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Proportionate universalism in practice? A quasi-experimental study (GoWell) of a UK neighbourhood renewal programme's impact on health inequalities

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ABSTRACT

Recommendations to reduce health inequalities frequently emphasise improvements to socio-environmental determinants of health. Proponents of 'proportionate universalism' argue that such improvements should be allocated proportionally to population need. We tested whether city-wide investment in urban renewal in Glasgow (UK) was allocated to 'need' and whether this reduced health inequalities. We identified a longitudinal cohort (n = 1006) through data linkage across surveys conducted in 2006 and 2011 in 14 differentially disadvantaged neighbourhoods. Each neighbourhood received renewal investment during that time, allocated on the basis of housing need. We grouped neighbourhoods into those receiving 'higher', 'medium' or 'lower' levels of investment. We compared residents' self-reported physical and mental health between these three groups over time using the SF-12 version 2 instrument. Multiple linear regression adjusted for baseline gender, age, education, household structure, housing tenure, building type, country of birth and clustering. Areas receiving higher investment tended to be most disadvantaged in terms of baseline health, income deprivation and markers of social disadvantage. After five years, mean mental health scores improved in 'higher investment' areas relative to 'lower investment' areas (b = 4.26; 95% CI = 0.29, 8.22; P = 0.036). Similarly, mean physical health scores declined less in high investment compared to low investment areas (b = 3.86; 95% CI = 1.96, 5.76; P < 0.001). Relative improvements for medium investment (compared to lower investment) areas were not statistically significant. Findings suggest that investment in housing-led renewal was allocated according to population need and this led to modest reductions in area-based inequalities in health after five years. Study limitations include a risk of selection bias. This study demonstrates how non-health interventions can, and we believe should, be evaluated to better understand if and how health inequalities can be reduced through strategies of allocating investment in social determinants of health according to need.

1. Introduction

Differences in health status between social groups are frequently recognised as avoidable and unfair (Graham, 2007; Marmot et al., 2010). In the UK, such differences are usually termed health inequalities, whilst elsewhere the term 'health inequities' predominates. Successive national and international public health strategies, including those advanced by the World Health Organisation (WHO), have emphasised the reduction of

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health inequalities by tackling socio-structural and environmental determinants of health (Bambra et al., 2011; Dahlgren and Whitehead, 2006; Graham, 2007; WHO, 2008). An emphasis on these broader determinants of health suggests a need for public health policy to extend its reach beyond the health sector, seeking improvements across a wide range of social domains including homes and neighbourhoods (Braveman et al., 2011; Hunter et al., 2010; Marmot, 2005). Empirical and theoretical research into housing and neighbourhood improvement interventions have indicated a range of pathways by which such interventions may improve the health of residents living in disadvantaged areas (Mehdipanah et al., 2015; Thomson, 2015) but there is relatively little evidence on whether such interventions reduce health inequalities or what mechanisms may drive such reductions (Droomers et al., 2014; Mehdipanah et al., 2014; Stafford et al., 2014).

Reducing health inequalities involves improving health for the most disadvantaged members of the population to a greater degree than for others (Graham, 2007; Macintyre, 2007). Health strategies have considered resource allocation to be an important mechanism for achieving this differential improvement, if resources that benefit health can be allocated in greater quantities to those population sub-groups who are most in need. Commentators such as Graham (2007) and Marmot et al. (2010) have argued that simple targeting of the most disadvantaged populations for intervention is problematic. Such an approach fails to recognise the health needs of other sections of the population, some of whom will also be disadvantaged to some degree even if they are not identified as targets for specific interventions.

The 'Marmot Review' into health inequalities in England argued that resource allocation must benefit all social strata but those benefits should increase according to need: "To reduce the steepness of the social gradient in health, actions must be universal, but with a scale and intensity that is proportional to the level of disadvantage" (Marmot et al., 2010, p.15). However, this strategy of 'proportionate universalism' has potential operational challenges that have not been explored in detail in the public health literature, particularly within the context of improving social determinants of health (Hutt and Gilmour, 2010). We suggest that these challenges include questions of how need or disadvantage is to be defined and measured, the proportion of resource that should be allocated to different need-levels, and the means of ensuring that different allocations of resource reach their intended sub-populations (see also Mackenzie et al., 2012).

Some studies have found that countries, such as Nordic states, with more universal policies tend to have lower rates of inequalities (Eikemo et al., 2008; Niedzwiedz et al., 2014). One argument advanced to explain this holds that universalism destigmatises and increases the acceptability of government spending on health and welfare (McKee and Stuckler, 2011). Whilst all members of society may be potential recipients, the benefits of such entitlements may be felt more according to an individual's level of disadvantage. Benach et al. (2011, 2012) highlight a difference between universal policies that include some additional targeting of deprived populations, and proportionate universalism that increases benefits along the social gradient. They argue that proportionate universalism may include universal policies that lead to a pattern of benefits mirroring the social gradient, or it may result from more prescriptive attempts to allocate resources proportionally across that gradient (Benach et al., 2012, 2011).

One type of resource that can be differentially allocated according to need is investment in housing-led renewal. Renewal is often delivered to selected neighbourhoods and considered a form of Area-Based Intervention (ABI) with the potential to modify structural and environmental determinants of health inequalities (Gibson et al., 2011; Thomson et al., 2006, 2013). Housing-led renewal varies in cost and composition depending on the type and quality of exposed homes and neighbourhoods. For example, implementers may assess houses, streets or neighbourhoods as requiring no additional improvements, minor repairs, substantial home improvement, investment in community organisations, new neighbourhood amenities, environmental neighbourhood improvements or demolitions and rebuilding of entire neighbourhoods (Curl et al., 2014; Durie and Wyatt, 2007; Kearns et al., 2009). The level of investment required to meet these different needs varies greatly. Furthermore, whilst renewal programmes are often not directed at affluent areas, there still remains scope to allocate different levels of investment to differentially deprived neighbourhoods. For example, in the study setting reported here (Glasgow, UK), 42% of the city's neighbourhoods meet the Scottish Government's definitions of 'deprived' (Scottish Government, 2013) but more detailed assessments of deprivation and need influence the targeting of investment in renewal across such areas (Glasgow City Council, 2009).

Renewal programmes such as those taking place in Glasgow reflect increasing international criticism of narrowly targeted intervention strategies that have been a feature of both social policy and public health debates in recent decades. For example, in the 1960's and 1970's, urban renewal projects funded under the UK Urban Programme targeted areas of 'special need' or multiple deprivation (Atkinson and Moon, 1994), an approach which became known as 'worst first'. Calls to move beyond the 'worst first' approach in the 1990's led to a broadening focus on 'at risk' areas, as well as the most deprived (Home, 2010). These developments parallel public health arguments put forward in support of proportionate universalism and 'the need to redirect existing resource from crisis intervention to crisis prevention' (Marmot et al., 2010, p.17). They provide a context for renewal programmes that target many areas with a range of disadvantages, compared to more intensive programmes that focused resources on a smaller number of the areas considered to be most disadvantaged.

As stated above, the impacts on health inequalities of population-level interventions affecting social determinants of health are rarely evaluated (Bambra et al., 2010; Katikireddi et al., 2011) and the hypothesis that reductions in health inequalities should occur if renewal investment is allocated proportionally to need has yet to be tested (Fenwick et al., 2013). It is possible to counter-hypothesise that reductions may not occur within specific timescales (Egan et al., 2013). For example, the most costly housing-renewal interventions (e.g. neighbourhood demolition and rebuild) can take years or decades to complete, leading to social upheaval and adverse consequences (Fullilove, 2004). In comparison, less disadvantaged residents may benefit from small-scale housing improvement without major disruption or delay (Egan et al., 2013).

Specifically, there is a recognised need for better evidence to support frequently stated policy assumptions that housing-led urban renewal contributes to public health goals, particularly given the huge investment in this form of intervention (Kearns et al., 2009). Widely acknowledged difficulties in conducting such robust evaluations are likely to have contributed to the relative dirth of empirical studies (Bond et al., 2013) and may help explain why no previous study has explored the effects of proportionally allocated investment in housing-led renewal on health inequalities.

This study aims to investigate whether calls for 'proportionate universalism' delivered as part of a social determinants of health strategy could be adhered to within urban renewal, with consequent impacts upon health inequalities. Our first objective was to examine the degree to which investment in the programme of housing-led renewal in Glasgow was allocated according to need. We then ask whether differential investment led to changes in self-