

What We Know About How Urban Design
Affects Children and Young People:

The Interaction Between Health Outcomes and the
Built Environment



Discussion Paper

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Project Brief

- To undertake a literature review focusing on what is known about the impact of urban design on children's health.
- To consider the responsibilities of Local Government to consult with children in its planning processes.
- To reflect on some of the requirements for planning a child friendly city.

Search Strategy

The initial literature search was undertaken by a research fellow, Ms Catriona Mackay, based at the Public Health Information Team (PHIT) at Community and Public Health. The databases searched were: Ebsco Host inclusive of (Academic Search Premier, Australia/ New Zealand Reference Centre, Professional Development Collection, Psychology and Behavioural Sciences Collection); Wiley Interscience; PubMed; Proquest; and ISI Web of Knowledge. Search terms used were: social planning; city planning; urban renewal; urban planning; urban design; environment design; child; consumer participation; focus groups; social responsibility; community health; social perception; environmental health. Further searches were undertaken by the author, Dr Anna Stevenson.

Papers were reviewed based on their availability, i.e. they were written in English and they were accessible via the internet. References from retrieved papers were searched for further relevant articles and websites.

This paper should not be considered a systematic review of the literature. It is a scan of literature available electronically through the University of Otago library, with discussion of the key themes that appeared. This paper has been reviewed by a number of people with an interest in the area. It seems unlikely (but not impossible) that any major themes have been missed. However, a systematic review of the literature would add depth and weight to the key findings.

Of particular interest was the finding that despite considerable debate and discussion in the literature around the importance of good urban design to children's health and later adult health outcomes, the search we conducted found very little that adequately linked theory with evidence. The paucity of evidence as opposed to hypothesis was startling. This is clearly an area where "more research needs to be done"!

Imagine a city in which children are valued and precious - where politicians, children, parents, planners and business people recognise the need to actively and deliberately move towards creating such a city. It would be safe. Children's opinions and perceptions would be given validity by decision-makers. Children would enjoy a clean green attractive environment. Recreation, health and educational facilities would be easily accessible to all, regardless of where they lived or what their parents earned. They would be positive about learning and employment opportunities and be confident happy citizens. Children would be proud and enthusiastic about their new families, communities and city. They would belong. This is the kind of vision meant by a child friendly city.

Christchurch City Council vision quoted in the Children's Strategy study

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Introduction

From its earliest beginnings planning, as a profession, has been driven by the desire to improve living conditions for the population. The planned communities of the Romans and Greeks focused on spaces, structures and processes that facilitated the central activities of the community – trade, food storage, worship, communal gatherings (Duhl and Sanchez 1999). Engineering systems at the time enabled a great improvement in hygiene standards.

Centuries later the need to control infectious diseases such as cholera, typhoid, malaria and tuberculosis led planners and public health officials to promote the need for fresh air, clean water, open spaces and sunlight. The Chadwick report *On the sanitary condition of the labouring population of Great Britain* led directly to the Public Health Act of 1848. It was the first time that the British government had made a commitment to safeguarding the health of the population and it served as the foundation of disease control efforts in local government such as sewerage, garbage collection and mosquito control. These kinds of environmental changes had (relatively) immediate effects. With potable water came an immediate reduction in deaths and illness due to cholera, for example. With improved living conditions, infectious diseases such as tuberculosis began to rapidly decline.

This 'immediate' effect of the built environment on health outcomes is still seen today; for example, when we look at road design – good design leads to reduction in accident rates.

The challenge for planners and public health advocates in this era is to recognise the links between and the impacts of the built environment on the major diseases of our time. Infectious diseases, while still significant, are overwhelmingly dominated by 'chronic' diseases. Our population is burdened by high rates of mental illness, particularly depression, and what are sometimes called 'lifestyle' diseases – the not so indirect result of the 'obesogenic' environment we all live in.

Our children are the most vulnerable members of our population, and for this reason require our extra care and protection. In many ways, they function for the rest of society as the 'canary in the mine'. In times past, miners would take a small bird with them as they travelled deep into the earth. As long as the bird was singing, they knew the air was free of dangerous, odourless gas. But if the bird with its greater vulnerability to noxious respiratory gases became unwell or died, then the miners knew they had only a short time to escape themselves.

If the environment that our children live in is one that helps them to thrive, to live active happy lives in neighbourhoods where they have a sense of belonging and connection and an awareness of their importance to the wider community – then it is very likely that the whole population, all ages from infancy through to the very elderly, will also thrive. In a sense this is the concept of 'universal design' applied to the whole population, rather than specifically to those who have a physical disability. Consider how the built environment, e.g. transport systems, might look like if the principles of universal design were applied with the needs of children in mind:

1. **Equitable use** – Urban design is useful to all people with diverse abilities;
2. **Flexibility in use** – The urban design accommodates a wide range of individual preferences and abilities;
3. **Simple and intuitive** – Use of the urban designed features is easy and understandable, regardless of the users' experience, knowledge, language skills or current concentration level;

4. **Perceptible information** – Necessary information is communicated effectively to the user, regardless of ambient conditions or the user's sensory abilities;
5. **Tolerance for error** – Hazards and the adverse consequences of unintended or accidental actions are minimised;
6. **Low physical effort** – The urban design can be used efficiently and comfortably with a minimum of fatigue; and,
7. **Size and space for approach and use** – Appropriate size and space is provided for approach reach and manipulation, regardless of users' body size, posture or mobility

Perhaps the major difference between a child and an adult when thinking about health issues is that the child is in a biologically active state of development and growth. From conception to adolescence, the young person is vulnerable not only to loss of function attributable to ill health, but also to a decrease in the expected or optimal rate of acquisition of function. Simply put, if a skill has not been acquired by a certain age, i.e. reading, then the probability of mastering that skill reduces as the child ages.

Child health can be categorized under seven headings(Nolan 1994; World Health Organisation 2005):

Health Domains	Description
Longevity	Projected life expectancy
Activity	Functional status, ability/disability
Comfort	Symptoms of wellness/illness, i.e. pain.
Satisfaction	Satisfaction with own health
Disease	Presence and progression of defined disease states
Achievement	Social and emotional development
resilience	Ability to resist threats to health

Increasingly we have good evidence that experiences in early life can have significant health effects in later life. For example, we know that exposure of the developing lung to air pollution reduces adult maximal functional capacity. There is increasing evidence that babies born to mothers exposed to air pollution tend to have lower birth weights (World Health Organisation 2005). Similarly, there is growing evidence that children born with low birth weight are more at risk of later life obesity and subsequent Type Two diabetes. There is an increasing awareness that the built environment can have positive and negative impacts on all the domains of child health described above.

New Zealand, along with much of the western world, is experiencing what has been termed an 'obesity epidemic'. Chronic health issues such as cardiovascular disease and diabetes are the 21st century equivalents to the tuberculosis rates of the 19th century. The top ten causes of death by risk factor in 1997 in New Zealand were diet, tobacco, deprivation, cholesterol, blood pressure, body mass index, insufficient physical activity, (pre) diabetes, infection and inadequate vegetables and fruit (Tobias 2004). Almost all of these risk-factors are modified by the built environment. Taking a universal design approach to new developments with children as the focus would be a significant step to addressing many future health concerns.

How Urban Design Issues Impact on Children's Health

The available research focuses on three particular urban design issues:

1. Transport
2. Traffic
3. Play

1. Transport

The issue of active transport is of particular interest to public health practitioners because of the interaction between activity levels and obesity. Obesity is a risk-factor for many chronic diseases such as heart disease, high blood pressure and stroke, gallstones, some cancers and Type Two diabetes.

The 2002 Children's Nutrition Survey showed us that about *one-third* of New Zealand children between 5-14 years old were overweight or obese, as assessed by their body mass index. In 1997 it was estimated that 11.5% of all deaths in New Zealand were attributable in part to increased body mass (reference?).



Sport and Recreation New Zealand (SPARC) surveys of young people have shown us that:

- Activity levels for young people are declining overall with a change from 69% active in 1997-98 to 66% in 2000/01;
- 9% of 5-17 year old New Zealanders are sedentary (no activity in last two weeks);
- 22% of 5-17 year olds are relatively inactive (less than 2.5 hours of physical activity in the last week); and,
- One-third of New Zealand young people are inactive. (Neuwelt, 2005)

1.1 Benefits of Active Transport

Seven studies were reviewed that considered children's ability to engage in active transport (walking and cycling). Active transport is important for population health for several reasons:

- Walking and cycling use energy. Even small amounts of such activity offer health benefits like reducing obesity rates, improving respiratory health and mental health, and increasing peak bone mass which reduces the likelihood of developing osteoporosis or osteoarthritis.
- Being able to walk and cycle safely on their own contributes to children's developing sense of control and independence, with positive mental health and social benefits.
- Children who have developed good active transport habits are more likely to become adults with good active transport habits and therefore, they gain all the associated health benefits.
- Improved adult health status results from childhood physical activity. (Nelson, 2005)

1.2 Barriers to Active Transport

Children's opportunities to walk and cycle are less than in their parents' generation. A 1971 study of English 7-8 year olds found that 80% made the journey to school unaccompanied by an adult. A follow up study in 1990 found this figure had reduced to 9% (Collins and Kearns, 2001). Nothing in the literature suggests divergence from this pattern in New Zealand.

Children's activities are moderated by their parents' choices. Where parents perceive the environment to be unsafe (traffic dangers, stranger dangers) or unsuitable in any way, children are less likely to use active transport methods in their daily life (Timperio et al, 2004). These findings on an Australian population were consistent with a more recent study on 473 children aged 9-11 years in Birmingham which showed that children's perceived lack of suitable leisure space in their neighbourhood and worry about strangers were associated with lower walking levels (Alton et al, 2007). As in the Australian study, a counter-intuitive finding was that children with high walking levels were more likely to perceive heavy traffic and low road safety levels in their vicinity. Both research groups postulated that this was due to high walkers having the 'watch out for cars' message constantly reinforced by their parents. One study showed that "when parents had few concerns, children were five times as likely to actively commute to school as when parents had many concerns" (Kerr et al, 2006). These researchers make the point that changing perception on its own is not enough, as they may be based on real dangers. "The most responsible approach to reducing parental concerns about children's active commuting may be improvement in the walking and biking infrastructure, protection from traffic, and aesthetics of routes to schools. In addition it is important to make the public aware of such improvements and promote active commuting" (Kerr et al, 2006).

Mitchell presented a thesis in 2005 entitled 'Through the children's eyes: (re)interpreting the freedom and use of public space from children's perspectives', which considered the views of Auckland primary school children through stories and photographs. She comments "the lack of play spaces, fear of strangers and traffic, combined with the unwillingness of parents to encourage their children to play outdoors, is increasingly creating a generation of children who are unfamiliar with their local neighbourhood, have limited knowable geographies and have cultivated a dependence in the car" (Mitchell, 2004).

Neuwelt (2005) cites a study of 500 Birmingham children entitled 'Environmental constraints on health: listening to children's views' which found that:

- There is an interaction between traffic danger, stranger danger and social/cultural factors that creates barriers to children keeping healthy and active;
- The restrictions adults place on children walking and cycling are constraints on being healthy;
- Adult 'lazy' behaviour such as driving short distances, influences children's attitudes towards active transport and physical activity; and,
- By the time children become young people they have learned to live with parental constraints regarding transport and are looking forward to car ownership.

An evaluation of travel behaviour to school following built environment improvements supported the thesis that appropriate environmental changes can increase active travel (Boarnet et al, 2005). Similarly, Kerr et al (2006) found that "overall neighbourhood walkability was significantly related to active commuting...designing neighbourhoods to facilitate walking to destinations appears to have health related benefits for both adults and youth".



1.3 New Zealand Research

There has been considerable interest in New Zealand recently around school travel planning, and in particular, walking school buses. Neuwelt (2005) cites three studies which show:

- Walking to school can contribute about 5% of children's daily physical activity, which is about 2.6 more times than the activity levels obtained by travelling in the car;
- Walking to school is associated with increased physical activity after school and in the evenings for boys; and
- An Auckland study of 1229 children aged 5-11 concluded that walking to school resulted in 1470 more steps per day in boys and 790 more in girls. Older children showed more benefits of active transport.

An evaluation of walking buses at four primary schools in Auckland found that children's views on the bus fell easily into five headings:

- i. Walking the bus leads to new friendships;
- ii. Walking is fun;
- iii. Walking improves fitness;
- iv. The walking bus helps overcome fear and improves safety; and,
- v. Walking is natural. (Neuwelt 2005)



A 2004 evaluation of the Auckland walking school bus (WSB) programme identified that "perhaps the strongest protective factor for child pedestrian injuries from participating in the WSB programme is the close involvement of the WSB programme with the TLA road safety co-ordinator, and the road safety co-ordinator's subsequent audit of the route with traffic engineers. The identification and reduction of hazards along the routes to improve the visibility and conspicuity of pedestrians, parking restrictions around the school, and speed reduction initiatives all contribute to road safety for not only those on the WSBs, but the whole school population" (Wong et al, 2004). This supports the thesis that the built environment can impact, for good or bad, the population's activity levels.

A useful study by Mackett et al (2005) collated children's diaries with the output from a tri-axial accelerometer which recorded movements on a minute by minute basis and their intensity. In total, 195 children returned usable data; 54 boys and 58 girls aged 10-11 and 42 boys and 41 girls aged 12-13. There were a number of interesting findings:

- At-home activity is the least active part of a child's day at 0.6 activity calories a minute. The only comparable level of activity was being in a classroom lesson at school. Unstructured out-of-home events were found to have significantly higher intensities compared with structured out-of-home activities. This means that playing soccer in the park with friends tends to use more energy than playing soccer in an organised game.
- Boys were found to be more active than girls at the same age.
- Walking to and from school for a week can provide similar volumes of physical activity to two hours of PE games and lessons.
- Children who walk to activities tend to be more active when they arrive than those who travel in cars. (Mackett et al, 2005)

The significance of unstructured activity fits in well with the findings discussed below on the importance of 'natural' landscapes for play.

Roemmich et al (2006) studied the activity levels of 32 boys and 27 girls aged 4-7. They found that in this age group, boys who lived in high housing density neighbourhoods were more physically active than boys in low housing density areas and girls in general. Increased access to neighbourhood park and recreation areas was associated with greater physical activity. Street connectivity was not independently related to physical activity in this age group, probably because most children of this age are not allowed to travel far from home without adult supervision (Roemmich et al, 2006).

There seems little doubt that an urban environment designed with the transport needs of infants and children in mind will have a positive impact on the whole population's activity levels. An excellent guide to child-friendly transport planning was published in 2005 by the Canadian Centre for Sustainable Transportation.¹ Entitled 'Child and youth friendly land use and transport planning guidelines', some of its guidelines clearly reflect a Canadian environment; e.g. Guideline Number Nine: "ensure that sidewalks are always cleared of snow". This simply reinforces the point that urban design must be informed by the affected population. The case for consulting with children on urban design decisions is summarised later in this paper.

¹ Attached as an appendix to this document

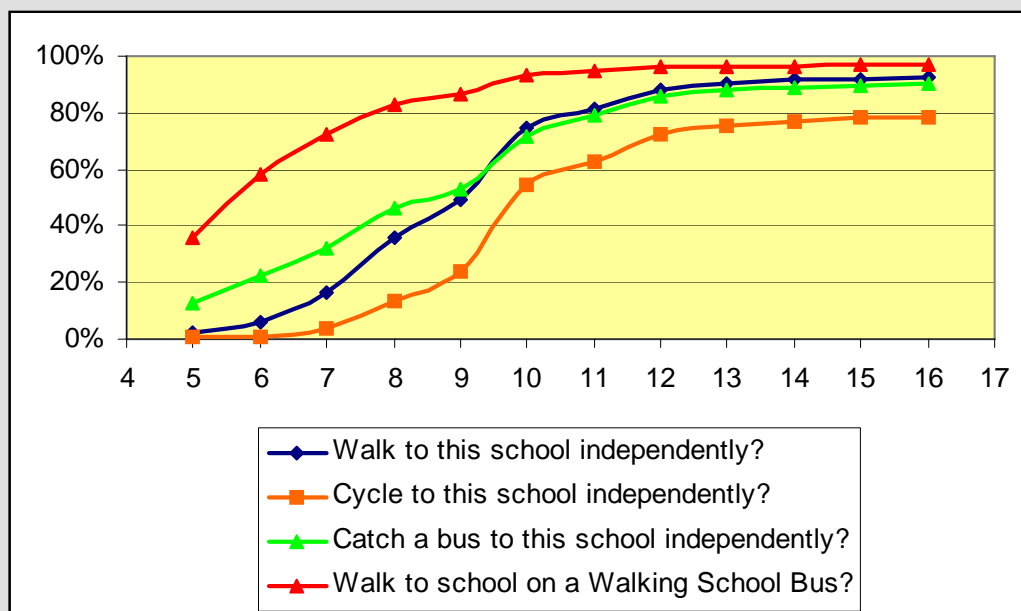
Case Study: The Auckland WSB

Walking Buses fill a unique niche in Auckland's transport system. An Auckland phenomenon that is becoming more widespread is the situation where very large cars travel very short distances to pick up very small children. In fact, 18% of all journeys in Auckland are under 2km long – and over half of these very short journeys are made by car.

Yet when we ask primary school children how they want to travel to school, only 22% choose "car" – and preference for the car is lowest among the youngest children. So what is going on within families to create a situation where 69% of all junior primary school children travel to school in the family car?

It is the parents who decide to travel by car – and parents are passionately concerned about their children's safety. Parents will not let a child travel independently to school until they believe it is safe to do so. Unfortunately, almost no parents think it is safe for a child to walk independently before age seven, and not until age nine are half of all parents happy to let their child walk independently to school, as shown in Figure 1.

Figure 1: "At what age do you think it is safe for your child to..."



Source = ARTA TravelWise surveys, before Travel Plan, n=28,696 parents

By age nine, it becomes acceptable to parents for children to walk themselves to school – but by age nine, the car travel habit has been formed (deliberately!) and the tables have turned. Children at this age are quite keen to travel by car, and have a repertoire of reasons (rain, a heavy bag, sleeping in...) why walking one kilometre (which is the average distance to primary school in Auckland) is too difficult. The children themselves have clearly taken their parents' fears to heart and genuinely believe themselves to be in great danger if they walked to school alone:

"It stops you from getting kidnapped."

"It stops you from being squashed by a car" (Percy 2007)

2. Traffic

The danger that traffic poses to children is a consistent theme in the literature. One study reports “motor vehicles pose significant hazards for children in a world where if a car hits a child, that is an accident, but if a child damages a car, that is vandalism” (Collins et al, 2001). Mullen (2003) analysed data from 5194 children from 50 Welsh schools and found that those children who reported that the road nearest their home was busy all of the time, or full of parked cars all the time, were less likely to consider the local area a good place to grow up, a safe place to walk alone after dark, a safe place for children to play outside and less likely to generally feel safe. These relationships were independent of socio-economic status (Mullan 2003).



Morrison et al (2004) analysed pedestrian numbers on a main road before and after a traffic calming scheme was implemented. Objective counts showed that there was significantly increased pedestrian activity, and responses to a questionnaire suggested that parents were more willing to allow their children to exercise outside (Morrison et al, 2004).

Chang-Hee et al (2007) showed that populations living within 165metres of high traffic densities were at risk of adverse health effects due to emissions from cars, particularly respiratory effects. Other studies have demonstrated clear links between air pollution and birthweight, increased incidence of respiratory infection, and reduced adult lung function (World Health Organisation, 2005).

“What is not good for children is the complete loss of autonomy they suffer in the suburbs...the result is a new phenomenon: the 'cul-de-sac' kid who lives as a prisoner of a totally safe and unchallenging environment... Dependent always on some adult to drive them, children are unable to practice being adults. They cannot run a simple household errand as picking up a carton of milk. They cannot bike to the toy-store and spend their money on their own. They cannot drop in on mother at work. Most cannot walk to school. Even pick up baseball games are a thing of the past, with parents now required to arrange car-pooling with near-military precision, to transport the children at the appointed times. Children are frozen in a form of infancy, utterly dependent on other, bereft of the ability to introduce variety into their own lives, robbed of the opportunity to make choices and exercise judgement.”

(Duany et al, cited in Canadian Centre for Sustainable Transportation, 2005)

3. Play spaces

Play has been described as children's work. Play is critical to children's development for the following reasons:

- Testing one's abilities and improving them;
- Experiencing autonomy and independence;
- Learning social and language skills;
- Stretching the imagination and developing creativity;
- Physical development and sensory pleasure; and,
- Experiencing adventure and risk.



Certain spaces are more conducive to children's play than others. These include areas which are visually and physically accessible, have sufficient space to do activities like ball games and cycling, are safe from traffic, are close to other activities – especially those with adults, offer a variety of opportunities for different types of play suitable for different ages and stages, have 'loose' elements under the child's control (e.g. stones and branches) and that are close to the child's home base (Churchman, 2003).

While there are positive aspects of conventional children's playgrounds, there are also disadvantages. They tend to be stereotypically similar, suitable for one age bracket only and are not particularly conducive to creative play. Several researchers and commentators have raised questions regarding the risk-benefit tradeoffs in the safety engineering of children's playgrounds; as one example, Ball (2004) considered the health and economic costs of using safer surfacing techniques on playgrounds in the United Kingdom. This issue is complex and beyond the scope of this paper. However, the suggestion that playgrounds engineered to be 'safe' may also inhibit the type of activity that children need to engage in to progress developmentally and physically is one that must be taken seriously. A good starting point for reviewing this topic would be a report commissioned by Great Britain's Health and Safety Commission: 'Playgrounds: Risks, Benefits and Choices.'²

Karsten and van Vlietl (2006) interviewed 79 parents in Holland. All believed that playing outside was very important for children. They wanted traffic calmed streets, green neighbourhood spaces and easy access to playgrounds, but also spaces not exclusively meant for child play, e.g. roof terraces, courtyard gardens, wide sidewalks (Karsten and van Vliet, 2006). Veitch et al (2006) interviewed 78 parents from lower, mid and high socioeconomic areas in Melbourne about the influences affecting their children's active free play. As usual, parents noted concerns about traffic and road safety en route to local parks and concerns about predatory strangers. They noted that where there are higher densities of children, they are more likely to play outside. They wanted playground facilities that encouraged creative and imaginative play for all age groups, not just toddlers. They wanted parks close by that were safe to walk to. In group living situations, e.g. blocks of flats, they wanted courtyards and shared backyards that could double as safe play spaces (Fjortoft, 2004; Veitch et al, 2006).

² http://www.hse.gov.uk/research/crr_pdf/2002/crr02426.pdf accessed May 2007

The green space we need now is backyard replacement green - for boys and girls aged between 8-13, those kids in low income areas that are chocker with in-fill housing and apartments where there is nowhere to play hide-and-seek or kick a ball. ...Hamish and his two brothers and 13 other friends in the immediate vicinity are constantly on the lookout for places to play. Sometimes they go to Champion Street Park, but that means crossing Geraldine and Barbadoes Streets to get there, and Barbadoes is a very busy thoroughfare. St Albans park has skate board and bike ramps but it's dominated by bigger boys, who rule...The old Orion site between Madras and Packe Streets has a long green sward between the footpath and the high wire fences and is guarded by fierce dogs. "We play cricket and soccer, touch and tackle there, but if the ball goes over the fence we can't get it back until Sunday , when the Korean church is open and the dogs aren't there"

(The Press, April 14, 2007)

Fjortoft (2004) compared two groups of children aged five to seven years for one year. One group continued as normal, the second played in a nearby forest one to two hours a day. When examined, those who played in the natural environment showed statistically significant increases in motor fitness and positive increases in balance and co-ordination (Fjortoft, 2004).

Blinkert (2004) assessed the environments against specific child-friendly criteria within a 200 metre radius of 4000 children's homes in Freiberg, Germany. She found that if the environment was appropriate, children spent four times longer outside without parental supervision than if it was not suited to them (Blinkert, 2004).

Morrow (2000) interviewed 99 children from two secondary schools located in low socioeconomic areas in the UK. She noted that "young people's communities more often constitute a virtual community of friends based around school, town centre and street, friends and relative's houses and sometimes two homes rather than a tightly bound easily identifiable geographical location". Consistent themes in the interviews were the lack of play areas that were safe and clean (parks with dog faeces and needles were not popular) and too much traffic (Morrow, 2000).

4. Other Factors

The importance of community amenities to parents' mental health, and therefore to their children's mental health, was highlighted by Thomson et al (2003) in a study of the impact of closing a swimming pool in one area, while opening a pool in another low socio- economic area of Glasgow. In this qualitative study, the physical activity health benefits of the pool were often mentioned, but the main benefits appeared to be 'facilitating social contact with friends and neighbours across all age groups, (which was) directly linked to mental health....The health benefits of social contact were said to be stress relief and reducing isolation... in particular, mothers of young children reported using the pool as a stress reliever to cope with lively young children ... and reported benefits to children of being able to participate in safe spacious and energetic play" (Thomson et al, 2003).

"(Last summer) Hamish (10 years old) went swimming in the Edgware Pool. "I used to go with my friends, and we went together." It was safe and accessible, and the pool was supervised. Now it's been demolished, and the centennial and QE2 pools are not so easy to get to. They require Mums time or a long bike ride on busy roads, and they cost more"
(The Press, April 14, 2007)

A recent analysis of the Youth 2000 study, a survey of 9699 randomly selected high school students (response rate 64%), showed that where students perceived there was access to opportunities for physical activity within walking distance to their homes, they were far more likely to engage in regular vigorous physical activity. Perceptions of neighbourhood safety also affected their likelihood of being regularly physically active. The authors noted that for most youth, physical activity is a social activity; so parks, skateboard ramps, sports fields, swimming pools, gyms and bicycle tracks were all strongly associated with regular physical activity (Utter et al, 2006).



Consulting With Children on Urban Design Issues

Why Consult With Children?



There are a number of rationales for including children in any consultation process around urban design issues apart from the legal and moral imperatives. These include:

- Children and young people are valuable members of the community, now and in the future;
- Children have different needs and perspectives from adults;
- The built environment can help or hinder children's development;
- Everybody learns through children's participation;
- Children provide new perspectives and ideas;
- Environments that are better for children and young people are better for everyone; and,
- Asking children and designing to their needs ensures facilities are more likely to actually be used by children.

"The inclusion of children and young people in the planning process provides planners with a win-win situation... Benefits to children and young people include: new ways of seeing and understanding their community; new networks of friends and role models; opportunities to learn about democracy and tolerance; active engagement in environmental and social change; and the strengthening of confidence, self esteem and identity. The community benefits from their creativity and enthusiasm. Constructive alliances are forged between the different generations, overcoming prejudices and mistrust. Planners are better in touch with the needs and issues of the communities they serve and will make more informed and effective decisions. They can educate young people in policy and decision-making and engage them in sustainable development; implement the UN Conventions on the Rights of the Child in their localities; and create child friendly humane environments." (Freeman et al, 2004)

One way of mitigating the disempowering effects of, for example traffic safety issues, is to engage children in the planning and design processes.

United Nations Convention on the Rights of the Child

In 1993, New Zealand ratified the United Nations Convention on the Rights of the Child (UNCROC). This committed the government to acknowledging children's rights, including the right to be heard on matters that affect them. New Zealand's compliance with UNCROC has been 'patchy' and has earned the government significant criticism in the past. As part of its response to this criticism, two key documents were released in 2002: New Zealand's Agenda for Children: Making Life Better for Children (Ministry for Social Development) and Youth Development Strategy Aotearoa (Ministry for Youth Affairs)

In March 2003, a coalition of concerned NGOs released a report detailing the government's progress on implementing the UNCROC. While recognising the significance of recent policy developments, the authors noted that:

"Often new policy initiatives have not been followed by funding and effective implementation. This has been aggravated by the shortage of inter-sectoral approaches to the delivery of services. Impact analysis of new policies on the lives of children and youth is almost non-existent. The benefits to children, young people, families, and society, of prevention and early intervention – as opposed to 'cleaning up' are often forgotten".

(Action for Children and Youth in Aotearoa 2003)

New Zealand's Agenda for Children - Making Life Better for Children

This document was released in June 2002 by the Ministry of Youth Affairs and the Ministry of Social Development. The strategy promotes a 'whole child approach', meaning that policy makers should:

- Focus on the big picture, on the child's whole life and circumstances, not just isolated issues or problems;
- Focus from the outset what children need for healthy development, rather than simply reacting to problems as they arise; and
- Looking across the whole public service at what can be done to support children's healthy development, instead of looking for single sector solutions.

The strategy has seven key action areas:

1. Promoting a whole child approach;
2. Increasing children's participation;
3. An end to child poverty;
4. Addressing violence in children's lives with a particular focus on reducing bullying;
5. Improving central government structures and processes to enhance policy and service effectiveness for children;
6. Improving local government and community planning for children; and
7. Enhancing information, research and research collaboration relating to children.

Of particular interest is the praise the report authors give to Christchurch City Council, "whose children's policy aims to ensure that all Council policies and programmes positively affect the wellbeing of children and their families, and involve children and their perspectives in planning and decision-making. The key to successful implementation has been an integrated strategy 'owned' by the whole organisation, including elected members" (MSD, 2002).

Christchurch City Council Policy and Strategy Study

This research project was initiated by the then Mayor of Christchurch, Vicki Buck, in February 1995.

"The Christchurch City Council's Strategy for Children refers to current and future initiatives undertaken by, or in partnership with, the CCC with the vision of a healthy, child-friendly city. The strategy is both a vision for the future and a plan for action-embracing initiatives in the public, private and voluntary sectors...Initiatives cover health, safety and welfare; physical design and layout of the city; children's experience of education and opportunities for stimulation and recreation. The Strategy is committed to equitable access for children from all sectors of the community. It is underpinned by the assumption that decisions made today impact upon the quality of life our city offers children both now and in the future.

(CCC, 1995)



At the time, the study was the largest consultation ever undertaken by a local authority in New Zealand. It included a citywide children's survey involving 892 children aged from 7-13 years from 29 Christchurch primary and intermediate schools, a city wide parent survey involving 94 parents, interviews with representatives of 44 different provider groups and interviews with various service providers at the Council.

The study was cited as best practice in several government level documents and continues to be cited approvingly in relatively recent papers. There were many recommendations made in the Strategy. Two that are particularly pertinent to this review are noted:

1. The Council should continue to use children as consultants. The CCC should work with, and through, Christchurch's schools on a regular basis. In particular, the Council should consult children regarding the planning and evaluation of parks, recreation programmes, recreation facilities, out of school care, holiday programmes, street design, cycleways, festivals, special events and the city landscape.
2. Children should be used as a starting point for local development. Children's or School Neighbourhood Improvement Plans (SNIPs) have the potential to provide a more representative information and ideas base for the Council than public meetings. At the same time, SNIPs would further incorporate children and families into the processes of local government and the issues that affect their area.

Many of the recommendations made in the report appear to have been implemented with good effect. However, many of the suggestions made by those consulted about their neighbourhoods still seem very pertinent. It may be time to review the status of this Strategy and its implementation plan.

A more recent review of local government planning for children and young people in New Zealand found that 'there are vast numbers of initiatives of all types being undertaken by authorities and planners across New Zealand. However, the impact of these on young people, on the social standing of young people and on local authority process itself is weak. These initiatives do not intend to challenge the currently marginalised position of young people, nor do they imply the development of any real participative change in the way local government works' (Freeman and Aitken-Rose, 2005).

Conclusions

This scan of the literature has revealed several recurrent themes. Firstly, there is world-wide and increasing concern at the epidemic levels of chronic diseases in adulthood that are strongly linked to being overweight or obese. There is increasing evidence not only that childhood levels of obesity are high and rising, but that the overweight child becomes an overweight adult. The costs of obesity in health and economic terms for the overall population are extremely high. Already, one third of New Zealand children are overweight or obese.

Secondly, the built environment is a major contributor to levels of obesity. It is not the only reason for the populations over-eating and under-exercising, but it is a significant and modifiable factor.

Thirdly, the built environment can adversely affect the health of children from pre-natal life through to adulthood. The immediate health effects (e.g. impaired lung function) and the daily habits of life developed in childhood (e.g. car-dependency) can have adverse health impacts throughout adult life.

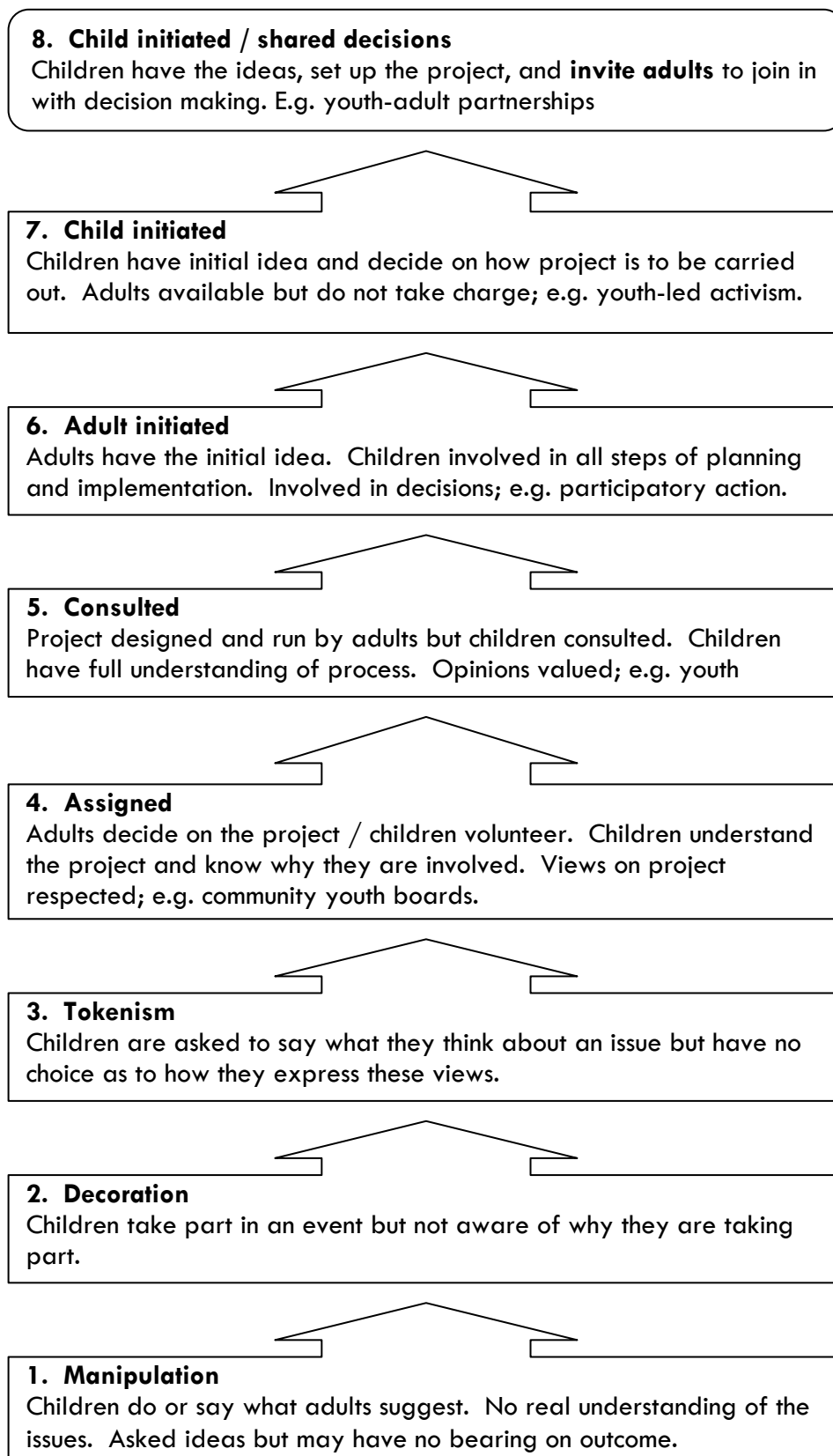
The evidence base concerning links between urban design issues and children's health is currently sparse. Partly this is because the study designs needed to show causality in this area are very complex and expensive. Partly it demonstrates the lack of recognition of the importance of early life experiences to total population outcomes. What evidence there is present is remarkably consistent.

The increasing recognition of the importance of consulting with children and young people in international and national conventions and strategies has, to date, not been consistently implemented at a local government level. There is expertise and tools available both here in Christchurch and nationally that could be of assistance in this area to the Christchurch City Council.

Recommendations

1. **Children should be used as the starting point for development.** This recognises that an environment that promotes the health, safety and wellbeing of children is likely to be an environment that supports the health of the whole community. There are a variety of different approaches that can be used to consult with children and young people. Tapping into already established networks and key people already working in this area would be cost effective and productive. The following diagram, Hart's Ladder of Participation, illustrates the appropriate framework when consulting with children. It is important the consultation process does not include the first three steps of the Ladder, as this is not true democratic process when engaging children.
2. **Neighbourhoods should be assessed on how well they encourage active transport using objective and qualitative measures.** Appropriate changes should be made if necessary. Habits around physical activity are formed very early in life. The built environment needs to promote physical activity for every age group.
3. **Addressing the *perceptions* of local residents is critical.** This may be as simple as ensuring residents know about local cycle routes, or increasing lighting at neighbourhood parks to address safety concerns.
4. **The traffic agenda should be re-framed to liveability, crime reduction, and better health outcomes for all.** This would facilitate health-promoting changes.
5. **Parks should be designed and adequately maintained with the play needs of children of all ages in mind.** Neighbourhood parks are critical to encouraging active transport in all ages. Play in safe but unstructured environments is necessary for optimal physical and mental development.

Hart's Ladder of Participation³



³ Thank you to Nicky Harrall, health promoter at Community and Public Health for bringing this to my attention. www.freechild.org/ladder.htm

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