Glasgow Centre for Population Health

BRIEFING PAPER 2 CONCEPTS SERIES

Health and the Physical Characteristics of Urban Neighbourhoods: Critical Literature Review

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INTRODUCTION

It is increasingly recognised that place and space have an impact on human health and wellbeing and that individual actions to improve lifestyle or health status are likely to be constrained by the environmental and socio-economic contexts in which they take place. Consequently there is growing interest in investigating the influence of the built and social environment on health status and on health related behaviours.

Recently Glasgow Centre for Population Health published a report, Let Glasgow Flourish[1]. The report shows that although the city has become more affluent in the last 25 years, benefits of this are not yet reflected in its overall health status as compared to similar cities in the UK. While some aspects of health are improving, others are proving resistant to change, and some are worsening, notably levels of obesity, diabetes and health inequalities. The Glasgow Centre for Population Health is developing new ways of thinking to help address these continuing health issues, including a programme on Healthy Urban Planning. In order to better understand the links between neighbourhood and health, it was decided to undertake a critical review of the evidence in this area. The full report of this review is available from http://www.gcph.co.uk/background/programmes/maximise/maximise4.htm. This briefing paper presents a summary of its findings and conclusions.

AIMS AND PURPOSE

The review explored the evidence relating to the impact of the urban physical environment at neighbourhood level on health and wellbeing, levels of physical activity and obesity. The intention was to locate key studies published since 1990, and to synthesise the main messages that could be drawn from the most robust studies.

APPROACH AND METHODS

In undertaking this review a number of the methods associated with systematic reviewing were applied. Complex search strategies were developed. Nine databases were searched. A set of inclusion and exclusion criteria were applied to the studies identified by the searches, and all potentially relevant studies were quality appraised. A total of 65 studies were included in the review. Most studies were undertaken in the USA with a smaller literature from Australia, the UK, Europe, Canada, and Japan. Most were published in the last five years. The majority of studies are cross-sectional in design and therefore cannot be used to imply causal relationships, but they can and do demonstrate strong associations between the built environment, health status, and health behaviours.

FINDINGS AND CONCLUSIONS

Summary points

- There is an association between the built environment, health and wellbeing, and levels of physical activity.
- Perceptions of neighbourhood quality are associated with health and wellbeing.
- "Walkable" neighbourhoods are associated with higher levels of physical activity, and lower levels of obesity.
- Accessible resources (places and facilities) that enable people to exercise in the neighbourhood are strongly associated with levels of physical activity.
- Urban greenspace plays an important role in facilitating exercise and promoting health and wellbeing.
- Evidence regarding particular characteristics of the built environment that might be associated with wellbeing and physical activity is less robust.
- Self-efficacy and social support also explain variance in levels of physical activity.

Neighbourhood environments, general health, and mental health

The evidence clearly shows that perceptions of neighbourhood are strongly associated with health. Where more objective measurements of neighbourhood quality have been adopted, these too demonstrate a clear link between the physical environment of neighbourhoods and general health and wellbeing. People who perceive their neighbourhoods to be hostile, dirty, poorly maintained, and lacking in safe places to play, are more likely to experience anxiety, depression, and poor health. Evidence also shows that the negative impact of poor physical neighbourhood environments is greater for women, older people, and people who are unemployed.

Walkable neighbourhoods

Residents in more walkable neighbourhoods undertake more physical activity. Walkable neighbourhoods are characterised by high population density, different types of land use, high connectivity (e.g. easy routes between destinations), good pedestrian and cycling facilities (well maintained pavements, cycle routes, traffic calming measures), and good accessibility (e.g. variety of easily reached destinations or facilities, such as shops, greenspaces, and transport links).

Accessible resources

Accessible neighbourhood resources are also a key determinant of physical activity. People who have easy access to physical activity facilities are more likely to engage in physical activity than those who do not. Access to facilities such as cycle paths, local parks and other green spaces, beaches, or recreation centres is strongly and positively associated with physical activity levels. Inadequate facilities, the absence of facilities or barriers to access (such as steep hills, busy roads to cross) have a negative impact on physical activity levels.

Urban greenspace

Accessible and safe urban greenspaces have a positive and significant influence on levels of physical activity, as well as enhancing individuals' sense of wellbeing by providing opportunities for engagement with nature, and social interaction. Access to safe green spaces, such as parks and playgrounds, and recreational facilities is particularly important for children and young people. Evidence shows that children who have better access to such safe places are more likely to be physically active, and less likely to be overweight, than those living in neighbourhoods with reduced access to such facilities. Moreover, access to greenspace is associated with greater longevity in older people.

Neighbourhood safety

Studies show that many people, particularly women and older people, are concerned about safety in their neighbourhood, usually related to issues such as street crime and fear of injury from traffic. Parents' perceptions of neighbourhood safety impact of levels of physical activity in children. Thus it seems likely that a range of measures that enhance people's perceptions of safety are likely to encourage greater levels of walking and cycling.

Design features

Evidence regarding particular characteristics of the built environment that might be most strongly associated with wellbeing and physical activity is less robust. Nevertheless the evidence suggests that the presence of pavements or footpaths that are well maintained with good surfaces, cycle paths, and street lighting increases the number of walking and cycling trips.

Social support and motivation

Environmental features explain some, but certainly not all of the differences in levels of physical activity. Some recent studies have explored the relationship between the built environment, physical activity, and levels of social support, self-efficacy and motivation to exercise. Although the findings of these studies are as yet inconclusive it would appear that self-efficacy and social support might explain more variance in levels of physical activity than do features of the built environment. Self-efficacy and social support are particularly important determinants of exercise in women.

The built environment, food environments and obesity

With regard to the relationship of the built environment (the manmade surroundings that provide the setting for human activity) to levels of obesity, evidence appears contradictory. However, it appears that neighbourhoods that offer opportunities for exercise are associated not only with higher levels of physical activity but also with lower levels of obesity. Disincentives to healthy eating (lack of availability and cost) may be greater in poorer neighbourhoods.

Effectiveness of interventions to changes to the physical environment

Evidence shows small and short term effects of changing the physical environment to increase physical activity. However, these effects are not consistent across different studies and the evidence base is limited.

CONCLUSIONS

There is an association shown in the research evidence between the built environment, health and wellbeing, and levels of physical activity. However, study designs adopted thus far (i.e. largely cross-sectional studies) do not allow a causal effect to be demonstrated.

The importance of walking (and to a lesser extent cycling) as a means of achieving recommended levels of exercise should not be underestimated. Regular walking is associated with lower levels of obesity, and generally better health and wellbeing. Walking is consistently reported as the most common form of exercise and the preferred form of physical activity, particularly for those who do not undertake other types or exercise.

Streets and public spaces are important locations for exercise and physical activity. Changes to the environment to make spaces more conducive to exercise may bring about considerable and sustainable public health gain.

More recent studies show that attitudes and beliefs about exercise may have more important associations with levels of physical activity than the physical environment. The relationship between individual beliefs and motivations and the built environment needs further investigation.

The evidence is limited with regard to other variables (such as gender, age, social class, and ethnicity) that might interact with or moderate environmental variable to facilitate physical activity. This would seem to be an area where further research could usefully be undertaken. Qualitative studies might enhance our understanding of individual attitudes and perceptions to both physical activity and the built environment. Meantime, investment in enhancing neighbourhood quality, safety and walkability is likely to make an important contribution to improving population health and wellbeing.

REFERENCES

1. Hanlon P, Walsh D and Whyte B. Let Glasgow Flourish. Glasgow Centre for Population Health, 2006.

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