Children and Nature

A quasi-systematic review of the literature
“We conclude that programs like 'Scared Straight' are likely to have a harmful effect and increase delinquency relative to doing nothing at all to the same youths”

Petrosino, Turpin-Petrosino & Buehler (2003)
What I’ll cover

• My approach
• Findings
• Some thoughts on reviews, evidence and policy arguments
Framing the project

- Children under 12
- ‘nearby nature’
- Outcomes
- Quantitative studies
London’s children & nature

200,000+ children under 12 have little or no everyday experience of nature
My approach

- Systematically search for relevant studies
  - Other literature reviews
  - Contact with leading primary researchers
  - Keyword search of bibliographic databases

- Analyse selected studies
  - Evaluate study quality
  - Categorise by benefits/outcomes
  - Categorise by degree of playfulness

- Evaluate evidence for each benefit
  - Based on number & quality of studies
Claims that are well supported (1)

- Spending time in natural environments is associated with
  - adult pro-environment attitudes
  - being connected with the natural world
  - sense of place
- Living near to green spaces is associated with greater physical activity
- Spending time in nearby nature leads to improvements in mental health & emotional regulation
Claims that are well supported (2)

• School gardening projects improve scientific learning & lead to healthier eating habits
• Experience of green environments is associated with greater environmental knowledge
• Play in natural environments leads to improved motor fitness
Claims that have some good support

• Forest school & school gardening projects are associated with improved social skills
• Forest school leads to improved self-control
• School gardening projects lead to increased self-awareness
Claims with some support

- Nearby nature is associated with more outdoor play & hence improved well-being
- Forest school is associated with improved self-confidence, & language & communication
- Conservation activities in school grounds & nearby open spaces are associated with improved psychosocial health
Why does children’s engagement with nature matter?

For non-cognitive outcomes, the most significant experiences are repeated, hands-on & playful.
Engagement style & outcomes

- Physical activity
- Concern for envt
- Mental health
- Connect to nature
- Knowledge

- More playful
- Less playful
- Both/unclear
Systematic reviews are unlike “reviews of the studies I could find”, “reviews of the authors I admire,” “reviews which leave out inconveniently inconclusive findings or findings I don’t like,” and “reviews which support the policy or intervention I intend to introduce.”

Prof Helen Roberts (from Roberts and Petticrew, 2006)
• Correlation is not causation (“the sandal-tofu hypothesis”)
  – “Things can only get better”
  – Placebo effect
  – Value of longitudinal & intervention studies & importance of controls

• ‘Evidence’ is not the plural of ‘anecdote’
  – Populations, sample size & statistical significance

• Biases are everywhere
  – Subject bias
  – Observer bias
  – Publication bias
A policy argument… tells a story: it provides a setting, points to the heroes and villains, follows a plot, suggests a solution, and, most importantly, is guided by a moral. Since policy arguments are designed to persuade, they are necessarily value-oriented. Yet this does not mean that policy arguments are mere opinion. Policy arguments explicate problems by recourse to rational methods... Policy arguments are successful, not because they are based on an objective standard, but because they persuade.

John Adams, author of *Risk*

www.rethinkingchildhood.com