’s Disease and Other Dementias*
Urban Trees & Green Space for Mental Health

**general wellness:**
school performance
stress reduction
attention restoration
creativity
job burnout prevention

**therapy:**
attention deficit
emotional therapy
depression reduction
dementia & cognitive disorders
Data Story: Nature for Human Health Benefits Across the Life Cycle
www.naturewithin.info