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More than bricks and mortar: How does the built environment influence mental and physical health?

Dr Lisa Wood

Deputy Director, Centre for the Built Environment and Health
The University of Western Australia

C_BEH



The idea that the built environment affects health is not new....

- 'Modern' Public Health had its 19th century beginnings in reducing disease and ill health through improved sewerage, clean water supply and refuse collection - and there was a clear correlation between life expectancy (infant and adult) and housing conditions



- As the prevalence of infectious diseases in the developed world decreased through the 20th century, public health began focus more on lifestyle behaviours (eg diet, physical activity, smoking)

Every so often however, there were reminders of the powerful impact of the built environment on wellbeing – such as the tearing down in the 1960's and 70's of U.S. high rise public housing that were in effect vertical slums

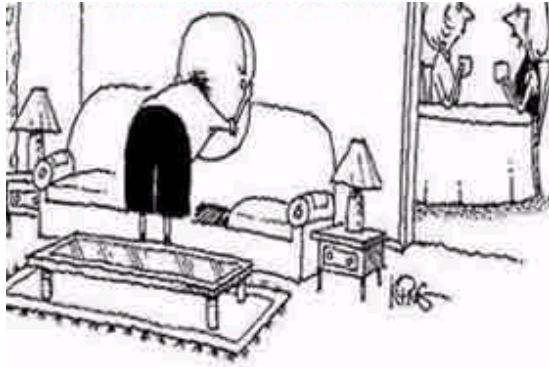


And in the last decade or so....

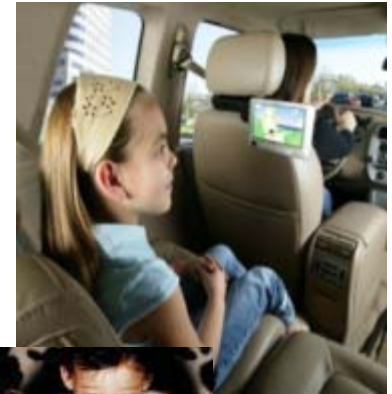
There has been renewed attention to the impact of the built environment on both physical and mental health, often in ways that haven't been considered in the building of our suburbs, towns and cities

Obesity – ‘a physiological response to a toxic environment’

Dr Louise Bauer



The doctor said he needed more activity. So I hide his T.V. remote three times a week.



OBESITY and OVERWEIGHT

“The rate of obesity has more than doubled over the past 20 years in the United States...it has almost **tripled** in Australia”

Health at a Glance, 2007

- 2008: **3.71 million adults** obese
 - 14.5% higher than 2005
- 290,000 5-19 year olds also obese
- Estimated direct costs in Australia¹
 - \$8.3 billion annually
 - **\$3.6 billion lost productivity**
- Estimated **total cost** of obesity in Australia
 - \$58.2 billion
 - \$8.3 billion direct costs
 - \$49.9 billion loss of well being



¹Access Economics (2008)

Mental health

- Depression is projected to be the second leading cause of worldwide disability by 2020
- 1 in 5 Australians will have a mental illness at some point



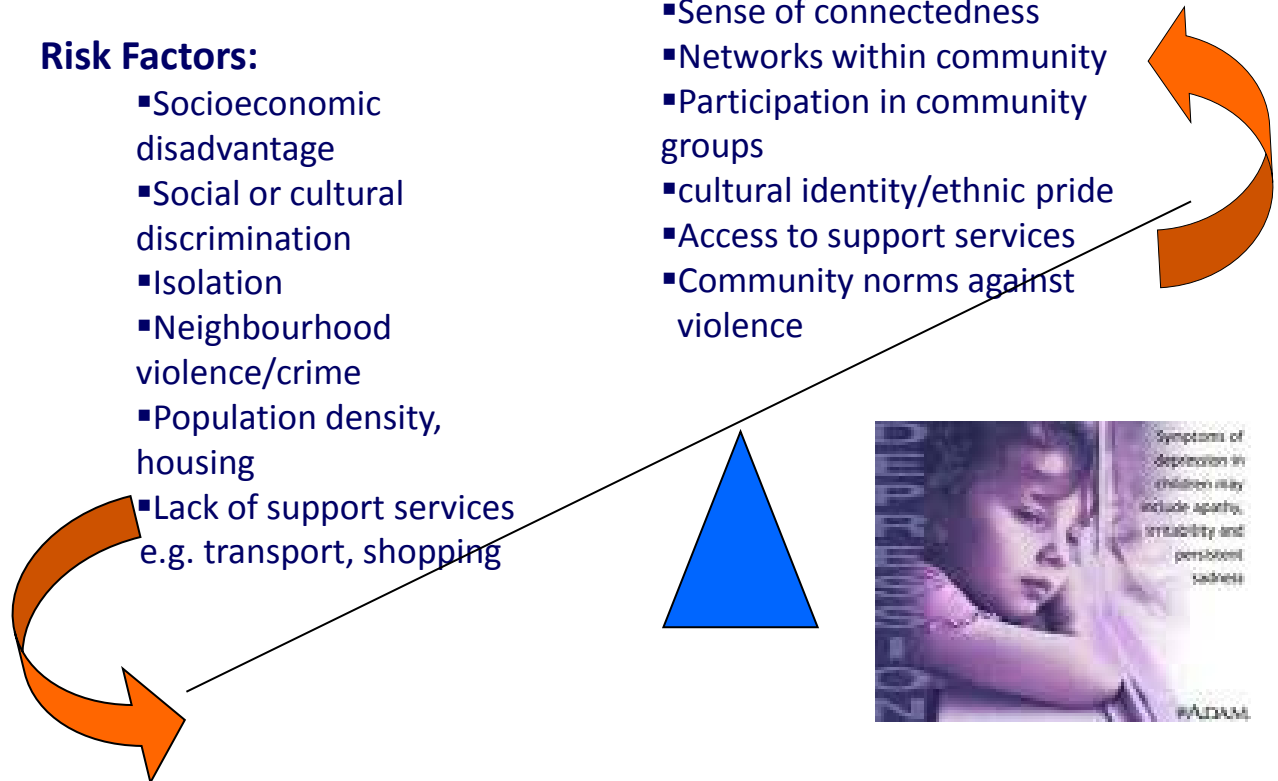
Mental health is not merely the absence of disease, but is also about **maintaining and fostering positive mental wellbeing**

Risk Factors:

- Socioeconomic disadvantage
- Social or cultural discrimination
- Isolation
- Neighbourhood violence/crime
- Population density, housing
- Lack of support services e.g. transport, shopping

Protective Factors:

- Sense of connectedness
- Networks within community
- Participation in community groups
- cultural identity/ethnic pride
- Access to support services
- Community norms against violence



How the built environment might be 'bad' for mental health...

"having suffered to get home, leaving home after work to socialise in suburban sprawl becomes problematical... there are often few social destinations, and they are generally not concentrated in one area, meaning you have to get back into the goddam car, which you just struggled to get out of... meanwhile, the tawdy blandishments of the boob tube (tv) and the microwave oven combine with this feeling of futility to defeat normal, healthy individuals in their quest for social connection...."

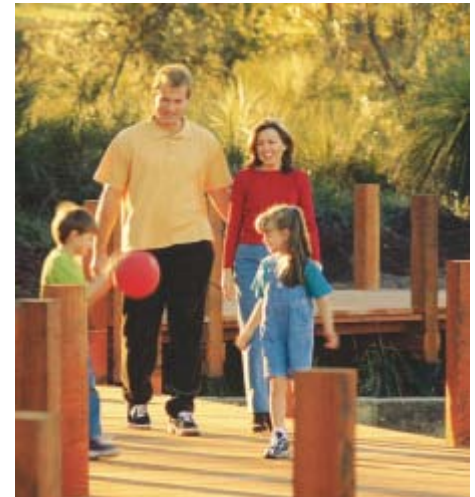
(James Kunstler, Home from Nowhere, 1996, p95)



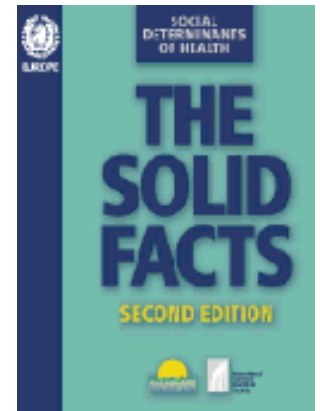
How the built environment might be 'good' for mental health...

*A city or town should be a collection of communities where every member has a right to belong. It should be a place where every man feels safe on his streets and in the house of his friends. It should be a place where each individual's dignity and self-respect is strengthened by the respect and affection of his neighbours. It should be a place where each of us can find the satisfaction and warmth which comes from being a member of the community of man. This is what man sought at the dawn of civilization. **It is what we seek today.***

- Lyndon B. Johnson



Much of our health is shaped by 'social determinants'



1. The social gradient

- What you do
- How much you earn
- Who you are
- Where you live

2. Stress

3. Early life

4. Social exclusion

5. Working conditions

6. Unemployment

7. Social support

8. Addiction

9. Healthy food

10. Transport policy

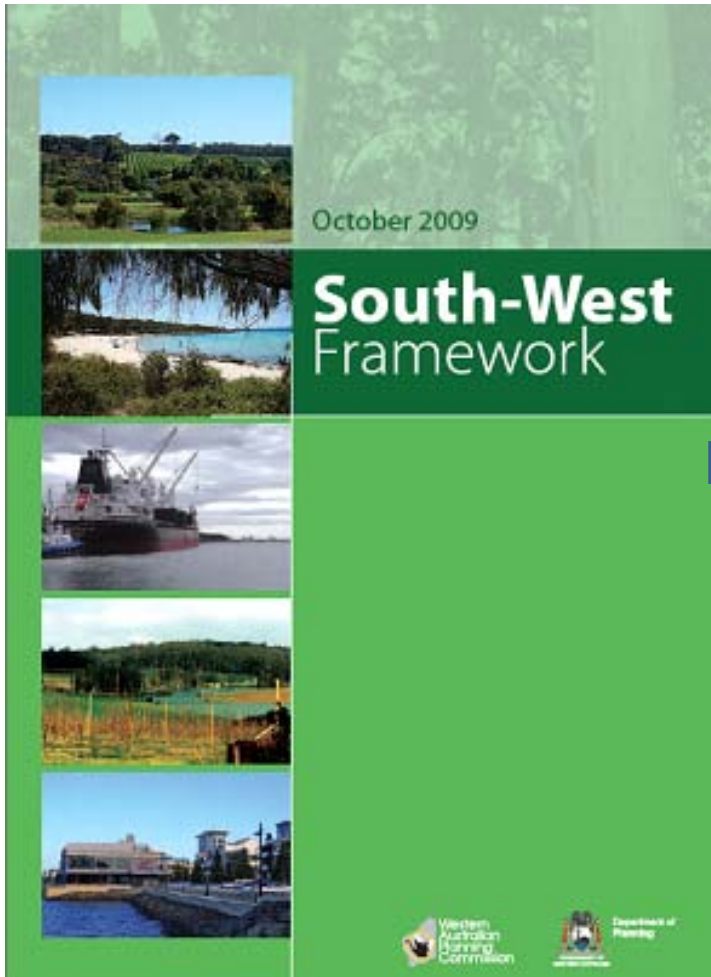
Accumulated evidence linking these to:

- Physical diseases
- mental health
- Mortality

“Health is not only the absence of infirmity and disease but also a state of physical, mental and social well-being.”

World Health Organisation

Many of the social determinants of health are reflected in the South West Framework...



Elements of an Inclusive Community:

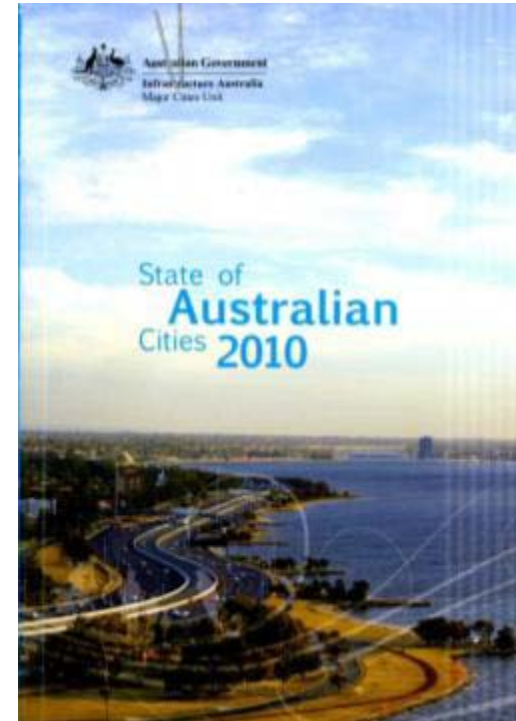
- provide mix of lots and dwellings in terms of size, affordability and location'
- 'provide sustainable, well-designed and livable neighbourhoods that ensure safe and convenient access to employment, health, education, shopping, leisure, social and community facilities for all residents'
- 'plan for youth'
- 'plan for needs of an aging population'
- 'promote community design which caters for a mix of age groups'
- 'constrain low density urban sprawl'

Similar themes also in the recently launched State of Australian Cities report...

The report emphasises the importance of

livability... “ a concept increasingly used to describe what people experience as positive in their environments - such things as low levels of pollution, good public transport, neighbourhoods which enable pedestrian traffic, tree lined streets, well designed buildings and civic centre, useable public spaces, access to open and green space, and the availability of recreational and cultural facilities...**how we plan and shape our cities, right down to neighbourhood level, is critical for our quality of life**”

Hon Anthony Albanese,
Minister for Infrastructure, Transport, Regional Development & Local Government,
State of Australian Cities Report Launch March 2010.



Such livability and quality of life are also at the core of good health and wellbeing

Health and the built environment

– a two way street

- Range of health issues impacted by spaces and places (e.g. physical activity, obesity, mental health, injury)

BUT

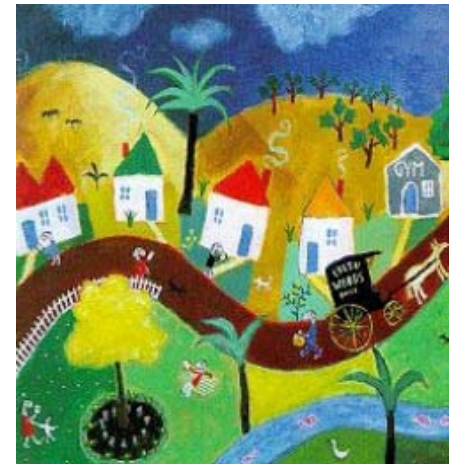
- Health can also impact on built environment (e.g. mental & social wellbeing related to violence, crime, incivilities, volunteering)

It is a two way street:

- Impact of spaces and places on health and vice versa can be both positive and negative



Ensuring the built environment has a positive effect on health, there are things we want to plan and design ‘in’, and plan and design ‘out’



PLAN, DESIGN AND BUILD FOR **WALKABILITY**

Built environment factors associated with walking

- **Walking for recreation**
 - Aesthetics
 - Presence of large attractive public open space
 - Presence of footpaths
 - Perceived safety
- **Walking for transport**
 - Higher density neighbourhoods
 - Land use mix – destinations required for daily life (shopping, services, work, schools, parks);
 - Connected street networks



PLAN AND BUILD FOR ACTIVE KIDS

aspects of built environment influencing children's physical activity

Functional	Safety	Aesthetic	Destination	The Home
Direct route Gradient Intersection distance Path type & location Path maintenance Street type & width Traffic control devices Traffic speed & volume Density/sprawl Street connectivity	Crossing aids Crossings Lighting Verge width Surveillance	Cleanliness Sights Garden maintenance Parks Pollution Trees Architecture Street maintenance	Local facilities Parks Public transport Services Shops Vehicle parking Bike parking Land mix	Play equipment Garden Home gym Exercise DVD's Exercise area
				

Adapted from: Kelty, Giles-Corti & Zubrick, 2008. *Physical activity and young people: the impact of the built environment in encouraging play, fun and being active*. Nova Publications.

DESIGN IN PLACES TO GO



"if you are in the habit of walking to the shops etc you'd start to recognise people and then you'd start to say hello and get to know them and that sort of thing, but if you drive everywhere, you don't see people to meet"

"Even if you don't talk to anyone else in the day you know that you can go into the chemist or the newsagent and have a bit of a chat. So that gives you some contact with other people"



"Everything is so convenient here it encourages you to walk so you can't help but meet people"

DESIGN IN PLACES TO MEET OTHERS



"I met people through the P&C and we have kept connected even though we've all gone from the school or our children have left"

"I get involved in a lot of sporting things and that does generate a lot of interaction with other people in my community"



"If there are groups and social activities where people can meet and enjoy time together...these help me to feel like I belong around here"



DESIGN OUT **CRIME AND FEAR**

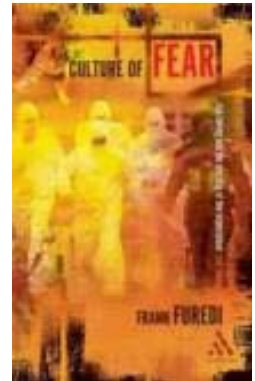
We are becoming more fearful – as individuals & communities

- More fearful about world events, what the future holds
- Less trusting of strangers
- Growing rates of anxiety related mental health issues

But fear can lead to...

- us creating walls of 'security' around us – gated housing, alarm systems, elaborate safety rules, intense monitoring of children
- overestimate dangers and ascribing catastrophic meanings to events and situations – *in a UK study, 72% of people felt nervous, threatened or scared when passing a group of young people on the street*
- many people with anxiety problems limiting their interactions with the world, potentially leading to poor self-care, economic hardship, social isolation and depression

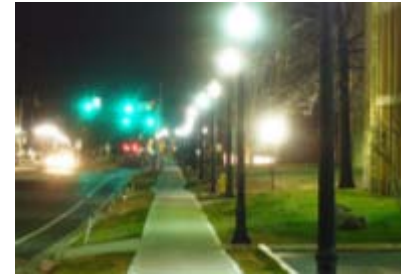
(In the Face of Fear, 2009)



DESIGN AND BUILD TO REDUCE FEAR

Fear and anxiety (whether based on reality or perceived threats) cannot be dismissed however, but there are things we can design into and out of the built environment to reduce fear:

- The design orientation of buildings with windows facing the street can increase natural surveillance by neighbours/retailers
- Mixed land use promotes more people being out and about at different times of the day and night, hence enhancing perceptions of safety
- Reducing visibility of surveillance measures (eg security grills, CCTV cameras – can visually signify that a place is not safe)
- Good lighting of streets, parks, bus shelters, public places can reduce assaults and perceptions of fear



FOSTER THE **SOCIAL REALM**

Does local community still matter?

“Although communities of interest – many of them organised around shared enthusiasms such as Star Trek or vintage cars – are clearly important aspects of social and personal life, it is often in places that communities congregate, or become attached to”

Urban Sociability, 2006

Humans are fundamentally social beings, with social isolation and loneliness risk factors for mental health

- Public spaces can provide important opportunities to interact with others, feel less isolated, and in turn, improve mental health.



it is the public realm and semi-public spaces that provide the terrain for social interaction

RECOGNISE PLACES THAT ALREADY BUILD COMMUNITY

“I met people through the P&C and we have kept connected even though we’ve all gone from the school or our children have left”



“I’ve noticed the mothers that walk their kids down to the school, they have a bit of a natter, its kind of a social gathering you know..”



“It is the school that makes me feel that I belong. To me that is what makes it feel like a community”



Schools as facilitators of social interaction and sense of community

Social capital study focus groups, Wood, 2006

PLAN OUT - Incivilities & Inaccess



“Now we can’t go down to the school oval to play footy and things like that because it is locked off so no one can damage it and we can’t use the basketball facilities because they are fenced off because of the crime levels”

“Parents don’t let their kids go down to the park because you don’t know what they might find”

“You feel sorry for kids now; they can’t just go anywhere, not like we could”



“I live across the road from the local primary school ... and now you’ve got high barbed wire fences and you think, what sort of atmosphere is that for our children to grow up in, its like being in jail or a cage”

Retain and plan In **NATURE**



The presence of nature in children's immediate vicinity can improve mental health and be restorative.

(Louv, 2008 Last Child in the Woods:
Saving Our Children from Nature-
Deficit Disorder)



Contact with nature can be restorative, helping in the recovery of fatigue and a greater sense of wellbeing

(Kaplan 1995; Herzog et al. 1997).

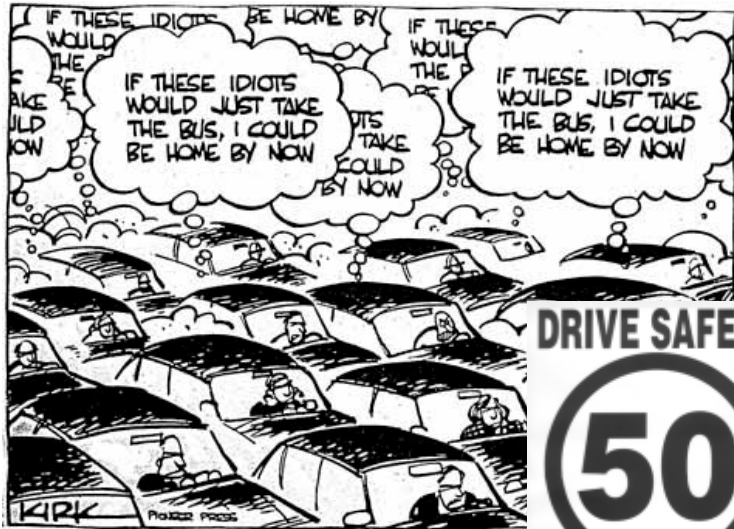
ENCOURAGE **COMMUNITY INITIATIVE**

- In his well known book, *Life Between Buildings*, architect Jan Gehl argues that one of the great losses to urban living in many towns and cities has been the removal or indoor locating of street Markets which, as places of exchange have been a focal point for all manner of social and economic transactions in urban history.
- But the growing popularity of local Farmers markets (a trend begun in country towns and now being taken up in the city) is revitalising the idea of markets as places for social gathering and goods exchange.

*And with a healthy food angle thrown in!!



REDUCE CAR DEPENDENCE



DRIVE SAFELY



OR
cycle instead

Safer roads to come

THE streets of Claremont will become more walk, cycle and public transport friendly after the council and transport new traffic and management strategy that aims to help people alter their transport arrangements.

Connecting Claremont was adopted last month to counteract the trend of parents driving their children to school rather than allow them to walk or ride bikes.

Stirling High
ularly congested
arrive and
mornings

Move to turn CBD car-free

Slow down or lose tourism edge

By ROBERT TURNER

A CAR-FREE Busseton could be a key to attracting more visitors to town, says Mayor M. A. Bernie Masters.

Peasants' stalls, street entertainment and a vibrant cafe scene, locally-sourced food were all aspects that could give Busseton an edge over other destinations with tourist dollars, he said.

But banning cars from the central business district around Queens and Prince streets was likely to be opposed by many CBD traders who believed removing car spaces would harm their businesses.

Mr Masters has taken the concept of the European tourist centres which was adapted by Busseton's fast food chains, and applied it to a ment guide plan.

experience such that the emphasis was changed to enjoyment of local culture, local traditions and local products," Mr Masters said.

"If this slow food concept was adopted for our town, Busseton would become the first 'slow city' in Australia, providing a major advantage over other tourist destinations with which we compete."

In a slow city, pedestrian areas are enlarged, public transport is improved, and more signage is taken down to make streets safer and more pleasant.

Chamber of Commerce and Industry of Claremont said opening up the heart of the town to pedestrians would encourage people to spend more time in the town.

• More pages

Every additional 60 minutes/day in car increases likelihood of obesity by 6%

Each km walked reduced the odds of obesity by 4.8%

(Frank et al, Am J Prev Med. 2004; 27(2):87-96)



CREATE SENSE OF PLACE

- **Sense of place** increasingly recognised as being important for health and quality of life
- *There is often more scope to foster 'sense of place' in regional cities, towns*
- Includes recognition and celebration of local culture, history, heritage
 - these can be 'expressed' through the built environment (eg public art, local industry theme reflected in park or public space design, providing public seating, involvement of local groups in planning and design, use of local materials, main street revitalisation)



*previously a blank wall, with issues of anti-social behaviour turned into a vibrant public space.
Wodonga, Victoria, (David Enright)*

“...for people seem to value local places, the collection of stones that form the built environment, local landmarks, and the association of place with identity and history” *Urban Socialability report, 2006*

Provide spaces for older children

“kids older than seven need more from their environment than a safe place to ride their bikes. They need at least the same things adults need; places to hang out, shops, eating places, libraries... they need a public realm worthy of respect” *Kunstler, 1998 Home from nowhere*



Spending time with peers is an important part of adolescent development. But young people increasingly lack places where they can just ‘hang out’ - Providing young people with a sense of space where they can informally gather and socialise is vital *City of Darebin Youth Consultation*

Social isolation and loneliness in adolescence has been linked to a myriad of adverse health outcomes, including depression, suicide ideation and violence, eating disturbances, adolescent alcohol use; more frequent involvement in high risk behaviours *(Houghton et al, 2010)*



Use regional assets to advantage

It is often said that 'country people and places' are more willing to help one another out, so build upon this...

Volunteer involvement and money donated to build the town playground recently built in Shire of Gnowangerup - Volunteering is good for mental health and for the community



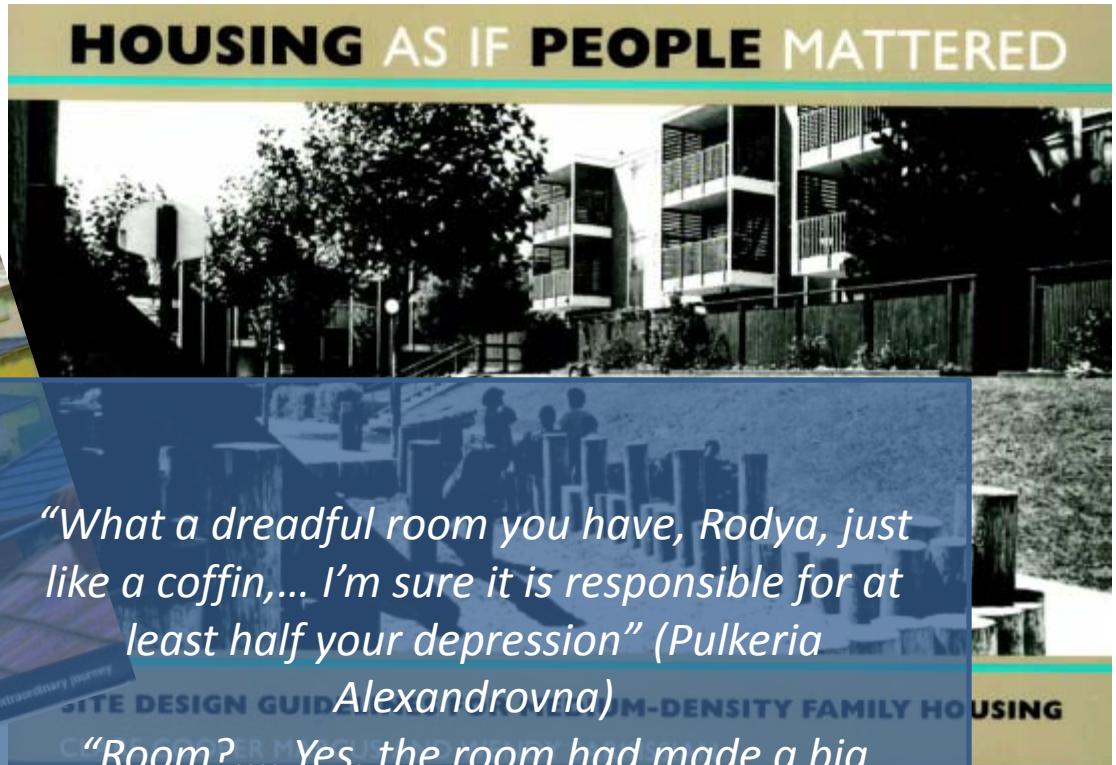
Pemberton restoration of local pool by a group of passionate locals

Looking out for one another as a community based solutions to 'parental fear and children's lack of physical activity (Albany)

Park Watch was started at Albany parks following suggestions from local parents who knew how important physical activity was for their children but had safety concerns. Up to 25 children walk or cycle to their local park after school each Tuesday and Thursday afternoon. They are supervised by volunteer parents who have been trained as Park Watch monitors.



DESIGN HOUSING FOR PEOPLE & QUALITY OF LIFE



“What a dreadful room you have, Rodya, just like a coffin,... I’m sure it is responsible for at least half your depression” (Pulkeria Alexandrovna)

“Room?.... Yes, the room had made a big contribution, I’ve thought of that too... (Rodya)”

- Crime and Punishment, Dostoevsky, 1865

CATER FOR PET OWNERS

🐕 76% said that owning a dog encouraged them take more walks (Social Capital study, 2002)

🐕 84.5% of dog owners had conversations with other people in the park compared to 65.2% of non dog owners (Town of Kwinana study, 2008)

Pets break the ice: study

THE phrase 'Location, location, location' may soon be replaced by 'pets, pets, pets' as the key to finding the perfect spot to live. Latest research reveals pets are a key to encouraging neighbourhood friendliness.

Lisa Wood, of the School of Population Health at the University of Western Australia, said: "While there are well-known one-on-one benefits to owning a pet, our research clearly shows that pet ownership also has a beneficial ripple effect for the whole community."

Dr Wood said non-pet owners spontaneously identified people walking dogs as one of the ways in which they get to know and recognise neighbours and other residents within their sub-

Dog owners also identified social contact resulting from being out with their dogs. "The visible presence of people walking dogs seems to contribute to feelings of collective safety and a generalised sense of community."

In her report, *More Than a Furry Companion: the Ripple Effect of Pets on Neighbourhood Interactions and Social Capital*, Dr Wood found:

- 40.5 per cent of pet owners said they had got to know other people in their suburb through their pet, with dog walking being the activity most likely to initiate contact.
- 83.8 per cent of dog walkers talked to other pet owners while out walking their dog.
- Pet owners were 57 per cent more likely to be

■ Pet owners were 74 per cent more likely to have a high social capital score compared to non-pet owners.

■ 82.5 per cent of dog owners felt safer in homes because of owning a dog.

■ The odds of feeling lonely more frequently were twice as high among non-pet owners.

"Dog ownership specifically contributed to people feeling a sense of community and getting to know others, and pet ownership contributed to an overall high score on the social capital score," Dr Wood said.

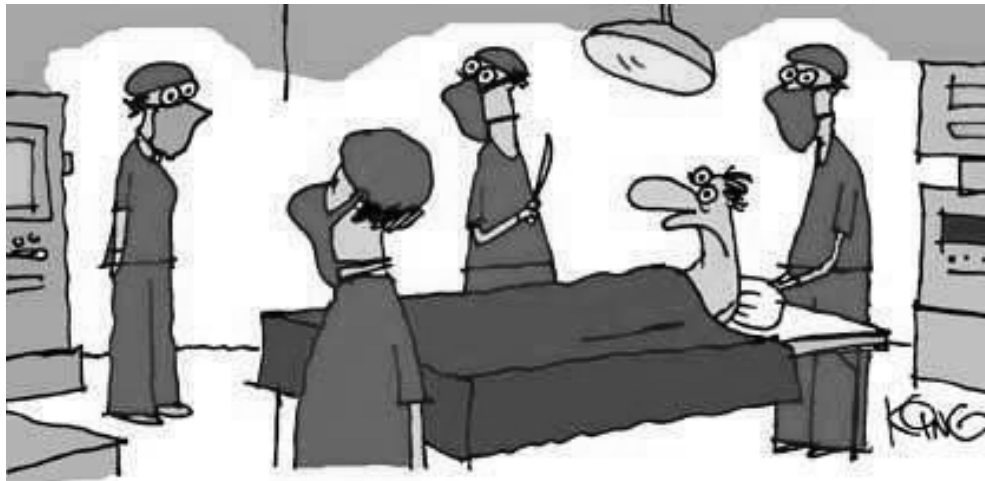
Almost two-thirds of Australian households have pets, outnumbering homes with children.

I walk down to the park every night and there is about 10 of us & 20 dogs that all get together in a group and I've met people through that [Social capital study, 2002]

I walk my dogs ...and there are about 5 or 6 others that go there and we all chat and have a little dog thing going [Social capital study, 2002]



Some current and future challenges for built environments re health...



"Nurse, get on the internet, go to SURGERY.COM, scroll down and click on the 'Are you totally lost?' icon."

Challenges: planning and designing for health of older generations



By 2051, 25% of Australians will be > 65yrs

- Issues of social support and isolation as relevant to health as 'aging body parts'
- Proximity to destinations important: Important destinations include shops, health-related (e.g. pharmacy, doctor) and parks.
- Having convenient destinations not enough, must also have efficient, barrier free routes between destinations: cracked footpaths with uneven or slanted surfaces make mobility difficult.
- Frequency of walking for transport in older adults significantly associated with the presence of curb cuts and pedestrian crossings, level ground (no hills) and safety from traffic (pedestrian crossings, no busy roads).

Challenges – reducing not widening health & social inequalities

- Affordability of housing, transport, recreation, education impacts on health
- Some evidence of SES variations in access to healthy food, public transport, quality parks
- “The gross inequality we see in the world, both within (a spread of 20 years in life expectancy) and between countries (a spread of up to 48 years) is not inevitable, but malleable and can be changed. Social factors are at the root of much of these inequalities”

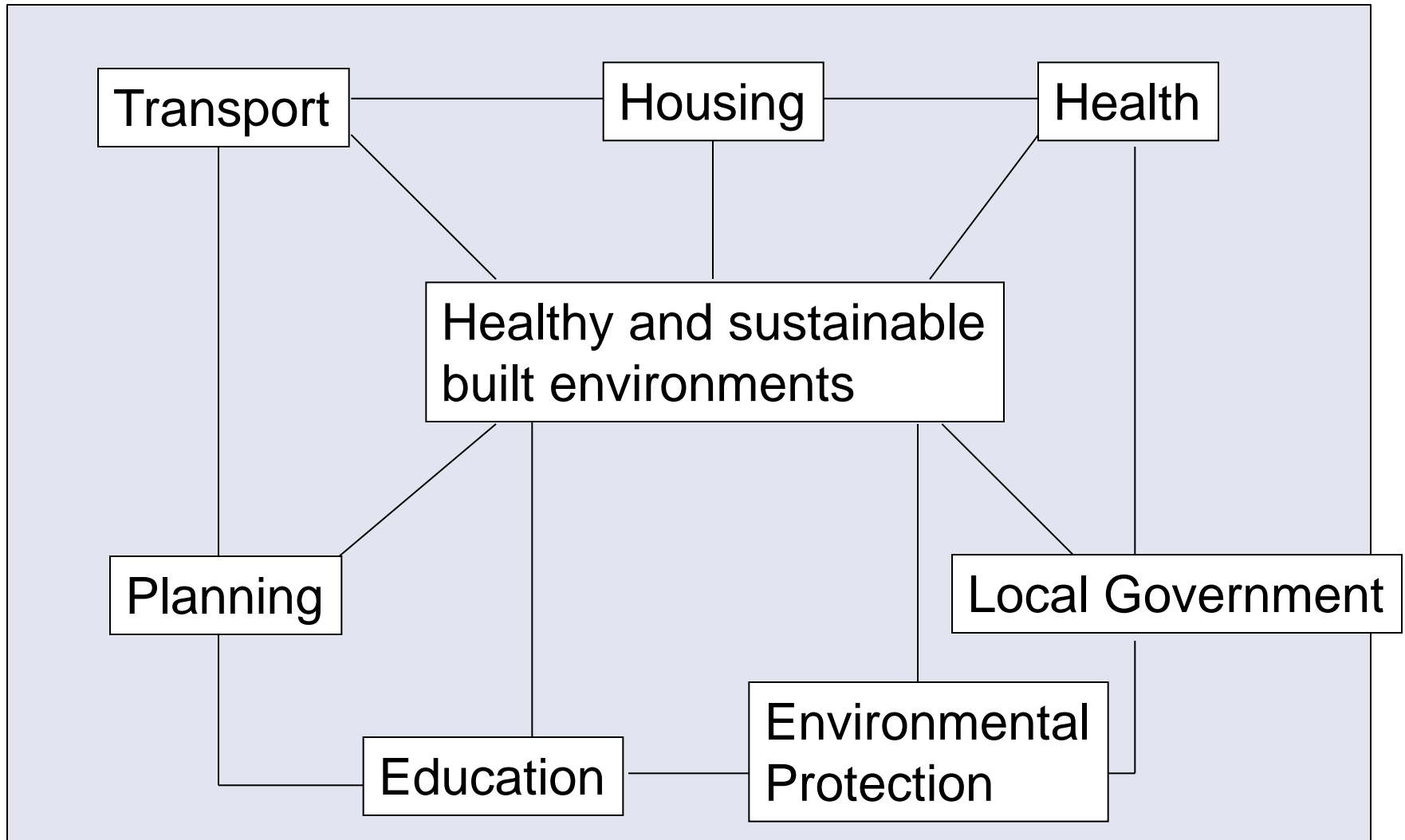
Marmot, 2005



“Report after report is produced showing that Indigenous health is poor, improvement patchy at best, and that overall, the gap between Indigenous and non-Indigenous health is widening. These reports reach the highest levels of Australian public and political life and are simply noted, or evoke defensive bureaucratic responses”

Ring & Brown, MJA, 2002

Challenges – getting beyond the rhetoric of a multi-sector agenda



Is a growing evidence base informing healthier livable environments



And finally...

“Research reminds us that the environment matters – that the design of houses, developments and cities have significant and demonstrable effects on the behaviour and wellbeing of the people who live in them...”

Perhaps this is obvious, but then sometimes it is worth reminding ourselves of the obvious, lest it become lost under the tide of fashion or invisible through familiarity”.

More than Bricks and Mortar?: Mental Health and the Built Environment, David Halpern (1995, p211)

