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Neighbourhood deprivation and self-rated health: The role of perceptions of the neighbourhood and of housing problems

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Abstract

It has been known for a long time that people living in socially and economically deprived neighbourhoods generally experience poorer health. However, it is often not clear what processes underlie the relationship between neighbourhood deprivation and individual health. In this study we explore the association between neighbourhood socio-economic status and self-rated health using the Caerphilly Health and Social Needs Survey ($n = 10{,}892$). We found that the association between neighbourhood deprivation and self-rated health was substantially reduced after adjusting for individual socio-economic status, but remained statistically significant. This suggests that the health effects of neighbourhood deprivation are partly contextual. We also found that the association between neighbourhood deprivation and self-rated health was further attenuated when controlling for perceptions of the neighbourhood and of housing problems, suggesting that these variables may play a role in mediating the health effects of neighbourhood deprivation. The implications of the results are that health policy should target 'places' as well as 'people'; and that policies aimed at improving the quality of housing, access to amenities, neighbourhood safety, and social cohesion may help to reduce health inequalities.

Keywords: Neighbourhoods; Deprivation; Self-rated health; Housing problems; Social cohesion

Introduction

It has been known for a long time that people living in socially and economically deprived neighbourhoods generally experience poorer health. Research has shown that neighbourhood deprivation is associated with a large number of health indicators, such as all-cause mortality, poor self-rated health, long-term limiting illness, and poor mental health (for an overview see e.g., Yen and Syme, 1999; Pickett and Pearl, 2001). However, it is often not clear what processes contribute to the relationship between neighbourhood deprivation and individual health.

One of the main debates in the social epidemiological literature is about the extent to which the associations between neighbourhood deprivation and health reflect genuine neighbourhood effects. Until recently it was not possible to come to definitive conclusions, as early evidence for health inequalities was mainly derived from ecological research. A well-known problem associated with

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ecological studies is that the results are open to different interpretations (Kawachi et al., 2004). It is possible that individual socio-economic status drives the association between neighbourhood deprivation and health. In this interpretation, deprived neighbourhoods exhibit higher rates of poor health because people with a low socio-economic status cluster within these areas (Yen and Syme, 1999). This means that the neighbourhood differences in health can be explained by differences in individual socio-economic status. It is however also possible that the associations between neighbourhood deprivation and health reflect genuine contextual neighbourhood effects. In this interpretation, living in a deprived area is detrimental to people's health over and above the effects of individual socio-economic status. So, rather than being a purely compositional effect, living in a deprived neighbourhood itself contributes to the occurrence and development of poor health. With the arrival of multilevel modelling it has become possible to disentangle the compositional and contextual effects of neighbourhood socio-economic status. Indeed, it is now common practice to adjust for individual socio-economic position when examining the association between neighbourhood deprivation and health (see e.g., Pickett and Pearl, 2001). Although some studies suggest that the health effects of neighbourhood deprivation are mainly the result of the concentration of people with a low socio-economic position in these areas (e.g., Reijneveld and Schene, 1998; Browning and Cagney, 2003), others have shown that neighbourhood deprivation is detrimental to people's health—even when taking individual differences in socio-economic position into account (e.g., Jones and Duncan, 1995; Anderson et al., 1997; Roberts, 1998; Bosma et al., 2001; Malmström et al., 2001; Fone and Dunstan, 2006). Overall, the literature suggests that the health effects of neighbourhood deprivation are compositional as well as contextual, with the neighbourhood health effects generally being smaller than the effects of individual socio-economic position (Stafford and Marmot, 2003).

Now it has been established that living in a deprived neighbourhood is associated with poor individual health, it is important to identify the mechanisms that link them together (Macintyre et al., 2002). Identifying the connecting mechanisms will help policy makers in the field of public health to construct more effective intervention strategies. Research suggests that various material, social, psychological and cultural factors play a role (Mackenbach and Howden-Chapman, 2003). One of the possible pathways is via lifestyle or behavioural factors. Research has shown that unhealthy lifestyles are more prevalent in deprived areas, with people being more likely to smoke, less likely to eat sufficient fruit and vegetables, and less likely to be physically active (Duncan et al., 1999; Bosma et al., 2001; Lee and Cubbin, 2002; Reijneveld, 2002), which could explain why people living in deprived areas are generally less healthy. Other studies suggest that the association between neighbourhood deprivation and health is mediated by perceptions of neighbourhood and housing problems (Stafford and Marmot, 2003). This forms part of the idea that people who live in deprived areas have poorer health because they have fewer material and social resources to their disposal. Material pathways are likely to include housing conditions and access to amenities that are necessary to maintain good health, such as sports facilities, shops with affordable healthy food, and health care facilities (Mackenbach and Howden-Chapman, 2003). In other words, people living in deprived neighbourhoods may be less healthy because of poorer quality of housing and neighbourhood environment. Indeed, there is evidence that people living in deprived neighbourhoods suffer from a poorer quality of housing (Reijneveld and Schene, 1998; Bosma et al., 2001; Drukker and van Os, 2003), and that adverse housing conditions are detrimental to people's health. In particular damp, mould, and low indoor temperatures appear to affect people's health (for an overview see Shaw, 2004). Living in cold and damp conditions has been found to increase the risk of contracting respiratory infections such as asthma (Williamson et al., 1997; Peat et al., 1998; Marsh et al., 1999), chronic illnesses such as cardiovascular disease (Khaw, 1995), and mental health problems (Hopton and Hunt, 1996). There is also evidence that the quality of the physical environment is poorer in deprived neighbourhoods. For example, deprived neighbourhoods appear to have poorer access to amenities, such as sports facilities, health services, and food shops (Cummins and Mcintyre, 2002a, b; Lovett et al., 2002; Lee et al., 2005; Pearce et al., 2006). Research has shown that poor access to a range of amenities is generally associated with a poorer health status (see e.g., Bowling et al., 2006; Parkes and Kearns, 2006).