

'Crowded suburbs' and 'killer cities': a brief review of the relationship between urban environments and mental health

Helen L. Berry

National Centre for Epidemiology & Population Health,
The Australian National University
Email: helen.berry@anu.edu.au

Abstract: Most of the world's population now lives in cities, with 90% of Australians living in urban settlements of more than 10 000 people. Urban environments help shape population health, particularly among disadvantaged people, where poor health is concentrated. A growing body of research has focussed on the association between cities and mental health. Three hypotheses have been proposed to explain this association: psychosocial stressors; concentrated disadvantage; and social drift. It remains unclear, however, how the characteristics of urban environments are related to each other and to mental health, and what might be the pathways underpinning the experience of different individuals. With one in five Australian adults meeting the diagnostic criteria for a mental disorder each year, investigation of the relationship between urban environments and mental health is urgently needed. This paper briefly reviews recent studies linking disadvantaged urban environments with mental health and proposes a hypothetical model to help guide future research.

Half of the world's people now live in cities;¹ by 2030 this proportion will increase to nearly two thirds.² In Australia, 75% of people already live in cities with a population of more than 80 000 and 90% live in urban settlements of 10 000 or more.³ There is growing concern expressed in the media over the possible health-damaging effects of city life, including commentary on the dangers of 'crowded suburbs',⁴ a facet of modern 'killer cities'.⁵ Cities are a 'potentially powerful force'⁶ in shaping population health, particularly that of disadvantaged people.⁷ The aims of this paper are to review briefly studies linking disadvantaged urban environments with poor mental

health and to propose an explanatory model to guide future research.

Cities differ substantially from one another, as do neighbourhoods within cities.^{8–10} Poor health is often 'highly concentrated' in a small proportion of neighbourhoods¹¹ that share health-damaging characteristics:¹² inadequate or 'substandard' housing^{12,13} that limits access to shelter, connectedness, and a sense of 'home',¹⁴ including pride in one's home and home as a refuge;¹⁵ poor access to transport, co-location with 'undesirable land uses', such as bus depots and busy roads;¹² lack of access to healthy food and overexposure to unhealthy food, alcohol and tobacco;⁷ limited access to and poor design of recreational and green spaces; and exposure to the clearly visible symbols of poverty and degradation¹⁶ that send 'powerful messages' that nobody cares about the neighbourhood or its residents.¹² These characteristics generate direct health risks, for example, by facilitating the spread of disease and discouraging physical activity,⁸ while encouraging negative health behaviours, such as reduced health care-seeking.¹⁶

While most studies have examined cities and their effects on physical health, some have investigated mental health. Mental health problems have been associated with social disorganisation and living in deprived neighbourhoods.⁶ Increasing population density has also been linked to mental health problems, including elevated rates of psychosis and depression.^{17–19} However, density alone does not necessarily determine disadvantage: for example, Potts Point in Sydney and Southbank in Melbourne are densely populated areas associated with advantage rather than disadvantage. More likely, population density is health damaging when it occurs in conjunction with other risk factors in the physical and social environment. These include lack of access to the natural environment and, especially, high levels of socio-economic deprivation,²⁰ including overcrowding.²¹ Prospective studies have concluded that improvements in the built environment are associated with decreasing psychiatric morbidity. In a follow-up of 503 people in Oslo, Norway, mental health problems declined among participants living in an initially poorly functioning neighbourhood that improved over a decade.²² Relocation can achieve similar results. In the American 'Moving to Opportunity' study, families selected at random moved from deprived to non-deprived

neighbourhoods.²³ In 550 such families, three years later, parents were less distressed and sons less anxious and depressed than were their peers who remained in public housing.

Qualitative studies of urban renewal and mental well-being have corroborated epidemiological findings. In-depth interviews with 16 Londoners indicated that enhanced safety and community facilities were associated with improved daily coping.²⁴

Health-damaging characteristics of urban environments

Built environments may be conceptualised in terms of ecological (neighbourhood) characteristics, such as type of housing, roads and public places,²⁵ and of individual dwellings. Disadvantaged neighbourhoods exhibit substandard housing,¹² which has been directly linked to poor mental health,^{26,27} and ‘physical incivilities’.²⁵ These physical incivilities include derelict buildings, extensive graffiti, litter, vandalism, excessive traffic, urine, dog faeces, a small proportion of private gardens (and a correspondingly higher proportion of shared recreational spaces),²⁵ visibly deteriorating buildings, external walls, windows, stairs or lifts, structural fires and dirty streets or pavements.⁶

Substandard housing is most prevalent in poor neighbourhoods²⁵ and among dwellings built since 1970, with deck access (a means of access to flats above ground level via stairs or lifts that lead to long corridors onto which residents’ front doors open directly) or floor-level access. This type of housing features one or more structural problems: damp,¹³ leaking roofs, rot, pests,²⁵ toilet breakdown, non-functioning kitchens, inadequate heating, repeated heating breakdown during winter, peeling plaster or paint, internal leaks,⁶ overheating in summer¹³ and lack of affordability.^{11,15} People’s perceptions about their housing may be influenced by their neighbourhood, and negative perceptions about both incline people to relocate, increasing residential instability.²⁸ This breaks social ties that promote mental health.²⁹

Disadvantaged social environments exhibit social incivilities, such as the presence of crime, teen gangs,²⁵ noise (for example, from trucks and aeroplanes³⁰), foul air,²⁷ neighbourhood poverty⁶ and diminished social capital. Socio-demographic disadvantages also prevail, including overcrowding, unemployment, poor education, single parenting, ethnicity, renting, no car or van access,²⁵ poverty⁶ and being an immigrant or refugee.¹⁷

The built and social environments and mental health are entwined.^{6,25} In a study of 1887 residents of two London wards, people living with socio-demographic disadvantages, substandard housing and physical incivilities were more likely to report depression than were their less dis-

advantaged peers.²⁵ Even after adjusting for socio-demographic characteristics and attributes of individual dwellings, significant associations remained between depression and deck access, post 1970s housing and few private gardens. Similar findings emerged from a study of depression and the built environment in 59 neighbourhoods in New York City.⁶ Controlling for socio-demographic factors, substandard housing and physical incivilities were significantly associated with elevated rates of depression.

How do cities influence mental health?

Three explanations for the direct and indirect² associations between urban environments and mental health have been proposed:⁶ psychosocial stressors, concentrated disadvantage and social drift.

Psychosocial stressors

Pearlin and colleagues³¹ described ‘the stress process’ as negative life events creating strain in people’s lives, with this strain eroding positive self-concepts such as confidence and sense of worth, leaving people psychologically vulnerable, especially to depression. Exposure to physical and social incivilities in cities generates psychosocial stress; both are associated with diminished feelings of safety and security in one’s home, which is related to mental health.¹⁵

Concentrated disadvantage

The concentrated disadvantage explanation suggests that the density of city populations concentrates physical and social problems, intensifying their effects and inflating pressures on mental health. Consistent with this explanation, physical incivilities, substandard housing, social incivilities and socio-demographic disadvantage are significantly positively correlated, as are their constituent components.^{6,25} The mental health effects of concentrated disadvantage may be mediated by psychosocial factors, such as collective efficacy³² and loss of control, social support, and recreation.²⁷

Social drift

The social drift explanation proposes that the socio-economic circumstances of people with severe and enduring mental health problems gradually deteriorate, necessitating relocating into progressively disadvantaged neighbourhoods and lower quality accommodation.³³ This explanation does not preclude the possibility that disadvantaged urban environments might also contribute to mental health problems. Indeed, while social drift contributes to the concentration of psychosis in disadvantaged neighbourhoods, urban environment causation seems more important than selection;¹⁹ controlling for individual income and neighbourhood socio-economic status, a relationship has been found between the urban environment and depression.⁶

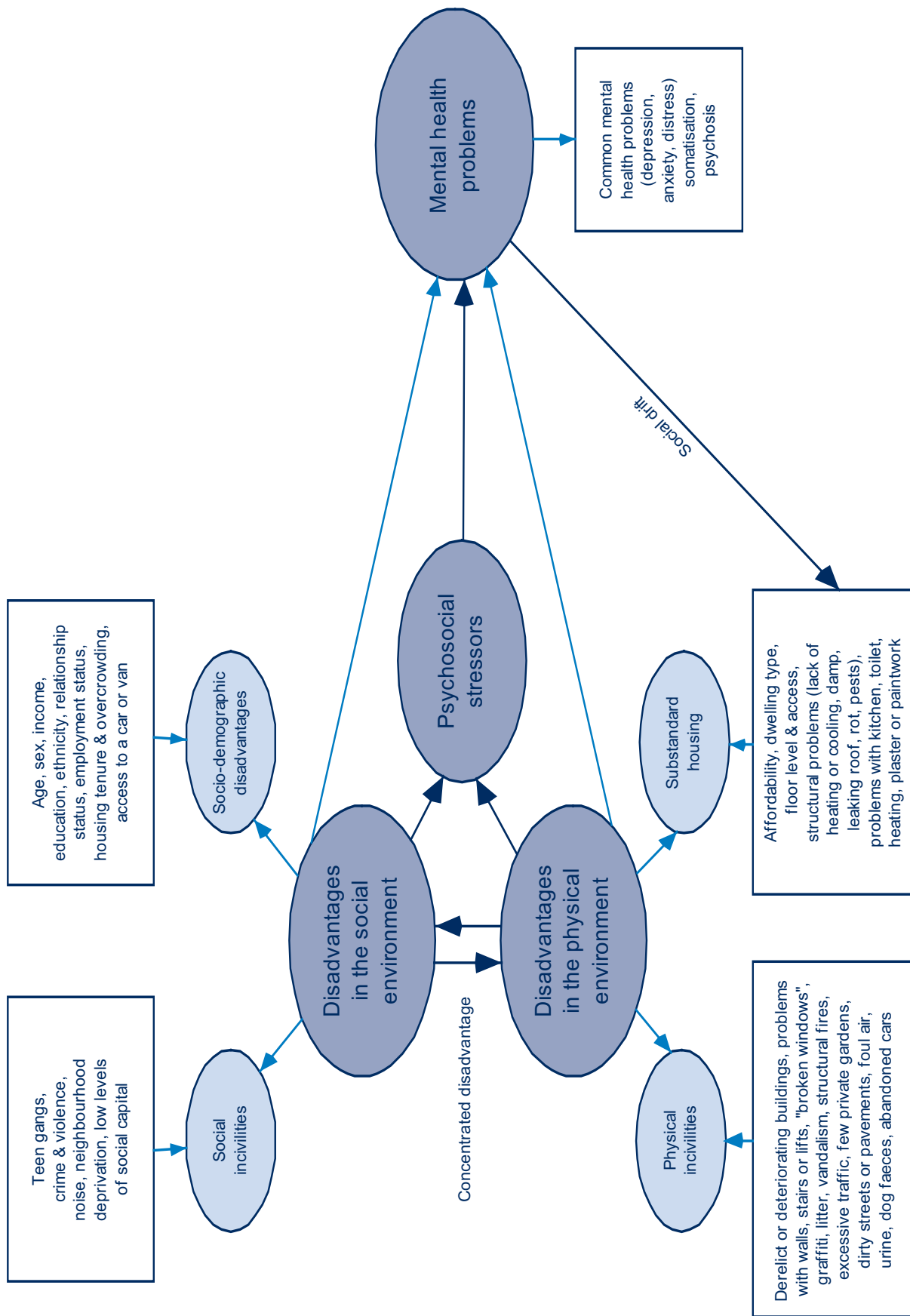


Figure 1. Hypothetical model of the relationship between disadvantages in the built environment and mental health, illustrating the concentrated disadvantage, psychosocial stressors and social drift explanations.

Cities and mental health: a conceptual model

While there is evidence that built environments may influence mental health and that mental health problems predispose people to live in disadvantaged environments, it is unclear exactly how environmental and social factors are related and how different explanatory hypotheses might be accommodated within a pathways model that allows for different individual experience. Figure 1 is a conceptual model of how disadvantaged city environments might be linked to mental health problems. The Figure includes only factors for which there is direct empirical evidence for a link with mental health, as summarised in the literature review above.

Constructs (in ellipses) have been presented together with lists of factors (in boxes) that have been empirically associated with the built environment and mental health. Darker arrows denote the direction of relationships among constructs as suggested by the concentrated disadvantage, psychosocial stressors and social drift explanations.⁶ Lighter arrows indicate relationships for which there is empirical evidence but which do not feature in the three explanations. The explanations are not mutually exclusive.⁶ Instead, they describe different aspects of a bigger picture, which must also take account of the size, density, diversity and complexity of a city's population and its global, national, political, economic and social contexts.¹

Urban environments and mental health: an urgent research priority

One in five Australian adults meets the diagnostic criteria for a mental disorder each year,³⁴ with mental health problems (particularly depression and anxiety³⁵) being the leading cause of non-fatal disease burden.³⁶ The prevalence of mental health problems is increasing.^{37–39} This trend is likely to continue,⁴⁰ involving massive costs to healthcare^{41–45} and Australian society,^{42,46–52} with profound implications for the intergenerational transmission of mental health problems^{53–55} and disadvantage.⁵⁶ Though we live predominantly in cities,^{30,57} we do not fully understand how cities influence mental health;⁵⁸ the social environment's contribution to this relationship remains 'neglected' in research as a 'possible [explanatory] mechanism'.¹⁸ The fields of social ecology and community psychology, together with social capital theory, could usefully contribute to filling this gap.

It is essential⁵⁹ to begin systematic investigation of pathways models that describe how features of the social and built environments of Australian cities may be related to mental health. Urban environments are amenable to modification and, with the potential to affect vast proportions of the world's population,² this is urgently needed.^{11,13} Insufficient investment has been made²⁷ in the challenging task⁶⁰ of developing sophisticated conceptual frameworks (pathways models) of how the built environment may

affect mental health. Frameworks must (i) be theory-based, empirically tested and continuously refined,⁶⁰ (ii) be constructed within a population health approach, with prevention in mind, and with interventions evaluated via 'report card[s]' that are not reliant on primary data collection and are 'grounded' in local realities,¹⁰ and (iii) include health-promoting features of built environments, such as contact with nature^{61,62} and easy access to parks and walking.^{58,60,63}

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