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## Special Issue: Child-friendly cities Leading Editorial

**Caroline Brown, Ariane de Lannoy, Deborah McCracken, Tim Gill, Marcus Grant, Hannah Wright, Samuel Williams**

### Introduction

Within the field of cities and health, the complexity of cities is mirrored by a plethora of whole-city initiatives and networks trying to address key issues. In addition to various 'healthy city' initiatives (de Leeuw, 2017) there are also slow cities, age-friendly cities, resilient cities, compact cities and many more. Focussing on children or any other target sub-population could be seen as an endorsement of this fragmentation. However, as editors of this special issue we see the focus on child-friendly cities as a valuable entry point for integrated healthy city commitment, policy and action, as set out at the foundation of the WHO Healthy Cities initiative (Hancock & Duhl 1986). To paraphrase Enrique Peñalosa (Mayor of Bogota) if a city is a healthy place for children, it is a healthy place for everyone.

The concept of a healthy city encompasses 'salutogenesis' (Antonovsky, 1979) meaning that the city as a place protects people from illness and supports the creation and maintenance of health. Healthy cities are also inclusive places; catering for the needs of all regardless of age, gender, income, status or ethnicity. As many of the foundations for a healthy life are laid down in our early years (Kalache & Kickbusch 1997), it follows that urban planning which focuses on healthy development for children will deliver benefits over many decades, and affect future as well as current generations. The economic and social benefits of whole life approaches are significant in terms of a healthier population (UNICEF, 2012). However, children are often overlooked in public policy even among public health and built environment professionals working on place-based health (Bishop & Corkery, 2017). The reasons for this are varied, and relate to status as well as intellectual capacity. Children do not have the ability to vote or pay taxes, and they are rarely assumed to be capable of contributing to the development of policy (Wood, 2016).

There are more people living in cities and more children growing up in cities than ever before. Over one billion children now live in urban areas around the world (UNICEF 2012). By 2030, up to 60% of the global population are projected to live in urban settings and up to 60% of those urban residents will be under the age of eighteen (UNICEF, 2018; Woodrow Wilson International Center for Scholars, 2003). While cities can be exciting and vibrant settings for urban childhoods, they also come with particular risks and challenges to the health and healthy development of children. Examples of these challenges include noise and air pollution, sedentary lifestyles, traffic dangers, crime, social isolation and disconnection from nature (UNICEF, 2012; Christian et al, 2015). Moreover, these challenges are made worse by poverty and inequality (UNICEF, 2012). Shockingly, in some high-income countries life expectancy is beginning to fall, with children being predicted to live shorter, less healthy lives than their parents (Office for National Statistics, 2018).

All too often children's health requirements are boxed up as 'paediatrics', with a consequent tendency for provision for children's developmental wellbeing to have a narrow focus on education or children's services. We argue that the actions of public health professionals outside this specialist area, and indeed many urbanists, can make a significant difference to children's health and well-being (Gill, 2008). Both the 'nurturing care' that parents, family and the community can provide and an environment that enables and supports this nurturing care, are decisive factors for healthy child development (Goldfeld et al, 2019). Taking a life-course approach to health (Kalache & Kickbush, 1997) as recommended by the WHO, recognises that health outcomes in later life are strongly influenced by our early years. We argue that there are important life-long impacts for the health of urban populations that are directly influenced by the ability of urban environments to support the establishment of healthy behaviours and habits during childhood. Seeing cities through children's eyes may help to foster the kind of long-term, socially inclusive values that needed if cities are to overcome the perhaps uniquely 'wicked' policy challenges of ineffective planning (Rittel & Webber, 1973) and become more sustainable, liveable and equitable places.

This special issue comes at a time when there is an increased focus on children's health and healthy childhood in cities. There has been an explosion of work in this area in recent years, in academic research, policy and practice.

Examples include international initiatives such as Urban95 which reimagines cities from 95cm, the average height of a healthy 3 year old (Vincelot, 2019); Unicef's (2018) handbook on child-friendly cities and communities and Arup's (2017) 'Cities Alive: designing for urban childhoods'. In addition, 2019 is the 30th anniversary of the UN Convention on the Rights of the Child (UNCRC). The convention, adopted in 1959, sets out 54 articles governing children and their civil, political, economic, social and cultural rights. The articles include a wide range of rights relevant to city life including: the right to play; the right to a safe and healthy environment; and the right to be involved in decision-making and to express opinions. While progress has been made in the last 30 years, rights-based approaches to urban policy are not yet widespread – but their adoption would be transformative.

#### Play – a universal building block for child health

Play is fundamentally important for children, shaping cognitive and physical development as well as learning and overall well-being (Ginsburg, 2007; Kemple et al, 2016). Play is our first step towards active lifestyles, ingraining healthy patterns of behaviour early on. It is the instinctive, voluntary and spontaneous human expression through which we learn to make sense of the world. Play comes in many forms: risky play, home play, messy play, socio-dramatic and imaginative play, rough and tumble play (Pascal & Bertram, 2019) and in all forms it is vital to development, is fun, gives satisfaction and a feeling of achievement (IPA, 2019). Lack of play can have significant impacts, affecting overall well-being, development, eyesight, allergies and levels of physical activity (NHS Digital, 2014). Children seek out and engage in many types of play that afford them opportunities to learn, to engage with others, to experience and to explore; and children play wherever and whenever there are opportunities to do so. From the early years, exploratory play alone and with a caregiver supports a strong foundation for development. As children develop, play transforms from play alongside to play with others, supporting cognitive, social and emotional development. Actions such as running, jumping, climbing and balancing assist with gross motor skills, proprioception and understanding of risk (Kemple et al, 2016). Fine motor skills develop through interaction with toys, loose parts or found materials, and games, including imaginative games and role play, help children to develop communication, negotiation and other social skills. However space and time for play, is often constrained – in some parts of the world this may be due to work (child labour), violence and conflict; in others it may be to do with intensive time pressures, social media, poverty or risk (Ginsburg 2007; Unicef 2012; Kemple et al, 2016).

The neighbourhood scale close to the places where children live and go to school is an important setting for play (Gill 2019b). In some places opportunities for play are poor – small patches of ground, fenced and gated, sometimes with equipment that does little to support imaginative, active, social and risk-testing play. In other places there may be high quality provision made inaccessible by busy roads, restrictive opening hours or entry costs. The good news is that in many places play is being taken more seriously, with policy makers, practitioners and communities working to deliver better play opportunities for children in urban locations. In some places this action is bottom up, led by communities; in others it is led by government. For example, in Wales – the first country to legislate for play - local authorities have a statutory duty to ensure sufficient play opportunities for all children in their area (Welsh Government, 2014). In other countries, municipalities are leading strategic action to expand children's play opportunities, as seen in Calgary, Antwerp, Ghent and Rotterdam (Gill, 2019a). Community-led projects are no less significant, as seen in Ferguson (2019) where parents have been instrumental in closing residential streets to traffic, so that play, independence and social interaction can take place. Around the world, practitioners are designing play into the urban fabric and demonstrating that small interventions can have big impacts (see for example: #PlayEverywhere kaboom <https://t.co/QEomOjHm3a>). Urban 95 programme takes that further by inviting adults to imagine that they are viewing the city from a height of 95 cm, the average height of a healthy 3-year-old (Vincelot, 2019). The programme supports relevant research, policy and practice around the world, funded by the Bernard van Leer Foundation.

Children, like all urban citizens, should have freedom to play, explore and socialise in all parts of the city (Kytä, 2004). All public realm has untapped potential and a positive role to play in children's health and wellbeing, and there is a need to move beyond urban policy which meets the needs of children by providing only play parks and schools. Expansive policy approaches include the concept of 'children's infrastructure' as set out in Cities Alive (Arup, 2017). Children's infrastructure is the network of spaces, streets, nature and interventions that support a city's ability to attract and sustain healthy, family-oriented communities. It looks beyond playgrounds to include an integrated and multifunctional public realm in which families and communities can enjoy time together. In a

similar vein, the Gehl Institute (2017) sets out 10 holistic principles that promote healthy development by planning for young children and families. The result is a network of children's infrastructure that can and should provide an accessible mix of activities for different ages, abilities and backgrounds. It enhances everyday journeys providing safe, welcoming and walkable streets and connecting children with nature through green and healthy environments. By improving the streets and spaces in front of people's homes such a network can 'nudge' (Thaler & Sunstein, 2008) towards healthy behaviours from the first steps out of the door.

#### Streets & movement in the city

As well as movement for play, the way that children travel in the city informs us about the fitness of infrastructure and street design for child safety, development and independence. Streets and public spaces that prioritise active travel and keep motorised traffic separate enhance the safety of children and enable cycling and walking. Guidance on street design for walking and cycling is commonplace, although not all of this explicitly considers the needs of children and the types of journeys made by carers and families. Movement for the very youngest children is dependent on their caregivers physical and mental wellbeing, as well as the accessibility, safety and comfort of streets (for example) with available seating, water, shade and access for prams and pushchairs. NACTO (2019) is developing a child-focused design guide, 'Streets for Kids', to supplement its Global Street Design Guide (NACTO, 2017) which set a new global standard for designing urban streets that prioritize pedestrians, cyclists and transit riders.

Children's independent mobility is the freedom children have to get around their neighbourhood unaccompanied by adults. This is vital to children's wellbeing and development as it leads to higher levels of physical activity, sociability and improved mental wellbeing – and it helps young people connect to their communities (Stanley et al, 2015). In the Netherlands a high proportion of children cycle to school and it seems to be no coincidence that this country has a high level of child happiness and satisfaction (Shaw et al 2015). In Finland, walking to school for primary stage children is something to be encouraged and protected (Kytä et al. 2015) because research shows that children who walk, cycle or scoot to school have lower body fat and are less likely to be overweight or obese (Lander et al. 2019). This type of evidence supports interventions that deliver better quality walking and cycling routes to school, such as the successful programme from Belfast Healthy City (Monaghan 2019) and the greenways in East Los Angeles (Taylor & Coutts, 2018).

While there are variations between countries, children's freedom to independently experience the city, for example to cross the road, go out after dark, or ride the bus alone, are falling all around the world (Shaw, et al, 2015). Parents concerns about safety can place limits on freedom, but autonomy and agency are also important. The safer the environment, the more freedom parents will grant to their child.

#### Physical Activity

In supporting healthier childhoods, one focus of interest for practitioners and researchers has been the extent to which different environments support the 'moderate to vigorous' levels of activity that promote health (WHO 2010). Through use of joint accelerometry and positional data, one study confirmed that time spent outdoors with other children is an important source of healthy physical activity (in this case meeting the relevant WHO guidelines) after school. This indicates that child friendly interventions to increase physical activity should include fostering friendship groups and opportunities for outdoor after school play and limiting the time children spend alone (Pearce et al, 2014). Interestingly, a study of children's evening physical activity across nine countries even concluded that the introduction of additional daylight saving measures (lighter evenings) could yield important public health benefits though supporting higher levels of moderate and vigorous activity in children (Goodman, Page and Cooper 2014).

#### Greenspace and access to nature

Safe and healthy environments are likely to include nature and greenspace. Access to greenspace at home and at school can deliver significant benefits to children, many of which are already recognised. For example, work on outdoor education points to the significant educational benefits of working with children in natural settings, and the way in which all children – particularly those with an educational disadvantage – respond to the richness of natural spaces (Hamilton, 2017). On the other hand, children who have less contact with the natural environment are more likely to suffer from problems with behaviour, interactions with their peers and general health and wellbeing in their childhood and adult lives (Engemann et al, 2019). Louv (2005) describes this

phenomenon as nature-deficit disorder which is the consequence of the disconnection between humans and nature.

### Participating in the city

Alongside research and practice that focusses on the quality of urban environments, a rights-based approach to urban policy means respecting the right of children to participate in the processes of decision-making. Where they exist in spatial planning systems, elaborate and formalised systems of consultation and participation do not work well for children – particularly younger children not yet in the scope of youth parliaments. Practitioners working with children have to use age-appropriate strategies that build on children's desire for play, creativity, movement and exploration. It must be clear from the outset what can be achieved through the process and there should be no sense that children are being used as marketing material for a developers or local good news stories.

Schools can provide an efficient means of engaging with children. However, many children respond better and more openly in a non-school setting. When listening to children, we must remember that children do not always have the words to express themselves: art, play and other approaches become tools for participation. The way in which we listen is important, but also the way in which we ask our questions. Asking a child "what would you like in a playground?" will typically result in a list of standard equipment. Asking the same child "how do you like to play?" however, can open up a rich account of activities and experiences for a designer to work with. One of the things children can gain through the co-creation of public space is an awareness that they are part of something bigger and more complex than themselves, and that they have the power to influence those things.

### Building data and evidence

A vital strand in making urban areas child-friendly is evidence: we need robust data about the health and well-being of children going about their daily activities; how they interact with their environments; what keeps them healthy; and how different built environment features affect their health (Gill 2019b). Children's geography and child studies have much to offer here, although practical understanding of where children spend their time or the places they prefer has been scarce until relatively recently. Techniques for capturing data so that it can be integrated into city authority mapping and GIS systems is particularly important (Kyttä et al 2012). A major contribution to this has come through the development of real-time data capture using accelerometry, where children wear devices that register and record their movement every few seconds. There have now been many such studies worldwide, with 20 of these combined into the International Children's Accelerometry Database combining data from studies of 3-18 year olds in ten countries (Sherar et al. 2010). More international consortia and the research protocols to extend this work are being developed (Stamatakis et al 2019). This type of movement data can be combined with global positioning satellite data and local mapping to provide data about activity intensity, where children play and how active they are in different locations (Cooper et al 2010).

Understanding the experience of children as they move around and spend time in their neighbourhood can provide insights for local policy makers. Without evidence about the children in their local area, local practitioners can find it hard to advocate for child-centred policies. Helpfully, there are several tools available to help generate useful data including Gehl's Toolkit for measuring urban experiences of young children (Gehl Institute, 2017), the 8-80 cities diagnostic (<http://880diagnostic.com/>) and Soft GIS (Kyttä et al 2012). However, even where evidence and data exists, there is by no means a straight line from evidence to policy (Weiss 1979). Public health policy-making needs to be evidence-informed but also adopt a politically aware advocacy approach; voices from children and parents can be particularly powerful (Monaghan 2019).

### Delivering child-friendly places

What does a child-friendly city look like? Clearly, we have some of the answers already: it respects children's rights; it is safe; it has space for play; it enables a strong connection to nature, it fosters nurturing child-caregiver interactions and independent mobility; and it includes children in the processes of urban policy making and design. Practitioners around the world have been working on child-friendly design and interventions for many years, and there are many inspirational case studies available. In 1996, UNICEF launched the Child Friendly Cities Initiative (see <https://childfriendlycities.org/>), supporting an international network of municipalities committed to becoming 'child friendly'. The network includes an impressive range of practical examples including community gardening projects that motivate care for nature and peers; extending use-times in play areas by providing free toilets, wi-fi, water fountains and seating; providing safer routes and networks to school;

transforming school settings into green learning environments or community hubs; employing co-creation and governance for, and by, children, instigating positive change in adult behaviours and progressing ambitious sustainability goals by championing action through mayoral support and child-friendly city advisors. The City at Eye level report offers a similarly diverse range of examples from all over the world (Danenberg et al, 2018) and guidance to practitioners. However, despite decades of advocacy and a growing library of pilots and case studies, children's rights-based approaches have had little strategic influence on the built form of cities to date (Bishop & Corkery 2017). This does not mean that participation is irrelevant or unimportant - quite the opposite. But it does suggest that mainstreaming has not yet been achieved, and further work is needed.

Children fundamentally seek the same characteristics from their urban environment as everyone else: safe and clean streets, access to green space, clean air, things to do, the ability to get around, the freedom to see friends, and somewhere to call home (Arup, 2017). Children's rights are universal and children's wellbeing is therefore of universal concern. Planning and designing cities from a child's perspective has the potential to be a unifying aid to tackling urban challenges in different contexts (Arup, 2017). To create safe and happy cities that prioritize people's well-being, 8-80 cities has undertaken projects and engagement based on the belief that if everything we do in our public spaces is great for an 8 year old and an 80 year old, then it will be great for all people (<https://www.880cities.org/>). Where efforts to address issues such as traffic, air pollution or lack of public space meet political resistance, a child-friendly approach can highlight the powerful benefits of urban interventions and overcome opposition to change. The City of Ghent's vision and action plan to become a child- and youth-friendly city was one of the few policy documents to be approved by all political parties (Gill, 2019a). An experiment for a car-free zone in inner-city Suwon, South Korea proved successful when it not only encouraged everyday walking and cycling but convinced residents that parking controls, speed-restrictions and one way systems were feasible, beneficial and would improve quality of life (EcoMobility World Festival, 2013). While in Tirana children have been empowered by the city Mayor to take part in decision making to shape the city through a children's council. Children helped to resolve initial resistance to new parks and play spaces by lending their voices to the conversation (see for example: Gill, 2019c).

The purpose of this special issue is to draw together strands of the conversations about evidence, policy, guidance, process and best practice; and to help practitioners, researchers and policy makers make the links between the health of the child and the health of the city. The research, ideas and case studies discussed in this special issue contribute to building a better understanding and alignment of planning with children's needs and perspectives. In doing so, it highlights what does and does not work well for healthy and child-friendly cities and the challenges that are still to be overcome.

Adults have the responsibility for shaping cities. In doing so we must make places that work for children and uphold the rights of all children to play, be safe, be heard and be respected. To do this we need to adopt new policies and new practices, and we need the education and training of all of the professions who influence the built environment to address the issues raised by this agenda. Professionals working in planning, public health, transport, environment, sport and leisure, education, arts and culture can all help to deliver urban environments fit for our children. The challenge yet to be faced is the co-ordination of the agencies, funding, disciplines and policies needed to deliver child-friendly cities everywhere.

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