

# The importance of access to nature for young children

Louise Chawla, Professor of Planning and Urban Design,  
University of Colorado, Boulder CO, USA

**Research shows that young children, like older children and adults of all ages, derive a range of benefits from having access to nature – even if only a small patch of trees on marginal urban land. This article discusses the reasons why nature is important for young children, including that it lays the foundations for an interest in taking care of the environment in later life, and touches on ways in which young children’s access to nature can be enhanced.**

A growing body of research attests to the importance of access to nature for human health and well-being. This research has profound implications across a range of areas, from healthcare to productivity in the workplace to urban planning to the design of schoolyards. In terms of urban planning and design, we urgently need – and are slowly experiencing – a paradigm shift towards putting front and centre the important question of how the design of the physical environment can best promote human flourishing.

As an environmental psychologist now working at the intersection of health, planning and design, my entry point into the issue of children’s access to nature has been an interest in the question of what prompts people to take an active interest in managing and safeguarding their environments. This question applies in both rural and urban areas, as the civic skills required to protect a forest or a river are much the same as those required to protect an urban environment. So what motivates people to notice the quality of their environment and take action?

In research in the USA and Norway, I found that the reasons people give when asked this question directly – for example, that they are concerned with human health or to protect resources for future generations – often have their roots in experiences in early childhood. When I asked people in an open-ended way to tell a story about their motivation, most drew on recollections of their childhood, describing connections they had felt to special places where they played as children.

It was not usually in wild lands that interviewees located their memories; often it was in an urban park, a garden, or the marginal green spaces found in many residential neighbourhoods. The connections they described were not necessarily to a sweeping landscape, but could be to a single tree. Even among adolescents, research shows a correlation between those who report having had positive experiences in nature as children and those who are taking action to protect their environment.

Early childhood appears to be a critical point in maximising the chances of such formative experiences by facilitating access to natural areas. When researcher Emily Stanley observed play patterns among children who had free access to a natural wooded area, an athletics field or a built play environment, she found that under-10s tended to gravitate towards the natural area, while over-10s were more likely to favour the built environment as a location for discussion or the athletics field for organised games

Even among older children, though, there are profound benefits to encouraging time spent in natural habitats. Fascinatingly, it does not appear to matter whether the time children and adolescents spend in nature is chosen in their own free time or mandated as part of their school activities; the benefits are the same.

## **How children benefit from access to nature**

The human appreciation for nature appears to be deeply rooted and instinctual. Among adults, research shows clear physiological benefits from contact with nature. Walking in a park, or even looking at pictures of natural landscapes, has been shown to lower heart rates, blood pressure and stress levels. When children are asked to draw things they would like to see in their environment, it appears to be a universal tendency – from the stone cities of Lebanon to the South African veld – for them to draw trees, plants, wildlife and water.

There are varied benefits for young children from having access to nature. Studies show links between access to nature and ability to sustain concentration, delay gratification and cope with stressors. A study in



**Early childhood appears to be a critical point in maximising the chances of such formative experiences by facilitating access to natural areas.** Photo • Courtesy Emily Stanley

Studies with children leave no doubt about how natural play stimulates the imagination and fosters a deep sense of connectedness to the larger universe of living things. In one ethnographic study of children's play in a forest, the forest was bulldozed during the research and the children's grief was clearly profound – it was not just a play location that had been removed, but an entire world of the imagination which they had created.

The box on the next page, prepared for a chapter in a newly published book which examines the role of creating natural habitats in emergency recovery situations, summarises research on features of natural environments that support children's resilience and strengths.

*'Studies show links between access to nature and ability to sustain concentration, delay gratification and cope with stressors.'*

the Netherlands demonstrated links between living further than 1 km from the nearest green space and the prevalence of 15 major illnesses, with one of the strongest links being with anxiety disorders and depression in children aged under 12. Adults in many studies report that memories of a special place in nature experienced in their childhood give them a pool of calm on which they can draw in difficult times.

Ethnographic observations of children's play show that games are more imaginative and creative in natural habitats than in built play environments. Play in nature has been found to promote physical agility and social confidence. Recent research in Sweden even shows that natural environments tend to encourage play that is gender-neutral, or that brings boys and girls together.

### Features of natural environments that support children's resilience and strengths

#### *Natural surroundings and views of nature*

- Better concentration (Wells, 2000; Faber Taylor *et al.*, 2002)
- Better ability to inhibit impulses and delay gratification (Faber Taylor *et al.*, 2002)
- Better coping with upsetting events (Wells and Evans, 2003)

#### *Special places in nature*

- Opportunities to assimilate and transform experiences in places that are responsively alive (Sobel, 2002; Goodenough, 2003)
- Opportunities to feel connected to the larger universe of living things (Clayton, 2003)
- Memories that form a reservoir of calm to draw upon (Robinson, 1983; Chawla, 1990; Hoffman, 1992)
- Familiarity with nature as a favourite place that can be recreated in new places (Chawla, 2003)

#### *Nature play*

- Better concentration, ability to stay on task (Grahn *et al.*, 1997; Faber Taylor *et al.*, 2001; Kuo and Faber Taylor, 2004; Faber Taylor and Kuo, 2009)
- Better motor coordination and agility (Grahn *et al.*, 1997; Fjortoft, 2001)
- More cooperative, creative social play (Kirkby, 1989; Grahn *et al.*, 1997; Faber Taylor *et al.*, 1998; Herrington and Studtmann, 1998)

#### *Animal companions*

- A feeling of acceptance by a responsive, non-judgmental creature (Melson, 2008)

#### *Animal care*

- Better self-control (Katcher and Wilkins, 2000; Katcher and Teumer, 2006)
- Better social skills (Katcher and Wilkins 2000; Katcher and Teumer, 2006)

#### *Gardening*

- Greater self-understanding (Robinson and Zajicek, 2005)
- Greater self-esteem (Cammack *et al.*, 2002b)
- Better interpersonal skills and ability to work in groups (Hung, 2004; Robinson and Zajicek, 2005)
- Increased sense of connection and responsibility to the environment (Cammack *et al.*, 2002a; Cutter-Mackenzie, 2009)

Adapted from Chawla (2012)

### Practical ideas to get children in touch with nature

With young children, a lot can be done in a small space. It doesn't take a large area to plant some trees, create a water feature and provide patches of soil for children to dig in. In the West, there are many areas with artificial play equipment built on expanses of asphalt; these spaces could easily be filled with trees and bushes instead (Keeler, 2008; Danks, 2010).

As the research indicates, there are also benefits to be derived from looking for opportunities to engage children in creating gardens and tending for animals. This points to the value of activities such as schools engaging their pupils in creating and tending for a natural habitat, monitoring the wildlife that uses the habitat, and passing on the habitat to their successors at the school.

Unfortunately, appreciation of the benefits of access to nature is penetrating the world of urban planning only slowly. However, while it is clearly easier if support exists from city authorities, this is an issue which lends itself to grassroots action. It takes an alliance of various groups, including advocates for children and for the environment, to engage with communities and identify opportunities to create natural areas in neighbourhoods, on housing estates, at preschools – in other words, in the fabric of children's daily lives.

Naturally, children themselves can and should be engaged in this process, as even preschoolers have clear ideas about what they want and don't want in their environment.

## References

- Cammack, C., Waliczek, T.M. and Zajicek, J.M. (2002a). The green brigade: the educational effects of a community-based horticultural program on the horticultural knowledge and environmental attitude of juvenile offenders. *HortTechnology* 12(1): 77–81.
- Cammack, C., Waliczek, T.M. and Zajicek, J.M. (2002b). The green brigade: the psychological effects of a community-based horticultural program on the self-development characteristics of juvenile offenders. *HortTechnology* 12(1): 82–6.
- Chawla, L. (1990). Ecstatic places. *Children's Environments Quarterly* 7(4): 18–23.
- Chawla, L. (2003). Special place – what is that? Significant and secret spaces in the lives of children in a Johannesburg squatter camp. In: Goodenough, E. (ed.) *Secret Spaces of Childhood*. Ann Arbor, MI: Michigan University Press.
- Chawla, L. (2012). Children's engagement with the natural world as a ground for healing. In: Tidball, K.G. and Krasny, M. (eds) *Greening in the Red Zone: Disaster, resilience and community greening*. Dordrecht: Springer.
- Clayton, S. (2003). Environmental identity: a conceptual and an operational definition. In: Clayton, S. and Opatow, S. (eds) *Identity and the Natural Environment*. Cambridge, MA: MIT Press.
- Cutter-MacKenzie, A. (2009). Multicultural school gardens. *Canadian Journal of Environmental Education* 14: 122–35.
- Danks, S. (2010). *Asphalt to Ecosystems*. Oakland, CA: New Village Press.
- Faber Taylor, A. and Kuo, F.E. (2009). Children with attention deficits concentrate better after walk in the park. *Journal of Attention Disorders* 12(4): 402–9.
- Faber Taylor, A., Kuo, F.E. and Sullivan, W. (2001). Coping with ADD: the surprising connection to green play settings. *Environment and Behavior* 33(1): 54–77.
- Faber Taylor, A., Kuo, F.E. and Sullivan, W.C. (2002). Views of nature and self-discipline: evidence from inner-city children. *Journal of Environmental Psychology* 22: 49–63.
- Faber Taylor, A., Wiley, A., Kuo, F.E. and Sullivan, W.C. (1998). Growing up in the inner city: green spaces as places to grow. *Environment and Behavior* 30(1): 3–27.
- Fjortoft, I. (2001). The natural environment as a playground for children. *Early Childhood Education Journal* 29(3): 111–17.
- Goodenough, E. (ed.). (2003). *Secret Spaces of Childhood*. Ann Arbor: University of Michigan Press.
- Grahn, P., Mariensson, F., Lindblad, B., Nilsson, P. and Ekman, A. (1997). Ute padagis (Outdoors at daycare). *Stad and Land (City and Country)* 145.
- Herrington, S. and Studtmann, K. (1998). Landscape interventions: new directions for the design of children's outdoor play environments. *Landscape and Urban Planning* 42: 191–205.
- Hoffman, E. (1992). *Visions of Innocence*. Boston, MA: Shambhala.
- Hung, Y. (2004). East New York farms: youth participation in community development and urban agriculture. *Children, Youth and Environments* 14(1): 56–85.
- Katcher, A. and Teumer, S. (2006). A 4-year trial of animal-assisted therapy with public school special education students. In: Fine, A. (ed.) *Handbook on Animal-assisted Therapy* (2nd edn). London: Academic Press.
- Katcher, A.H. and Wilkins, G.G. (2000). The centaur's lessons: therapeutic education through care of animals and nature study. In: A.H. Fine (ed.) *Handbook of Animal-assisted Therapy*. New York, NY: Academic Press.
- Keeler, R. (2008). *Natural Playscapes*. Richmond, WA: Exchange Press.
- Kirkby, M. (1989). Nature as refuge in children's environments. *Children's Environments Quarterly* 6(1): 7–12.
- Kuo, F.E. and Faber Taylor, A. (2004). A potential natural treatment for attention deficit/hyperactivity disorder: evidence from a national study. *American Journal of Public Health* 94(9): 1580–6.
- Robinson, C.W. and Zajicek, J.M. (2005). Growing minds: the effects of a one-year school garden program on six constructs of life skills of elementary school children. *HortTechnology* 15(3): 453–7.
- Robinson, E. (1983). *The Original Vision*. New York, NY: Seabury Press.
- Sobel, D. (2002). *Children's Special Places* (2nd edn). Detroit, MI: Wayne State University Press.
- Wells, N. (2000). At home with nature: effects of 'greenness' on children's cognitive functioning. *Environment and Behavior* 32(6): 775–95.
- Wells, N. and Evans, G. (2003). Nearby nature: a buffer of life stress among rural children. *Environment and Behavior* 35(3): 311–30.