



OUTDOOR PLAY

Designing Cities for Outdoor Play

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Introduction and Subject

Children's right to play is enshrined in international conventions.¹ Moreover, the importance of outdoor play for children's health and well-being is well established.²⁻⁵ Yet around the world, opportunities for outdoor play are declining.⁶

This chapter reviews evidence and arguments on the relationship between children's outdoor play and urban planning and design. It focuses on 'neighbourhood built environment attributes'⁷ such as yards, housing typologies, streets and public open spaces, and how these are arranged in residential neighbourhoods, rather than just playgrounds (the most obvious built environment intervention).

This review does not examine design features within play spaces (e.g., landscaping, play equipment) as this topic is covered elsewhere.⁸ It also does not examine toxic or hazardous environmental features. Finally, it does not examine social, cultural and economic factors (which may have a greater influence on children's outdoor play experiences than built environment factors⁷).

Problems

Poor outdoor play opportunities have health and well-being consequences for children.^{4,5} Families, communities and wider society also have much to lose. What is more, outdoor play is linked to greater environmental awareness and connections with nature⁹ and to adult use of public space.¹⁰ This suggests that a lack of outdoor play may undermine children's concern for the wider environment, and lead to lower levels of engagement with their community.¹¹

Despite this, in most cities, planning and design decisions take limited account of their impact on children.^{12,13} The challenges are greater in low and middle income country contexts due to rapid, often unplanned growth.^{14,15}

Research Context

The evidence base on the influence of neighbourhood-built environment features on outdoor play is slim. Two systematic reviews found 51 relevant quantitative studies.^{7,16} However, only a minority of these use robust methodologies. Moreover, the studies are highly heterogeneous, including a diverse set of interventions, population groups, urban contexts, and outcome measures. Outcome data are often based on parental responses rather than more direct measures, leading to a risk of bias. Many studies focus on physical activity, rather than on outdoor play (although in street and public space contexts, physical activity levels may serve as a reasonable proxy indicator for outdoor play activity).

Key Research Questions

The central question for research is how the planning and design of neighbourhood housing, streets and public spaces shape children's play opportunities. Given the growth of cities worldwide, one priority for research should be informing the master planning of new residential developments. Economic, cultural and geographical contexts need to be explored, as well as issues for children and families of different ages, abilities and backgrounds.

Planning and design factors that could be studied include:

- Neighbourhood population density;
- Size, distribution and accessibility of parks, playgrounds and other public open spaces;
- Proximity and ease of access to local services and facilities including schools, childcare, shopping and health services;
- Housing densities, typologies and tenure patterns;
- Access to private and semi-private outdoor space;
- The relationship between housing and the surrounding public realm;
- Design and layout of walking and cycling paths and networks;
- Traffic flows and speeds;
- Street grid patterns;
- Street designs, including traffic calming and other street features;
- Detailed design features of public open spaces.

Recent Research Results

Low traffic volumes, fewer intersections, neighbourhood greenness and access to a private yard are all linked to greater levels of outdoor play. Features including pedestrian infrastructure and traffic calming are linked to greater levels of outdoor play in girls, but not boys. More limited evidence suggests that low residential density, living in rented/public housing, not living in an apartment and higher physical disorder are linked with greater outdoor play.⁷

Perhaps surprisingly, evidence is mixed on the importance of public open space. Two reviews have found no effect on outdoor play.^{7,16} However, reviews with an explicit focus on physical activity (rather than outdoor play) have reached different conclusions.^{17,18}

One further noteworthy observational study of newly-built English suburban housing developments suggests that residential urban design features including direct, traffic-free access from homes to green spaces, good oversight of outdoor space and good walking networks are all associated with a greater presence of people, including children playing, in public open space.¹⁰

Research Gaps

The empirical research literature is not only heterogeneous; it also shows significant gaps. As already noted, few studies use robust intervention methodologies, limiting the scope for making claims of cause and effect. Further research clarifying the importance of public open space would be particularly helpful, as the existing evidence is contradictory.

While some findings do distinguish between girls and boys, and some between different forms of housing tenure, little is understood about the influence of socio-economic or ethnic/cultural background.

A broader age focus is needed; only a handful of studies included in the literature reviews encompass children under three. Likewise, more research is needed on low and middle income country contexts.^{7,16} Globally, this is where the urban child population is set to grow the most.¹⁴

Research could help to explore long-term trends. Studies in several countries show generational declines in children's independent mobility and 'roaming range',¹⁹ which is linked to outdoor play.⁷ What is more, levels of physical activity in childhood may influence activity patterns later in life.^{20,21} Finally, children's levels of physical activity are influenced by parental factors.^{22,23} This raises the prospect of spiralling declines in outdoor play as adults with limited experiences of outdoor play become parents.

An authoritative review of qualitative studies and grey literature would be helpful, to add to the quantitative evidence base and shed light on possible causal mechanisms.

Finally, up-to-date studies are needed to explore the rapidly growing role of technology on children's lives,²⁴ which is likely to influence their outdoor play.²⁵

Conclusions

Given the limitations of the literature, the conclusions offered here are contingent. However, empirical research suggests that residential built environment features do have an impact on outdoor play. The most robust finding

is that play-friendly neighbourhoods are ones that are not dominated by vehicle traffic. Hence measures that reduce traffic flows within neighbourhoods are likely to be effective in increasing levels of outdoor play.

Private or semi-private outdoor space for play - in the form of gardens, yards or courtyard space - is likely to lead to increased outdoor play, especially where children and families have unmediated, traffic-free access to these spaces. There are also likely to be links between making neighbourhoods more play-friendly and making them more walkable and cyclable.¹⁰

One review concludes that a playable neighbourhood looks like “a rural or suburban neighbourhood, with limited traffic, large yards, and extensive greenery”.⁷ The same review notes that “ready access to parks and accessible school grounds may be less important to outdoor play” (although as noted above, other reviews have reached a different conclusion).

Implications for Parents, Services and Policy

The key levers for change are at the municipal level, where decisions about urban planning and design typically reside. Some broad play-friendly principles, such as the need to tame vehicle traffic in residential areas, are likely to apply in all cities.

The research findings about the value of private green space fit with conventional views of parental aspirations,^{26,27} though these may be changing.^{26,27} Such aspirations are in tension with changes underway or in prospect in many cities. One response to this tension is to advocate for compact, green urban neighbourhoods with features that echo those found in more suburban contexts, including street layouts that reduce traffic speeds and volumes, and features in the public realm that encourage social encounters.⁷

Policy decisions about transport, land uses, housing design, streets, schools and services are intimately linked, highlighting the need for cross-disciplinary work.¹⁶ The creation of a strategic municipal focus, in the form of a well-placed official with an explicit child-friendly planning brief, may be a key step.²⁸

The engagement of children and their caregivers will help to gain insights and bring their experiences and concerns to the direct attention of decision makers. ‘Smart city’ initiatives may allow policy makers to better explore the impact of their planning and design decisions on children.²⁹

Ultimately children’s entitlement to space and time for outdoor play is a matter of values, not just evidence. It is one example of what has been called spatial justice, or “the fair and equitable distribution in space of socially valued resources and the opportunities to use them”.³⁰

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