Building collective control and improving health through a place-based community empowerment initiative: Qualitative evidence from communities seeking agency over their built environment.

Both environmental improvement and collective agency over local decisions are recognised strategies for promoting health and health equity. However, both strategies have been critiqued for their association with policies that emphasise local resources and decision-making while the state disinvests in social and environmental determinants of health. This paper explores the role of place-based community empowerment initiatives in building collective control and improving health. We examined the perspectives of participating communities using qualitative data from interviews and observational fieldwork embedded within an evaluation of a national community empowerment initiative: Big Local (funded by The National Lottery Community Fund and overseen by Local Trust). We selected five examples of community action to improve and maintain built environments. We found that while academics (including the authors) are interested in mechanisms to health impacts, participants focused on something more general: delivering benefits to their communities and maintaining services threatened by state disinvestment. Participants sometimes used ‘health’ as a pragmatic justification for action. We posit that systemic pathways to health impact are plausible even when communities themselves do not forefront health goals. For example, 'quick wins' and 'quick losses' resulting from early community action have potential to galvanise or undermine collective agency, and so affect communities’ capability to deliver future improvements to social and environmental determinants of health. However, structural limitations and unequal access to resources limit the potential of communities to make health-promoting change, as some participants acknowledged. Collective agency may improve socio-environmental determinants of health but systemic barriers to empowerment and equity persist.

Background

Environment and control can each be considered social determinants of health (World Health Organisation (WHO) 2013). Public health strategies and recommendations for reducing health inequity frequently state that the quality of neighbourhood environments should be improved; and that collective agency should be encouraged so that communities have more control over decisions that affect them (Marmot et al, 2020; WHO, 2013; Solar & Irwin, 2010).

Communities could, potentially, have more control over neighbourhood improvement. However, neighbourhood planning and improvement programmes are typically top-down processes managed and implemented by governments and the public sector, at times in partnership with third and private sector organisations (Lawless et al, 2010). Dargen (2009) argues that area-based initiatives (ABIs: programmes to deliver improvements in specific localities) may include some resident consultations or limited participation opportunities. Nonetheless, those designing and delivering ABIs tend not to offer opportunities for communities to exercise control over decisions (Popay et al, 2015).

Collective control is related to concepts such as collective agency, action and power. These terms are used inconsistently in the literature (we discuss this in detail in another publication) but here we outline our own understanding. In previous work (Popay et al, in press; Ponsford et al, in press) we argued that 'action' refers to a thing that is done, while 'control' relates to power in that it denotes the ability to influence events and others' behaviour. We proposed a capabilities framework that distinguishes between a community's (i) internal capabilities; (ii) capabilities to work with other agencies to achieve agreed ends; and (iii) the organisational structures and capabilities to take action. Drawing on feminist literature we term these capabilities *power within, power with* and *power to* respectively. With respect to agency, Rolfe (2018) suggests that community groups may at times appear to

have agency in the sense of having opportunities to come together to make their own decisions. However, individuals and communities do not have equal capacity (or equal capabilities, as we would frame it) to fully realise this agency. Furthermore, this unequal capability may be linked to broader social inequities. Policies to promote community agency therefore risk being less effective for disadvantaged communities and residents (Rolfe, 2018).

The aim to "empower communities to come together to address local issues" (Conservative Party, 2010) has increasingly been embraced by a range of political ideologies. In the UK, widening health inequity has resulted from a decade-long retrenchment in public spending instigated by a government that in 2010 emphasised community empowerment alongside economic austerity as its flagship policies. Community empowerment, once seen as a challenge to the status quo, has become mistrusted by some as a regressive means of filling gaps left by government disinvestment in local areas and services. (Bambra et al. 2019; Woodall, Warwick-Booth & Cross, 2012).

Empirical research also problematises the assumed benefits of community empowerment. Control is positively associated with a range physical and mental health impacts (Orton et al, 2019). However, systematic reviews of community empowerment interventions have found positive and negative impacts on health and wellbeing (Durand et al., 2014; O'Mara-Eves et al., 2013; Voorberg, Bekkers & Tummers, 2015; Wallerstein, 2006) - with participants' stress and feelings of being overburdened contributing to the negative impacts (Pennington et al., 2017).

Hence, these are changing times for attempts to relocate collective agency and control in community settings. It is an appropriate time to revisit the issue of community action aimed at improving and maintaining neighbourhood built environments. Whereas past ABIs have been criticised for failing to adequately involve communities, in this paper we consider

an ongoing national ABI that foregrounds collective agency amongst community members – but at a time when community empowerment is itself the subject of critical scrutiny.

The built environment and health

Built environments are manufactured physical spaces that have social purposes and meanings for those who create and use them. Built environments risk contributing to health inequities through physical, psychosocial and behavioural pathways if disadvantaged populations have greater exposure to harmful, rather than beneficial, environments (Bernard et al; 2007; Elliott, 2018; Marmot et al, 2020). WHO (1948) defined health in terms of its positive (wellbeing) and negative (ill health) dimensions. Built environments can influence both these dimensions of health.

Risks of ill health and infirmity associated with the built environment include physical injury from poorly planned or maintained environments (e.g. dangerous roads) and risks from polluted or unhygienic environments. (Macintyre, Ellaway & Cummins, 2002; Morello-Frosch, 2002; Wallace 1990). Environmental characteristics have also been framed as 'psychosocial stressors' that adversely affect health through chronic stress (Martikainen, Bartley & Lahelma; 2002). Stressors include buildings and other physical features that are perceived to be ugly, vandalised or symbolic of area decline and neglect (Egan et al., 2008; Kearns et al., 2013). Neighbourhoods may also present opportunities for less healthy behaviours (e.g. the sale of unhealthy products in local shops (Marmot et al, 2020), or spaces where the sale of illicit substances occur (Kimpton et al, 2017)).

However, built environments can be salutogenic: that is, supportive of positive wellbeing. Features of the built environment considered desirable by residents may have positive psychosocial impacts, for example, clean streets, aesthetically pleasing architecture, greenspace, and publicly visible artwork. (Maass et al, 2017). However, views about which

kinds of environment are desirable or undesirable are subjective, and can be influenced by social attitudes and prejudice (Kearns et al., 2013).

Built environments also provide opportunities for salutogenic behaviours. Local amenities such as greenspace, sports facilities, community hubs, shops and services are places where people can socialise, engage in physical activity or access services including health services, or services relevant to social determinants of health - such as employment, education and social support. Macintyre & Ellaway (2003) applied the term 'opportunity structures' to their description of health-promoting local amenities. The geographical proximity of affordable and culturally appropriate opportunity structures can help reduce inequalities of access for those who lack the money, free time, transport and personal mobility to travel further afield (Bernard et al. 2007).

Despite these posited pathways to health impacts, reviews examining different aspects of health and place have expressed concerns about the quality of evidence underpinning assumptions that built environment improvements benefit residents' health (Ige et al., 2019; Schüle & Bolte, 2015). Attempts to identify and measure causal associations between specific neighbourhood features and residents' health have been critiqued as reductionist. Cummins et al. (2007) argued that interactions between multiple physical and social exposures are crucial. Bambra et al. (2019) criticised studies that focus on *horizontal* (e.g. local level) determinants of health without considering *vertical* (e.g. regional, national and international) structures and power imbalances that determine local inequities in resource allocation.

More recently within public health disciplines, interest in complex systems has focused attention on wholistic theories of causation: emphasising how health (and other) impacts can emerge from cyclical causal pathways involving multiple interacting factors (Rutter et al, 2017). The wider system in which an action takes place may respond and adapt

in ways that amplify or minimise the impacts over time. Systems thinking can also encourage us to consider not only the impact of specific activities, but also the trade-offs involved in pursuing one course of action over another (Hawe, Shiell & Riley, 2009)

Analytical approaches that emphasise these more interactional and systemic causal mechanisms are well suited to the intervention we have studied, which simultaneously encourages collective agency and neighbourhood improvement in a number of complex community settings.

Aim

This paper aims to examine the role of place-based community empowerment initiatives in building collective control and improving health. We focus on perspectives of residents from communities who participate in the ongoing BL initiative and who have sought to exert collective control over the built environment in neighbourhoods they live in.

Methods

Study design and ethics

This research was conducted as part of the *Communities in Control* study: an ongoing independent mixed-methods evaluation of the impact of the BL initiative on health inequalities and their social determinants. The qualitative component of this evaluation included in-depth studies of a sample of 15 BL areas, including semi-structured interviews with 280 participants. The analysis presented in this paper focuses on examples of built environment initiatives from five of those areas based on data collected between November 2013 and November 2015; and a second fieldwork phase from January to December 2016.

Research ethics approval was obtained from Lancaster University Research Ethics Committee. The sites are anonymised, which limits the level of contextual information we provide about each area. Areas in this paper are labelled A1 to A5.

Intervention

BL is funded by the English Big Lottery Charity and managed by a not-for-profit organisation: Local Trust. This long term (>10 years) initiative involves residents of 150 relatively disadvantaged areas in England receiving £1 million per area to use to improve their neighbourhoods. BL communities did not apply for this funding. Initially, the funder produced a long list of English neighbourhoods that had not received significant national lottery funding previously. The final 150 BL areas were selected from this list, following discussions between the funder and stakeholders from local government and the local voluntary and community sector.

Residents in each neighbourhood decide collectively how to use funds, within a common overall framework comprising: forming a resident-led governance Partnership; involving the wider community in developing and delivering a local plan; reviewing progress; and adapting the plan as necessary. BL Partnerships are encouraged, but not required, to collaborate with other organisations. The programme is innovative in having the central objective of giving power over the £1 million to the residents of BL areas, unlike most previous place-based interventions that put financial control in the hands of local government or other professional institutions (Local Trust, 2012). Governance over how the money is spent in each area rests with a resident-led Partnership but many Partnerships open up the "governance space" to the wider 'community of place' to enable them to contribute to priority setting, decision making and plan delivery.

Sampling and data collection

The research team worked with Local Trust to identify areas to approach, then contacted local BL representatives to facilitate contact with the Partnerships in that area. The researchers sampled BL areas to ensure geographical variety (e.g. villages/towns/cities). The research team is a collaboration of researchers based in different English regions (North West, North East, South West, London), and the geographical spread of sampled areas reflected this. Partnership Members were contacted to discuss participation. If interest was expressed, the researchers attended Partnership meetings to discuss the research and seek consent.

Fieldwork at new sites began with a short period of familiarisation. Stakeholders were identified, including members of the Partnership, the BL representatives providing support to the Partnership, and relevant stakeholders and decision-makers working across the area.

Stakeholders were invited to participate in interviews or group discussions. In some instances, follow-up interviews and informal conversations were conducted with participants with particularly in-depth knowledge of BL in their area. The following year, further fieldwork included sampling a mixture of previous participants and new participants. Observations took place at both Partnership meetings, during guided area 'walkabouts' and at events associated with the Partnership. Documents relevant to each site (e.g. those produced by Partnerships) were collated for analysis.

With the consent of participants, formal interviews and group discussions were audio-recorded and the recording was transcribed. Informal conversations were not audio-recorded: the researcher made notes during or as soon as possible after the conversation. Observations of Partnership meetings and BL-related events were recorded using written notes made on a structured observation reporting template.

Analysis

The analysis was conducted in two stages. In the first stage, cross-case analysis was initiated through the sharing of memos and a series of face-to-face analysis workshops where findings were presented by each of the five research teams. In the second stage, 5 examples of community actions to improve or maintain features of the built environment were selected. Selection criteria stipulated that each should come from a different site and involve different types of built environment. Researchers discussed the different types of initiatives taking place in areas they were working in and from that discussion we agreed to seek an example for each of the following categories: a sport or leisure facility for young people; a community centre or hub, green space, community art, and the local economy. We selected an outdoor sports facility in A1; a community hub in A2; a 'pocket park' (greenspace) in A3; a wall mural in A4; and aesthetic improvements to a street containing shops in A5 (see also Table 1 in the online supplemental document).

Returning to the primary data, structured memos were created to describe what had happened, who was involved, the improvement's purpose, contrasting opinions, health perspectives, progress made, and any other important factors that influenced developments. We compared participants' views on potential health impacts with our own understanding of health pathways based on the literature (summarised above in the Background section). Our intention was to consider hypothesised pathways to health impacts for initiatives that were at a planning or early implementation stage – rather than assess actual health impacts.

Findings

From our analysis, several themes emerged that provide insights into the role this place-based community empowerment initiative could play in improving health. We present these below

under the headings (i) contrasting views on health pathways; (ii) systemic pathways; and (iii) setbacks and limits to agency.

Contrasting views on health pathways

Each of the five examples had their own unique configuration of immediate intended impacts (see Figure 1). The community actions we selected included opportunity structures intended to encourage socialising (A1, A2, A3), physical activity (A1, A3), and access to information and services (e.g. employment service, youth group, art group, and education/training for adults) (A2). Different examples of salutogenic improvements to area aesthetics were found in A3, A4 and A5. In A3 it was also hoped that cleaner, more attractive greenspace would provide a safe place for children to play. In A4 it was hoped the wall mural would attract people to the community centre – a space at times used by the BL Partnership. In A5 it was hoped that the aesthetic improvement would attract people to local shops and therefore help the local economy.

[Figure 1 near here]

However, the hypothesised pathways that we describe in Figure 1 reflected the researchers' perspectives – influenced by professional expectations that we focus on pathways to potential health impacts. In contrast, the community members we observed and spoke to discussed health relatively infrequently. They were more concerned with more general goals of neighbourhood improvement, implementation and community engagement.

Community members did refer to health at times in formal documentation. For example, in the BL Partnership's written local plan for A1, Partnership members stated that their proposed outdoor sports facility would provide young people with opportunities for

physical activity, which they linked to potential health benefits including lower blood pressure and delayed onset of diabetes.

Community members also gave health more prominence when a proposed community action was the subject of contention. For example, the Pocket Park was contentious amongst some of the residents in A3, who thought the land would be better used to build affordable housing. In the face of this opposition, a Partnership member who advocated for the park was keen to make the case for its benefits, including health benefits.

> [the pocket park] *will be more beneficial, health and wellbeing wise, because it is a very densely populated car congested area, full of pollution. More housing on there…will be more tightly packed, more cars, more pollution and you know they need a bit of greenspace. There is nowhere for kids to play, they are playing in the flipping road now, the park, is a mile further up the road, along busy main roads the kids aren't going to go to the park to play.*
> (A3-Interview-Partnership Member).

This proponent of the park framed his arguments to contrast the health benefits of greenspace to what he perceived to be health harms resulting from an alternative land-use (housing development). In contrast, a supporter of new housing turned this framing on its head by claiming that greenspace attracted harmful and anti-social behaviours.

> *There is still people that wants to see houses on there, not everybody wants to see a little park. Because you put a little green space you are going to get people drinking, drug dealing, dog fouling, so it is not everybody that want to see a green space there.*
> (A3-Interview-Resident).

While these views appear contradictory, they share an implicit recognition that the decision on how best to use this land required a trade-off: choosing one form of land-use meant rejecting another. Furthermore, both speakers appeared to believe that framing this trade-off around health harms and benefits could strengthen their own case.

Systemic Pathways.

Partnership members did at times express an awareness that their efforts to modify local environments were linked to a strategy for increasing capabilities for collective control. For example, the wall mural intervention in A4 was considered by one of the participants to be an initial step to more ambitious future projects. The participant hoped that actions to improve the built environment could strengthen the Partnership's capabilities to take more ambitious action in the future.

> *I think it's a small step… I think it's just a little nod to what could happen and at the moment it's about getting people thinking about art as a positive thing to spend money on. I think if we get the people onside now, a bigger project that we can do leading off from this will have a much greater impact.*
> (A4-Interview-Partnership Member).

Early action could also potentially give Partnership members experience and confidence to improve their internal capabilities (power within) and provide opportunities to influence other organisations to work with them (power with). For example, the Partnership in A1 entered into a matched funding arrangement with local councils, allowing their £1million BL budget

to go further. A council worker in A3 suggested that the early work of the Partnership there could potentially strengthen the case for greater public investment in the area:

> [it] *really gave strength to a lot of local authority and elected members arguments that the area needed investment and knowing that they were residents who were willing to step up and get involved*
> (A3-Interview-Council Worker)

Hence, a relatively small initial intervention could be hypothesised to prompt a virtuous circle of increased collective capability leading to further action, which could further increase capabilities – and so on. These escalating cyclical pathways are summarised in Figure 2 and are referred to as 'positive feedback loops.' They are not the only feedback loops we could hypothesise but they are pathways that some of the participants seemed particularly aware of.

[Figure 2 near here]

Setbacks and limits to agency

However, the escalation of impact hypothesised in Figure 2 would not occur if community members considered early interventions to be unsuccessful. A perceived 'quick loss' could reduce Partnership members' confidence and cohesion. In A5, for example, the plans to attract more customers to local shops through high street aesthetic improvements was eventually abandoned following disagreements over who would primarily benefit: residents or business owners. The episode exposed divisions within the community, as described by the discussion between two Partnership members.

> *PM1: How is that helping anybody in the borough, you know?*

PM2: All it's helping is the shopkeepers.

PM1: Yeah, um, but people didn't understand what, when she said about economy They was like, yeah obviously we want to help the economy, we'll tick that one.

R2: But it wasn't actually, that's not what it was about, so.

R: …they was really misled.

(A5-Interview-Partnership Members).

To some community members, this episode highlighted limitations to what the Partnership might achieve. In the following quote, one A5 Partnership Member contrasted the difficult task of attempting to use BL to improve the local economy, with what was felt to be a more achievable aim of improving specific local spaces.

There weren't many people in the community, probably barring me and a few other people, that had that economic understanding. So that it was really hard, because it felt like ideas had to be suggested more. Whereas with some of the other groups, like the Community Spaces one, it was much easier.

(A5-Interview-Partnership Member).

This speaker framed the main barrier to collective agency to be a lack of economic expertise: a limitation of *internal* capabilities amongst community members. However, *external* factors (beyond the community) could also be seen to shape and limit impacts from community action. For example, A2's community hub was presented by its Partnership as a response to cuts in government funded local services. During a presentation about the hub at a local meeting, one of the Partnership's PowerPoint slides stated that:

> *We want to bring back a range of support services to the village that have been withdrawn through funding cuts – this would include supporting people into employment and training, debt and benefit advice, housing, community safety.*
>
> (A2-Observation-Partnership Member)

Although residents' health and wellbeing may be hypothesised to benefit from the kinds of services accessed through the hub, it is important to consider whether there were any *net* benefits – taking into account not only what the Partnership added but also what public sector disinvestment previously took away.

Discussion

We have drawn on qualitative data relating to our evaluation of the BL, along with our knowledge of public health literature and evidence, to examine five examples of community action to improve or maintain the built environment. Four of these were works in progress at the time of our fieldwork and one (the high street improvements) was abandoned. We have explored how each of these, if fully implemented, could impact on health and wellbeing through pathways that include improving local opportunity structures and replacing psychosocial stressors with salutogenic improvements.

We have also suggested that researchers' understandings of potential health impacts may differ from those of community members. As researchers, our views reflect our subject specialism in health-related fields and our need to focus on health issues in order to meet professional expectations (e.g. from academic peers, funders and journal editors). Community members had a need to deliver improvements and to be perceived to be doing so by the wider community. They tended to focus on concerns around engagement, planning, implementation

and more general benefits to people's lives. It was often left to the researchers to theorise how health improvement linked to the kinds of impacts participants discussed. When community members did draw on public health discourse, it tended to serve specific strategic purposes: for example, in written statements to funders, or to reinforce a particular viewpoint about a disputed issue.

The community actions described in this paper – though substantial undertakings for those involved – do not by themselves represent transformative changes to neighbourhood built environments. They are generally small in scale and so, even if direct pathways to health are plausible, the scale of those impacts would be limited unless they lead to an escalation of collective agency and action extending beyond the immediate environmental changes we have reported here. 'Quick wins' and 'quick losses' resulting from early community action have potential to galvanise or undermine collective agency, and so affect communities' capability to deliver future improvements to social and environmental determinants of health.

Previously, we have argued that contextual factors, including community cohesion and previous experience of community participation, could influence Partnerships' capabilities for collective control (Ponsford et al, in press). Here, we found that structural limitations and scarce resources may also limit the potential of communities to make health-promoting change, as some participants acknowledged (Whitehead et al., 2018). The problem can be framed as 'system incoherence': an attempt to leverage change within a wider system characterised by more powerful causal pathways resistant to that change (Knai et al., 2018). In this case, we suggest those more powerful causal pathways involve economic systems and national government policies that led to disinvestment in local authority public services. This was made explicit by community members in one of our areas (A3) but could also help explain why the local Partnership in A5 abandoned its attempts to improve the local economy. We do not suggest that community-led initiatives to improve local economies are

an impossibility. We do suggest that local communities should not have to carry the responsibility for transforming a system that, for the most part, operates beyond their immediate sphere of influence.

Even when community action is focused on small scale built environment modifications, we can see how larger structural inequalities can undermine collective agency. Resources – including so-called local assets - are scarce and scarcity can necessitate trade-off decisions. We provided an example of a trade-off regarding how best to use local land (housing vs greenspace), but the principal extends to other types of resource including money and human capacity. Hawe, Shiell & Riley (2009) have argued that assessing trade-offs could be considered an important part of intervention evaluation. Here, we argue that trade-offs are a mechanism for generating intervention inequalities because they disproportionally affect community action where resources are scarcest – limiting choices for action in those communities.

The BL initiative does include features that can plausibly help local communities push back on some of these problems. It provides communities with additional financial resource and encourages them to seek matched funding so that budgets can seed further investment. Furthermore, by encouraging the development of collective control, communities may be better able to expand their sphere of influence in future.

Limitations

This is one of a number of papers (some yet to be produced) from a larger study. The qualitative component of the study covers 15 areas and from these we selected five examples to focus on here. Our sampling decisions reflect the common tension of optimising breadth and depth. It means only a portion of our qualitative dataset was drawn upon here. A quantitative impact evaluation covering all 150 sites is also planned.

Experiential and subject disciplinary knowledge of the researchers have played a crucial role – both in our hypotheses about pathways to health, and our interpretations of participant accounts. Although we did not systematically review health pathways specifically for this paper, we have drawn upon a number of relevant systematic reviews and other sources.

Conclusion

We have examined examples of built environment improvements achieved through community action linked to the BL initiative and sought to understand their implications for health improvement and health equity. Participants from the communities we studied tended to be pragmatic about health, referring to it when it was useful to do so – rather than treat it as their main priority. Nonetheless, we would argue that researchers and policy-makers involved in public health policy may still wish to understand the health implications of initiatives such as BL. Public health strategies have long emphasised the need for action beyond the health sector, with the implication that health impacts can result from actions that are not primarily motivated by health concerns. In the case of BL, we caution against assuming that the most likely pathways to health impacts are through simple, direct causal chains from collective empowerment to neighbourhood improvement to health improvement. Collective agency may improve communities' socio-environmental determinants of health over time through systemic pathways. However, systemic barriers to empowerment and equity also persist and may undermine communities' ability to achieve substantial improvements to their environment and their health.

References:

Bambra, C., Smith, K. E., & Pearce, J. (2019). Scaling up: The politics of health and place. *Soc Sci Med*, 232, 36-42. https://doi.org/10.1016/j.socscimed.2019.04.036

Bernard, P., Charafeddine, R., Frohlich, K. L., Daniel, M., Kestens, Y., & Potvin, L. (2007). Health inequalities and place: a theoretical conception of neighbourhood. *Soc Sci Med*, 65, 1839–1852. https://doi.org/10.1016/j.socscimed.2007.05.037

Conservative Party (UK) (2010). Invitation to Join the Government of Britain: Conservative Manifesto 2010. London: Conservative Research Department. https://conservativehome.blogs.com/files/conservative-manifesto-2010.pdf

Cummins, S., Curtis, S., Diez-Roux, A. & Macintyre, S. (2007). Understanding and representing 'place' in health research: a relational approach. *Soc Sci Med*, 65(9), 1825-1838. https://doi.org/10.1016/j.socscimed.2007.05.036

Durand, M-A., Carpenter, L., Dolan, H., Bravo, P., Mann, M., Bunn, F. & Elwyn, G. (2014). Do interventions designed to support shared decision-making reduce health inequalities? A systematic review and meta-analysis. *PLoS One*, 9(4), e94670. https://doi.org/10.1371/journal.pone.0094670

Egan, M., Tannahill, C., Petticrew, M. & Thomas, S. (2008). Psychosocial risk factors in home and community settings and their associations with population health and health inequalities: a systematic meta-review. *BMC Public Health*, 8, 239. https://doi.org/10.1186/1471-2458-8-239

Elliott, S. J. (2018). 50 years of medical health geography(ies) of health and wellbeing. *Soc Sci Med*, 196, 206-208. https://doi.org/10.1016/j.socscimed.2017.11.013

Hawe, P., Shiell, A. & Riley, T. (2009). Theorising Interventions as Events in Systems. *Am J Community Psychol*, 43, 267-276. https://doi.org/10.1007/s10464-009-9229-9.

Ige, J., Pilkington, P., Orme, J., Williams, B., Prestwood, E., Black, D., Carmichael, L. & Scally, G. (2019). The relationship between buildings and health: a systematic review. *J Public Health*, 41(2):e121-e132. https://doi.org/10.1093/pubmed/fdy138

Kearns, A., Whitley, E., Bond, L., Egan, M. & Tannahill, C. (2013). The psychosocial pathway to mental well-being at the local level: investigating the effects of perceived relative position in a deprived area context. *J Epidemiol Community Health*, 67, 87-94. https://doi.org/10.1136/jech-2011-200415

Kimpton, A., Corcoran, J., & Wickes, R. (2017). Greenspace and Crime: An Analysis of Greenspace Types, Neighboring Composition, and the Temporal Dimensions of Crime. Journal of Research in Crime and Delinquency, 54(3), 303–337. https://doi.org/10.1177/0022427816666309

Knai, C., Petticrew, M., Mays, N., Capewell, S., Cassidy, R., Cummins, S., Eastmure, E., Fafard, P., Hawkins, B., Jensen, J.D., Katikireddi, S.V., Mwatsama, M., Orford, J., & Weisharr, H. (2018). Systems Thinking as a Framework for Analyzing Commercial

Determinants of Health. *Milbank Q*, 96(3), 472-498. https://doi.org/10.1111/1468-0009.12339.

Dargan L. (2009). Participation and local urban regeneration: The case of the New Deal for Communities (NDC) in the UK. Regional studies. 43(2):305-17. https://doi.org/10.1080/00343400701654244

Lawless P, Foden M, Wilson I, Beatty C. Understanding area-based regeneration: the New Deal for Communities Programme in England. Urban Studies. 2010 Feb;47(2):257-75. https://doi.org/10.1177/0042098009348324

Local Trust. (2012) Creating lasting change. Unpublished report: The Big Lottery.

Maass, R., Lillefjell. M., Espnes G.A. (2017) The Application of Salutogenesis in Cities and Towns. In: Mittelmark MB, Sagy S, Eriksson M, editors. *The Handbook of Salutogenesis* [Internet]. Cham (CH): Springer. Chapter 18. Available from: https://www.ncbi.nlm.nih.gov/books/NBK435852/ doi: 10.1007/978-3-319-04600-6_18

Macintyre, S. & Ellaway, E. (2003). Neighbourhoods and health: An overview. *Neighbourhoods and health*. I. Kawachi & L. F. Berkman. New York, Oxford University Press**:** 20-42.

Macintyre, S., Ellaway. E. & Cummins, S., (2002). Place effects on health: How can we conceptualise, operationalise and measure them? *Soc Sci Med*, 55, 125-139. https://doi.org/10.1016/S0277-9536(01)00214-3

Marmot, M., Allen, J., Boyce, T., Goldblatt, P., Morrison, J. (2020). *Health Equity in England: The Marmot Review 10 Years On.* London, Institute of Health Equity.

Martikainen, P., Bartley, M. & Lahelma, E. (2002). Psychosocial determinants of health. *Int J Epidemiol***,** 31, 1091-1093. https://doi.org/10.1093/ije/31.6.1091

Morello-Frosch, R. (2002). Discrimination and the political economy of environmental inequality. *Environ Plann C Gov Policy,* 20, 477-496. https://doi.org/10.1289/ehp.02110s2149

O'Mara-Eves A, Brunton, G., McDaid D, Oliver, S., Kavanagh, J., Jamal, F. Matosevic, T., Harden, A., & Thomas, J. (2013). Community engagement to reduce inequalities in health: a systematic review, meta-analysis and economic analysis. *Public Health Research*. Southampton, NIHR Journals Library, 1.4. https://www.ncbi.nlm.nih.gov/books/NBK262817/ doi: 10.3310/phr01040

Orton, L., Pennington, A., Nayak, S., Sowden, A., Petticrew, M., White, M., & Whitehead, M. (2019). What is the evidence that differences in 'control over destiny' lead to socioeconomic inequalities in health? A theory-led systematic review of high-quality longitudinal studies on pathways in the living environment. *J Epidemiol Community Health,* 73, 929–934. http://dx.doi.org/10.1136/jech-2019-212565

Pennington, A., Pilkington, G., Bache, I., Watkins, M., Bagnall, A., South, J. & Corcoran, R. (2017). Scoping review of review-level evidence on co-production in local decision-making

and its relationship to community wellbeing. What works wellbeing. https://whatworkswellbeing.org/resources/scoping-review-local-decision-making-and-community-wellbeing/

Ponsford, R., Collins, M., Egan. M, Halliday, E., Lewis, S., Orton, L., Powell, K., Barnes, A., Salway, S., Townsend, A., Whitehead, M., & Popay, J. (in press). Power, Control, Communities and Health Inequalities. Part II: Measuring Shifts in Power. *Health Promot Int*.

Popay, J., Whitehead, M., Ponsford, R., Egan, M., & Mead, R. (in press). Power, Control, Communities and Health Inequalities I: Theories, Concepts and analytical frameworks. *Health Promot Int*.

Popay J, Whitehead M, Carr-Hill R, Dibben C, Dixon P, Halliday E, Nazroo J, Peart E, Povall S, Stafford M, Turner J & Walthery P. (2015). The impact on health inequalities of approaches to community engagement in the New Deal for Communities regeneration initiative: a mixed-methods evaluation. *Public Health Res*. 3(12). https://doi.org/10.3310/phr03120

Rolfe, S. (2018). Governance and governmentality in community participation: the shifting sands of power, responsibility and risk. *Soc Policy Soc*, 17, 579-598. https://doi.org/10.1017/S1474746417000410

Rutter, H., N. Savona, K. Glonti, J. Bibby, S. Cummins, D. T. Finegood, F., Greaves, F., Harper, L., Hawe, P., Moore, L., Petticrew, M., Rehfuess, E., Shiell, A., Thomas, J., &

White, M. (2017). The need for a complex systems model of evidence for public health. *Lancet*, 390(10112): 2602-2604. https://doi.org/10.1016/S0140-6736(17)31267-9

Solar O, Irwin A. (2010). A conceptual framework for action on the social determinants of health. Social Determinants of Health Discussion Paper 2 (Policy and Practice). Geneva: World Health Organisation.

Schüle, S.A. & Bolte, G. (2015) Interactive and Independent Associations between the Socioeconomic and Objective Built Environment on the Neighbourhood Level and Individual Health: A Systematic Review of Multilevel Studies. *PLoS ONE*, 10(4): e0123456. https://doi.org/10.1371/journal.pone.0123456

Voorberg, W., Bekkers. V. & Tummers, L. (2015). A Systematic Review of Co-Creation and Co-Production: Embarking on the social innovation journey. *Public Management Review*, 17(9), 1333-1357. https://doi.org/10.1080/14719037.2014.930505

Wallace, R., & Wallace, D. (1990). Origins of public health collapse in New-York-City—the dynamics of planned shrinkage contagious urban-decay and social disintegration. *Bull N Y Acad Med*, 66, 391-434.

Wallerstein, N. (2006). What is the Evidence on Effectiveness of Empowerment to Improve Health? Health Evidence Network Report. Regional Office for Europe, World Health Organisation.

Whitehead, M., Orton, L., Pennington A., Nayak S., Ring A., Petticrew M., Sowden, A. & White, M. (2018). Is Control in the Living Environment Important for Health and Wellbeing, and What are the Implications for Public Health Interventions? Final Report. Public Health Research Consortium.

Woodall, J., Warwick-Booth, L. & Cross, R. (2012). Has empowerment lost its power? *Health Educ Res*, 21(4), 742-745. https://doi.org/10.1093/her/cys064

World Health Organisation (2013). Health 2020 Policy Framework and Strategy. European Regional Office.

World Health Organisation (1948). Preamble to the Constitution of WHO as adopted by the International Health Conference, New York, 19 June - 22 July 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of WHO, no. 2, p. 100) and entered into force on 7 April 1948.