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Making unhealthy places: The built environment and non-communicable diseases in Khayelitsha, Cape Town

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ABSTRACT

In this paper, we examine how economic, social and political forces impact on NCDs in Khayelitsha (a predominantly low income area in Cape Town, South Africa) through their shaping of the built environment. The paper draws on literature reviews and ethnographic fieldwork undertaken in Khayelitsha. The three main pathways through which the built environment of the area impacts on NCDs are through a complex food environment in which it is difficult to achieve food security, an environment that is not conducive to safe physical activity, and high levels of depression and stress (linked to, amongst other factors, poverty, crime and fear of crime). All of these factors are at least partially linked to the isolated, segregated and monofunctional nature of Khayelitsha. The paper highlights that in order to effectively address urban health challenges, we need to understand how economic, social and political forces impact on NCDs through the way they shape built environments.

1. Introduction

This paper is concerned with non-communicable diseases (NCDs) in Khayelitsha, a predominantly low income area in Cape Town. In particular, it focuses on how Khayelitsha was shaped by, and continues to be shaped by, economic, social and political forces, and how the resulting built environment impacts on NCDs. Initially, apartheid planning created Khayelitsha in the 1980s as a racially segregated residential area for poor people on the urban periphery. From the 1990s onwards, economic conditions and policies changed, resulting in some changes in the built environment of Khayelitsha, but, on the whole, these shifts have tended to reinforce the area's marginalisation. The built environment of Khayelitsha continues to have a negative impact on the health and wellbeing of residents, resulting in extremely high prevalence of NCDs.

There have been only a few studies that have attempted to examine how economic, social and political forces manifest in built environments that impact negatively on the health of residents. For example, Krieger's (2011, 2012) work suggests that these forces can manifest in various ways and "people literally embody, biologically, their lived experience, in societal and ecologic context, thereby creating population patterns of health and disease" (Krieger, 2011, p. 215). However, there has been relatively little work on NCDs in cities of the global South (Dalal et al., 2011; Ebrahim et al., 2013), and almost nothing of relevance to the relationship between the built environment and NCDs in the global South. Where scholars have examined the urban environment or built environment and health in cities in the global South, they have tended to focus on environmental health issues resulting from inadequate water, sanitation, stormwater drainage, energy supply and shelter, rather than NCDs; a typical example is Sverdlik's (2011) review of health in informal settlements which, of its twenty four and a half pages of text, spends one and a half pages on NCDs. Herrick (2014) notes that the link between health and urban planning is still seldom recognised in the global South.

Our paper adds to and complements the work on how economic, social and political forces can manifest in built environments that impact negatively on the health, specifically NCDs, of residents, through examining how these forces impact on NCDs in Khayelitsha through the shaping of the built environment. The

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paper draws on literature reviews of the relationship between the built environment and NCDs and of the historical context, and on ethnographic fieldwork undertaken in three different neighbourhoods of Khayelitsha. The fieldwork focused on residents' perceptions of how their neighbourhood environments impacted on their health and wellbeing.

First, the various links between built environments and NCDs are discussed. Second, the evolving context of Khayelitsha since its establishment in the 1980s is examined, showing how economic, social and political forces have played, and continue to play, a role in shaping the built environment and NCDs. The key features of Khayelitsha's built environment include: its isolated location as a separate township on the periphery of Cape Town; its origin as a segregated area for largely low-income black Africans; and (despite a few shopping malls, a few major community facilities and some informal economic activity) its largely monofunctional residential nature. The fieldwork method is then briefly introduced, and the findings on the ongoing impact of the built environment in Khayelitsha on residents with regard to NCDs are discussed. Finally, we reflect on the factors underlying the creation of areas like Khayelitsha (which continue to result in the creation of similar areas), and the ongoing challenge this presents for addressing the growing incidence of NCDs in cities in the global South.

2. The built environment and NCDs

The World Health Organization (WHO) identifies the main NCDs as "cardiovascular diseases, diabetes, cancers and chronic respiratory diseases" (WHO, 2011, p. 1), but there are a range of other NCDs, including mental disorders such as depression and post-traumatic stress disorder (WHO, 2008). NCDs, are growing rapidly in the global South, and it is estimated that by 2020, NCDs may account for 69 per cent of all deaths in the global South (Allender et al., 2008). The four main behavioural risk factors for NCDs are "tobacco use, physical inactivity, harmful use of alcohol and unhealthy diet" (WHO, 2011, p. 1). There are, however, a range of other risk factors; for example, in addition to being NCDs themselves, mental disorders such as depression and anxiety increase the risk of other NCDs (Prince et al., 2007). Although public health discourse tends to focus on lifestyle (and non-communicable diseases are sometimes even referred to as "diseases of lifestyle"), in recent decades there has been increasing recognition that the urban environment and built environment can have a significant (although complex and difficult to quantify) impact on human health (Cummins et al., 2007; Diez Roux, 2003; Macintyre et al., 2002; Perdue et al., 2003; Rao et al., 2007; Vlahov et al., 2007). The health settings approach is also useful for understanding the complex relationships between health and place, as it recognises that health settings – which are "the place or social context in which people engage in daily activities in which environmental, organisational and personal factors interact to affect health and wellbeing" (WHO, 1998, p. 19) – are "themselves important and modifiable determinants of health and wellbeing, both directly and indirectly" (Dooris et al., 2007, p. 328).

The terms "urban environment" and "built environment" are often used interchangeably but should be understood as different things. Vlahov and Galea (2002) subdivide the urban environment into three main components in terms of relevance to health: the social environment, the physical environment, and the provision of health and social services. The physical environment, in turn, can be subdivided into the natural environment – which can be conceptualized as providing ecosystem services, which have a profound impact on human health (Millennium Ecosystem Assessment, 2005; Sala et al., 2009) – and the built environment. A useful definition of the built environment is that it consists of "all buildings, spaces, and products that are created or modified by people" (Rao et al., 2007, p. 1111). Rural areas naturally also have built environments, and these also impact on health (for example, see Merchant et al., 2006), but almost all scholars who write about built environments mean the term to refer to urban built environments. Of course, these different components of the urban environment are closely related to each other: the social environment impacts on the built environment (for example, the physical form of residential areas generally clearly reflects the socio-economic status of residents) and the built environment impacts on the social environment (for example, residents of spatially segregated areas may find it harder to engage with communities and in activities located outside the area in which they live).

Most of the literature of relevance to the relationship between the built environment and NCDs exists in four, largely separate, bodies of work on built environments and physical activity, built environments and food (and a few related pieces of work on alcohol), built environments and mental health, and a body of work on urban planning (which is inherently mainly concerned with the built environment) and health.

These first two bodies of work are partially related in that they start from the premise that obesity increases the risk of developing many NCDs and that obesity occurs more frequently when there is "high energy intake and low energy expenditure" (Hill and Peters, 1998, p. 1371). In this view, therefore, the two main ways that the built environment can impact on obesity are through access to food and the extent to which the built environment is conducive for physical activity. This is the "obesogenic environment thesis" (for example, Hill and Peters, 1998; Lake and Townshend, 2006; Townshend and Lake, 2009). Both the underlying assumptions of what causes obesity and attempts to link the built environment to obesity have been criticized (for example, by Guthman, 2013), but there is growing evidence that the built environment has at least some impact on NCDs, however hard this is to quantify.

The most-studied relationship between the built environment and NCDs is the impact of the built environment on physical activity, for example, whether the layouts and design of streets are conducive to walking and cycling, whether there is a mix of land uses that encourages walking and cycling to a range of local destinations, and whether there are suitable spaces, such as parks and sportsfields for range of outdoor activities. There has been a large body of work on this, mainly in the global North (for example, Handy et al., 2002; McCormack and Shiell, 2011; Saelens et al., 2003).

In terms of food availability, some of the commonly identified ways in which the built environment can impact on obesity, and thus NCDs, is through the nature and location of food outlets (linked to the concept of "food deserts" , which are low-income residential areas in which nutritious foods are hard to access) and the extent of urban agriculture (Alkon et al., 2013; Dixon et al., 2007). In addition, alcohol consumption is linked to NCDs, and the type and location of alcohol outlets are therefore important (Bernstein et al., 2007; Parry et al., 2011).

A relatively under-explored link between the built environment and NCDs is how the built environment can impact on mental health. Mental disorders such as depression and anxiety are not only NCDs themselves, but also increase the risk of other NCDs (Prince et al., 2007). There is a body of work that suggests that well-maintained areas with legible planning layouts and access to green space seem to be more conducive to good mental health (Evans, 2003; Galea et al., 2005; Sullivan and Chang, 2011). Violence and injuries are important risk factors for mental disorders such as depression, anxiety and post-traumatic stress disorder (Prince et al., 2007; Seedat et al., 2009). Of particular importance, crime and fear of crime can have a significant impact on