System resilience and neighbourhood action on social determinants of health inequalities: an English Case Study

Authors

J Popay
Professor, Division of Health Research, Lancaster University, Lancaster, UK

H Kaloudis
Senior Research Associate, Division of Health Research, Lancaster University, Bailrigg, Lancaster LA1 4YE, UK
Email: h.kaloudis@lancaster.ac.uk

L Heaton
Senior Manager CLAHRC Legacy Project, Division of Health Research, Lancaster University, Lancaster, UK

B Barr
Professor, Department of Public Health, Policy and Systems, University of Liverpool, Liverpool, UK

E Halliday
Senior Research Fellow, Division of Health Research, Lancaster University, Lancaster, UK

V Holt
Senior Research Associate, Division of Health Research, Lancaster University, Lancaster, UK

K Khan
Senior Research Associate, Division of Health Research, Lancaster University, Lancaster, UK

A Porroche-Escudero
Senior Research Associate, Lancaster Environment Centre, Lancaster University, Lancaster, UK

A Ring
Research Associate, Institute of Population Health, University of Liverpool, Liverpool, UK

G Sadler
Senior Research Associate, Division of Health Research, Lancaster University, Lancaster, UK

G Simpson
Research Fellow, Faculty of Medicine, University of Southampton, Southampton, UK

F Ward
Senior Research Associate, Division of Health Research, Lancaster University, Lancaster, UK

P Wheeler
EPBHC Theme Manager, Division of Health Research, Lancaster University, Lancaster, UK

Corresponding author:
Harris Kaloudis, as above

Keywords

neighbourhood resilience; social determinants of health inequalities; community control; collective action; place-based public health

Abstract

Aims: This article seeks to make the case for a new approach to understanding and nurturing resilience as a foundation for effective place-based co-produced local action on social and health inequalities.

Methods: A narrative review of literature on *community resilience* from a public health perspective was conducted and a new concept of *neighbourhood system resilience* was developed. This then shaped the development of a practical programme of action research implemented in nine socio-economically disadvantaged neighbourhoods in North West England between 2014 and 2019. This Neighbourhood Resilience Programme (NRP) was evaluated using a mixed-method design comprising: (1) a longitudinal household survey, conducted in each of the Neighbourhoods For Learning (NFLs) and in nine comparator areas in two waves (2015/2016 and 2018/2019) and completed in each phase by approximately 3000 households; (2) reflexive journals kept by the academic team; and (3) semi-structured interviews on perceptions about the impacts of the programme with 41 participants in 2019.

Results: A difference-in-difference analysis of household survey data showed a statistically significant increase of 7.5% (95% confidence interval (CI), 1.6 to 13.5) in the percentage of residents reporting that they felt able to influence local decision-making in the NFLs relative to the residents in comparator areas, but no effect attributable to the NRP in other evaluative measures. The analysis of participant interviews identified beneficial impacts of the NRP in five resilience domains: social connectivity, cultural coherence, local decision-making, economic activity, and the local environment.

Conclusion: Our findings support the need for a shift away from interventions that seek solely to enhance the resilience of lay communities to interventions that recognise resilience as a whole systems phenomenon. Systemic approaches to resilience can provide the underpinning foundation for effective co-produced local action on social and health inequalities, but they require intensive relational work by all participating system players.

ISSN 1757-9139 DOI: 10.1177/17579139221106899

MAIN POINTS IN PAPER

What do we already know?
Action to 'build community resilience' is a prominent component of place-based initiatives that aim to reduce social and health inequalities.
Definitions of community resilience lack clarity, but the primary focus is on resilience understood as the property of people who live in a particular geographical area, with external agencies and professionals in a supporting and nurturing role.
Definitions of resilience also lack clarity, but there is a broad consensus that it includes the ability to adapt positively to change and adversity and that at a collective level, these capacities emerge from social relationships between people.
The emerging new 'community paradigm' approach to place-based initiatives seeks to devolve decision-making to residents of particular places and open up new opportunities for community control of local services.
There is evidence that initiatives that devolve responsibility down to residents may be less beneficial in the most disadvantaged areas and risk increasing inequalities.
Co-production can be an effective approach to local action on social and health inequalities, but it requires residents to work as equals with staff in the public, civil society and private sectors to develop a 'credible commitment to one another' and to share responsibility for designing and implementing actions.
What does this paper add?
A new concept of *neighbourhood system resilience* moving away from the myopic focus on residents in places refers to the collective capacity of all individuals and agencies, living, working, and operating within a place, to adapt positively to change and adversity. It explicitly recognises and foregrounds the fundamental interdependence of all system players.
This paper also adds evidence demonstrating the positive impact of a place-based programme that aimed to increase neighbourhood system resilience to improve social determinants of health inequalities amenable to local action Key points include:

The central importance of equitable collaborative relationships between all system players with the shared aim of addressing local problems.

The impact of this model of co-production and of shifting power dynamics on levels of perceived influence among residents. Inclusive governance spaces can engage everyone with a stake in the neighbourhood.

How increased social connectivity across a neighbourhood system can impact on the development of new shared identity, increase the use and integration of diverse types of knowledge, and deliver modest improvements in economic and environmental conditions.

INTRODUCTION

Persistent and enduring inequalities in health outcomes are found in all countries. In some, including the USA and the UK, they have been widening as increases in life expectancy have stalled and, for some groups, reversed.[1,2] Despite many national public health strategies focusing on individual behaviours, there is consistent, robust evidence that health inequalities are driven by inequalities in people's living and working conditions, the material resources they have access to, and the degree of control they have in their lives.[3,4] The COVID-19 pandemic is occurring against this backdrop, creating what Bambra and Smith[5] describe as '*a syndemic* of COVID-19, inequalities in chronic disease and the social and commercial determinants of health'(p. 7).

Place-based initiatives are a prominent feature of policies aimed at tackling social inequalities, although improving health is not always an explicit aim.[6] These initiatives are often 'hyper' local being implemented in small neighbourhoods and a central feature is the involvement of people who live in the area – typically understood as the local 'community'.[7,8] Over time, there has been an increasing adoption of strength-based approaches that seek to identify, enhance and work with the 'assets' and 'competencies' of local people – or communities – in the pursuit of positive outcomes.[9] Most recently, as the global recession and now the COVID pandemic have exacerbated inequalities, policy makers and practitioners in the public and third sectors have increasingly focused on how to nurture the resilience of communities bearing the brunt of social inequalities – their collective capacity *to endure, adapt and generate new ways of thinking and acting* in the face of these adversities. In this context, a new 'community paradigm' has emerged, involving approaches that devolve decision-making to people who live in particular places and opening up opportunities for *community* control of local services.[10] In this model, communities are to be given direct control over financial resources to implement their collective decisions, supported by the civil society sector, with a 'soft' enabling rather than leadership role for the local state and other actors.

Research has shown that interventions that increase the collective control communities of interest or place have over decisions and actions impacting on their lives can have positive impacts on health.[11,12] However, evaluations of neighbourhood initiatives have also shown that the type and degree of control communities are 'given' in these interventions vary and that the conditions and resources they need to exercise control over decisions/actions are unequally distributed.[13] As Baba et al.[13] note,

> *Thus, community engagement processes can be inadequately specified, producing weaknesses in the process and its aftermath, or narrowly proscribed such that they are unable to respond to variations in circumstances faced by communities living in different places. The result is that individual residents may not derive a sense of empowerment from*

either their participation in, or the ripple effects of, collective community engagement processes. (p. 1631)

This raises the possibility that neighbourhood initiatives aiming to enhance resilience and involve residents in local action to address social and health inequalities could be '*imposing greater risks and responsibilities upon more disadvantaged communities in return for lower levels of power*'.(p. 16).[14] There is also evidence that the individual benefits of involvement in neighbourhood initiatives may be unequally distributed and that there can be negative impacts on the health and wellbeing of residents who get involved.[15,16]

Though not always explicit, co-production is an underpinning principle of many of these neighbourhood initiatives. According to the originator of the concept, the political scientist Elinor Ostrom,[17] co-production is a process that enables the knowledge and skills of citizens to be utilised to transform services and goods. By definition it can give greater control over decisions and actions to local communities *but* as Wilton[18] notes '*it does not mean letting communities fend for themselves*' (p. 79). Rather it works best in the context of equal partnerships between local people, the local state and other actors. However, as Ostrom[17] noted, creating the conditions for '*successful co-productive strategies is far more daunting than demonstrating their theoretical existence*' (p. 1080). Many writers since have identified systematic barriers, including dysfunctional leadership styles, perverse incentives, limited resources and lack of trust, that work against the development of genuine co-productive relationships. But perhaps the most important prerequisite if community members and staff in the public, civil society and private sectors are to work together as equals is for them to build a '*credible commitment to one another*' (p. 1083).[17]

In this article, we argue that local place-based initiatives that nurture *resilience* can create the conditions for effective co-produced action to reduce some of the social inequalities that drive health inequalities, but we also argue that this requires a different understanding of resilience. To this end, in the first section we briefly review the literature on *community resilience* from a public health perspective, concluding that understanding resilience as a potential property of neighbourhood systems rather than of the people who live in a particular area offers greater analytical and practical advantages for the design of place-based initiatives. We then describe how this approach was operationalised in nine socio-economically disadvantaged neighbourhoods in North West England and present an overview of key findings from an evaluation of this Neighbourhood Resilience Programme (NRP). Finally, the implications for public health policy and practice are discussed.

COMMUNITY RESILIENCE: AN INADEQUATE FRAMEWORK FOR LOCAL ACTION TO REDUCE INEQUALITIES

The COVID-19 pandemic has reinvigorated a long-standing policy and research interest in community resilience as a potential mechanism for local action to deliver greater social and health equity.[19–21] Prior to the pandemic, Ziglio et al.[22] argued that '*if we are to foster lasting and meaningful action to strengthen resilience to improve health and wellbeing ... it is more vital than ever to be clear about its particular significance*' (p. 789). However, achieving clarity about the 'community resilience paradigm' is a formidable challenge.

First, resilience in general, and community resilience in particular, have been under-theorised. Definitions are frequently ambiguous, using the term to describe (as a metaphor), to explain (as an independent variable, a model, or a paradigm), as a normative goal for policy or combinations of these.[23–28] The 'characteristics' of resilience are typically presented as a mix of qualities such as robustness, adaptability, and transformability. Definitions rarely elaborate these qualities, which can seem inherently contradictory: never satisfactorily explaining how resilience can encompass both social stability and social transformation.[29]

Cutter[30] argues that this definitional 'muddiness' makes the concept's application to practical initiatives problematic and does little to address inequalities. Research on community resilience as a component of responses to major events such as natural disasters, terrorist attacks, or political violence illustrates this muddiness. Reviewing this literature, Patel et al.[27] identified more than 50 unique definitions of community resilience to disasters, which they grouped into those focusing on resilience as: (1) a process of change and adaptation, (2) the absence of adverse effects, and/or (3) a set of traits or attributes – with some definitions including all three approaches. Where resilience properties are 'located' is also typically obtuse. For example, although describing *community centred public health* as a *whole-system* approach, South et al.[21] argue that it involves '*the public health system supporting the least advantaged communities to become more resilient*' (p. 306) rather than focusing on action to strengthen the resilience of the 'whole system' in which residents and other actors are co-located.

Second, whether as a normative policy goal or the potential outcome of interventions, resilience has been criticised as a component of particular political modes of neoliberal governance.[31,32] These modes of governance are argued to legitimise the rolling back of collective state provision of goods and services, promote personal responsiblility for health and wellbeing, and prioritise interventions that aim to enhance self-reliance and self-sufficiency through local community action. These resilience-informed interventions are disproportionately targeted at communities of interest or place that are bearing the brunt of social and health inequities and as a result may be less able to benefit (p. 16).[14]

Third, the design of many community resilience focused interventions in the health field compounds these limitations by adopting an 'inward gaze' on psychosocial dynamics within disadvantaged communities and on actions to improve health-related behaviours and proximal neighbourhood conditions. As South et al.[21] argue in the context of the unequal

impact of the COVID pandemic, creating community resilience is '*what public health systems can do to strengthen protective factors, such as strong social networks, which will aid people and communities to manage, adapt, and ultimately recover well*' (p. 305). Social networks are important protective factors. However, a narrow inward gaze on relationship in communities diverts attention from the arguably more important 'outward gaze' on collective action in the pursuit of transformative structural changes to deliver greater equity. Although currently neglected, this outward gaze was enshrined in key global consensus public health statements on community-based public health such as the Ottawa Charter.[9,33]

In response to these and other criticisms, Welsh[34] highlights a growing stream of work rehabilitating resilience as '*an analytical framework for examining [and as a means of mobilising] change*' (p. 22) towards more equitable and ecologically sustainable social and economic systems. Similarly, Hart et al.[35] have developed a formulation of resilience in the context of psychological services for children and young people that integrates with social justice approaches. Alternative framings have also been proposed that move away from understanding resilience as a property of a 'community' defined as the people who live in a particular place. The Canadian Centre for Community Renewal,[36] for example, proposes a place-based system perspective defining: '*[r]esilient neighbourhoods [as] those that take action to enhance the personal and collective capacity of citizens and institutions to respond to and influence the course of social, economic and environmental change*' (p. 5).

These attempts to reconceptualise resilience through the prism of equity and systems-thinking go some way to deliver a potentially more useful framework for local action to address structural drivers of health inequalities. Building on this foundation, we designed a place-based intervention around the concept of *neighbourhood system resilience* and implemented and evaluated this in nine neighbourhoods in North West England. In the rest of this article, we describe the concept, the action research programme in which it was embedded, and key findings from an evaluation of this programme.

NEIGHBOURHOOD SYSTEM RESILIENCE: A PUBLIC HEALTH CONCEPT FIT FOR PURPOSE

The concept of *Neighbourhood system Resilience (NR)* directs attention away from a narrow focus on the resilience of people living in disadvantaged places and on a 'supporting' role of external agencies and professionals. Instead, resilience is understood to be the collective capacity of all individuals and agencies, living, working, and operating within a neighbourhood to adapt positively to change and adversity. This collective capacity emerges primarily from social connections and governance processes that engage everyone with a stake in a neighbourhood. In turn, these connections and processes enable adaptive capacities and resources to be activated, shared, and used to co-produce action for greater social and health equity. The term 'adaptive capacities' refers to the tangible and intangible resources available to be modified or transformed by the actions of system players.[26]

More equitable and inclusive social connectivities and governance processes can only emerge, if traditional power dynamics are challenged and changed. In particular, imbalances in the power local communities and civil society have compared to other players in the public and private sectors need to change. Governance processes need to include and value all system players, building trust between them. Key to this is the harnessing and sharing of all forms of knowledge, particularly the knowledge emerging from lived experience, to co-produce a holistic picture of the drivers of social and health disadvantage locally, and effective action to address these.

Hyper-local places, such as neighbourhoods, have a unique combination of factors including local histories, contemporary economic, social and environmental conditions, cultural norms, and participatory structures and processes. These combine to shape local patterns of inequalities, the actions that are possible, and the impacts these actions will have. Every neighbourhood also has a unique group of system players that live, work, and operate there. At this granular geographical level, all system players can in principle debate, agree, and own a common goal of tackling specific structural determinants of health inequalities that are amenable to local action.

THE NEIGHBOURHOOD RESILIENCE PROGRAMME

The NRP sought to operationalise the concept of neighbourhood system resilience and evaluate the impacts.[37–39] The NRP was developed by partners in the Collaboration for Leadership in Applied Health Research and Care in the North West Coast region of England (CLAHRC NWC) between 2014 and 2019. It was funded by the English National Institute for Health Research and CLAHRC NWC partners and implemented in nine Neighbourhoods For Learning (NFLs). Populations in the NFLs ranged from 5000 to 10,000. The neighbourhoods were all in the bottom 15% on the index of multiple deprivation, had relatively poor health indicators, and no previous experience of a major place-based initiative.

The neighbourhood resilience framework: adaptive capacities for action

The first step in designing the NRP was to identify the resilience-related adaptive capacities the programme would seek to nurture and/or release. Five such capabilities were identified through a rapid review of resilience-related initiatives being implemented by local government agencies across England in 2014/2015. These included capacities related to:

(a) Inclusive neighbourhood governance: structures and processes that enable people to collectively influence decisions that affect the conditions in which they live and work, and how available resources are allocated.
(b) Social connectivity: opportunities and spaces that enable people who live and work in a neighbourhood to

deepen and extend existing connections and forge new ones to improve information flow and communication, and create opportunities for collective action.

(c) Cultural coherence: emerges from the recognition of shared interests among diverse system players and a shared confidence in their ability to act collectively to improve local conditions.

(d) The living environment, encompassing the availability, accessibility, and quality of indoors and outdoors spaces, such as community hubs, housing, transport, parks, and so on.

(e) The economic system, comprising policies and services that enable people to engage in meaningful work, promote financial security, reduce indebtedness, and so on.

The Neighbourhood Resilience Programme infrastructure

The NRP infrastructure was established across all nine neighbourhoods to support local implementation and strategic governance. It comprised four main elements and a number of key roles.

A Programme Management Group (PMG) was responsible for overall governance. It included a representative from each Local Authority partner and senior academics. As members of the PMG, *Local Authority Leads* were the link between local authority partners and the NRP. They could also be directly involved in local programme implementation. The PMG produced the system resilience framework, selected the neighbourhoods in which the programme was to be implemented, and had oversight of the evaluation. As the programme evolved, development events brought together members of the PMG and local players, including residents from across the neighbourhoods, to share learning and enable collaborative problem solving to contribute to the further development of local programmes.

The Community Research and Engagement Network (COREN) comprised local residents supported by a group of third sector organisations. These organisations were contracted to employ *COREN facilitators* who recruited and support residents to get involved in the NRP locally as *Resident Advisers.* The COREN also operated as a source of support and learning across the neighbourhoods contributing to local programme development and to the PMG. The COREN facilitators (who were often local residents) were supported by a *COREN Manager.* The *Resident Adviser* role gave local residents actively engaged with the NRP equal standing with representatives from the public, private, and civil society sectors; formal recognition of their contribution; financial compensation for their time and work; and opportunities to develop new skills and acquire new employment-related experiences.

Knowledge mobilisation processes evolved over time. Initially, the research team conducted reviews of resilience-related initiatives in English local authorities and those already underway in the 'programme' neighbourhoods. These reviews informed the development of the neighbourhood resilience concept and aspects of the programme infrastructure. The design and implementation of local programmes, described in more detail in the next section, were supported by a range of knowledge mobilisation mechanisms. These included resident-led enquiries and researcher-led rapid reviews, which provided evidence on locally prioritised issues. Key findings from these activities were then used to trigger change in the system by, for example, influencing the perceptions of professionals working in the neighbourhoods. The NRP took an inclusive approach to knowledge, utilising evidence from peer-reviewed journal articles, grey literature, websites, and lived experience from community members and other local players.

The Programme Research Team contributed to the design and implementation of the programme centrally and in neighbourhoods, undertook systematic rapid reviews of evidence to support local work, some of which were published,[40] and conducted the evaluation. The team lead was a senior academic and there were two deputies: one responsible for evaluation and the other for project management. Other team members operated as 'academic leads' for a neighbourhood, supporting the local programme including co-producing resident-led enquiries and acting as a link to the PMG.

Local design and implementation

Within the framework described above, and following a common albeit non-linear process, local programmes were designed and implemented in nine Neighbourhoods for Learning (NFLs). Key elements of the implementation included establishing a space for inclusive collective governance; working with the COREN to recruit and support resident advisers and other system players; getting started by bringing the 'whole system' together to discuss and decide on a local priority for action; undertaking local enquires; and acting for change.

Spaces for collective governance

In each NFL, programme governance rested with a Local Oversight Group (LOG) with members from across the 'neighbourhood system' including local residents. The LOG was responsible for designing, implementing, and overseeing action to address a local issue that was negatively impacting on population health in the area. Drawing inspiration from the Habermassian 'ideal speech situation',[41] LOGs sought to create the conditions in which diverse knowledges and voices were treated as equal. In addition to formal governance, they were spaces in which all system players could be engaged in collective sense making, consensus building, learning, and improvisation. In addition, the LOGs convened and facilitated transient spaces for collaborative deliberation and problem-solving. These typically took the form of public events in which diverse system players were invited to voice their perspectives, hear those of others, attempt to find common ground, and make shared decisions.

Recruiting resident advisers and working with the COREN

In each area, a civil society organisation was funded to employ a COREN facilitator. They were in post as local

Table 1

Focus of action in the neighbourhoods for learning

Blackpool	Improving privately rented accommodation
Liverpool	Rethinking the role of the High Street and taking action on air pollution
Knowsley	Community cohesion & environmental quality
Cumbria	Job searching and barriers to employment
Preston	Healthy streets and play places
Haslingden	Social cohesion and reduced social isolation
Ellesmere Port	Improving the quality of public spaces and increasing safety
Blackburn with Darwen	Housing and living environment
Sefton	Improving access to debt advice and support, increasing financial knowledge amongst young people

implementation began and their first task was to recruit local people as Resident Advisers (RAs). Together with the COREN organisation and supported by the COREN facilitator, RAs participated in the LOG and other discussions, contributing knowledge about the neighbourhood including previous and existing community-based initiatives, the community's strengths, and the social, economic, and environmental risks to health locally. The COREN facilitators and RAs were key players in the collation of evidence about local issues and in the design and delivery of action for change.

Getting started and deciding the focus

Work in all the NFLs started with a public event that sought to bring people across the neighbourhood system together to discuss the aims of the NRP. Participants also began to consider which of the social determinants of health inequalities amenable to local action should be prioritised as a focus for change within the lifetime of the NRP. The NRP framework served to focus local programmes on the five domains – social, economic, environmental, cultural, and governance – in which resilience capabilities needed to be enhanced and structural adversities needed to be addressed. These early phases of implementation embodied a commitment to shifting power dynamics: residents and other system players were engaged in participative governance spaces in which discussion and debate were supported, different voices were heard, and diverse evidence was valued.

Typically, the final decision on the issues to be prioritised for local action was taken by a small number of system players including residents, but subsequently, involvement in evidence collection and action was widened. A list of the focus for action in the nine NFLs is provided in Table 1. They included the experience of social isolation and cohesion; local employment prospects: air pollution; the quality of local streets and the neighbourhood environment; the availability of debt advice and awareness of gambling and debt in schools; and local transport.

Resident-led enquiries and acting for change

Once a priority for action had been identified, rapid reviews of research sources and resident-led, participatory enquiries provided evidence on the current 'state' of the issue and potential action for change. The resident-led enquiries involved residents working as 'peer researchers' alongside the NFL Academic Leads and sometimes the COREN facilitator. Enquiry methods were diverse. They included working with a graphic artist to produce illustrated booklets and commissioning drama workshops, alongside more traditional methods, such as surveys, face-to-face, and group interviews. Findings fed directly into the design of local actions for change which were typically small scale and involved modest additional financial resources, often depending primarily on people's commitment of time. On some occasions, enquiry findings were a key component of local action for change. For example, in one neighbourhood, the information collected was produced as a local exhibition and shared with several large local employers to inform and strengthen their social impact policies and to address some of the practical problems experienced by employed and unemployed people in the area.

WHAT WAS ACHIEVED: EVALUATING THE NRP

Evaluation design

Programme evaluation comprised three components: a longitudinal household survey; reflexive journals kept by the academic team, focused on implementation processes; and qualitative interviews exploring perceptions about the impacts of the programme among those involved. The findings reported draw on the survey and interview data only.

The longitudinal Household Health Survey was conducted in each of the NFLs and nine comparator areas to provide a baseline and assess impacts. The first wave was carried out between August 2015 and January 2016 before the local programmes were implemented and repeated between July 2018 and January 2019 at the completion of the

NRP. The survey was completed at each phase by approximately 3000 households. The primary outcome was the percentage of the population reporting that they could influence decisions affecting their local area. Secondary outcomes included composite measures of social, economic, and environmental determinants and measures of depression and anxiety. A difference-in-difference analysis was conducted to investigate whether outcomes had improved to a greater extent in the intervention areas compared to the comparator area. Ethical approval for the survey was obtained from the University of Liverpool (Reference: RETH000836). Details of methods are provided elsewhere.[42]

The qualitative research, conducted between November 2018 and September 2019, explored subjective perceptions of programme impacts and pathways to these. Semi-structured interviews were conducted with 8 COREN facilitators, 19 Resident Advisers, and 14 representatives from local authorities, civil society organisations, and the private sector. The interviews were recorded, transcribed, and imported into NVivo12. Data were coded separately by three researchers, using initial themes from the interview schedule. The researchers then discussed their findings and agreed on a consensual set of themes. In subsequent analyses, individual researchers explored the relationships between themes, and developed narratives that sought to account for the emergent findings on impacts. The researchers then collaboratively compared and contrasted their individual analyses and arrived on a common descriptive and explanatory narrative. The Lancaster University Ethics Committee provided ethical approval in November 2018 (Reference: FHMREC16016).

Resident advisers and others involved in the programme contributed to the analysis process via a series of interpretation workshops where emerging findings were discussed. These took place in December 2018, June 2019, and August 2019. The latter two sessions focused on two main themes, social connectivity, and local governance. A fourth interpretative session took place with COREN facilitators in September 2019. Key findings are presented below. Where illustrative quotes are used, research participants are identified by their role (Resident Adviser or Local Authority Professional) and an area ID.

FINDINGS

The quantitative impacts

Findings from the household survey show that over 4 years, the percentage of people responding affirmatively (with a '1-Definitely agree' or '2-Tend to agree') on a Likert-type scale of 1 to 4 to the survey question 'Do you agree or disagree that you can influence decisions affecting your local area?' had increased by four percentage points in the NRP areas while in the comparator areas the same percentage had fallen by three points. Relative to what would have been expected had the NRP not taken place, the impact of the NRP on this dimension can therefore be quantified as an overall increase of 7.5% (95% confidence interval (CI), 1.6 to 13.5). Before the intervention, the NRP areas reported lower levels of perceived influence than the comparator areas. There was also a weak effect of the intervention associated with a reduction of the proportion of the population reporting symptoms of anxiety by five percentage points on average, although the confidence intervals on this estimate are very wide (95% CI, 0.08 to 10.1). Conversely, there was no evidence of any intervention effects on the proportion of residents reporting symptoms of depression or on the set of social, environmental, and economic indicators included in the household survey.

The qualitative findings

In contrast to the survey results, participants in the qualitative research highlighted positive impacts in all five of the adaptive capacities of the NRP framework – social, cultural, economic, environment, and governance – with those in the social and cultural realms being more pronounced. The accounts provided also highlighted how action in one domain could trigger changes in another.

Governance

The survey findings suggested that the programme had succeeded in increasing the proportion of people in the NRP neighbourhoods who felt that they could have real influence on decisions in their area. The qualitative findings illuminate people's lived experience of these shifting power dynamics. As these participants illustrate, these shifts could mean that residents felt empowered to speak out in venues where they would not previously have done so. They also felt their contribution was valued and that institutions opened their formal governance spaces to local people:

> *I think having the Resident Advisers being strong enough to stand up to directors of the big company, to stand up to councillors in the council, and to stand up at housing conferences, to be able to stand and tell our story*. (Resident Adviser A)

> *it's something that we would quite like to see rolled out in the other four areas because we now have at least one of the Resident Advisers comes along to our community partnership and updates us on what they're doing, which has been great for our councillors and the police and the other people there because I think there's been a better dialogue between everybody and a better understanding of who's doing what*. (Professional A)

However, despite the positive impact on residents' sense of control over decisions impacting on their lives demonstrated in both the survey and qualitative findings, there were some residents who felt that power dynamics had been resistant to change:

> *but you're just reminded subtly that you are a mouse, and they are not; and when you hear along the grapevine that, oh we decided on that a few months ago. It was like 'did you!' No one told us that, and it's that feeling of being reminded that you do not possess the same influence and power that these big stakeholders do*. (Resident Adviser B)

I: *And do you think resident Advisers have had enough influence on the work?*
R: *No, definitely they are not, because at the end of the day they don't have the authority, they don't have the power. Because they are only like voice of others*. (Resident Adviser C)

Social connectivity

Participants described how local programme activities had contributed to the creation of new social connections, strengthened existing connections, and repaired ruptured relationships across the neighbourhood system. As the quotes below illustrate, diverse system players argued that these changes had enabled the creation of new networks, initiated new conversations, increased sharing of information, knowledge, and skills between players, and broke down barriers to collaborative actions for change:

> *... people that we wouldn't normally have communicated with [...] we have become friends with, not just communicate with, but we have actually become friends with [...] I would never have had any reason to speak to the local councillor or the mayor or even [name of Academic Lead], I would never have reason to meet them, but it's, yes, we have met people.* (Resident Adviser D)

> *It has really encouraged or increased the amount of interactions the Public Health team have with our Environment team and our relationship improves because of that, which then has other spin-offs in terms of other pieces of work.* (Professional B)

> *So, this kind of, it could have broken the community but I think because the [NRP] came along around the same time, this was being very much a healing process for, and again, people started to trust the housing association again.* (Resident Adviser E)

Cultural coherence

There were many accounts of how the NRP had fostered recognition of shared interests and a shared belief among neighbourhood system players in their ability to act collectively for change. In three areas, for example, residents worked with COREN facilitators and academic leads to co-create stories capturing people's past and current experience of trying to find employment, of loneliness and exclusion, and of problems with local services. The stories took different forms – videos, illustrated booklets, and verbal testaments[i] – and were themselves interventions that resisted deficit-based narratives and shaped the agendas of organisations and institutions. This Resident Adviser described how the process had started new conversations that could in turn open up new possibilities for change:

> *... we are very hopeful about this animation that is coming out. We will present it to residents and local authorities and everybody. There is a conversation that has started. We are sure. We know that nothing is going to happen overnight but there is a conversation that has started, people have come and talked about their issues and problems, and I think that is a good thing*. (Resident Adviser F)

Diverse forms of communication also allowed these stories to be heard in ways that opened up new directions for action. These included public exhibitions, festivals, mediated conversations with local politicians and local businesses, and representations to a regional Air Quality Steering Group and the management board of a housing association.

The local environment

Four neighbourhoods chose to focus on improving the local environment, including traffic safety, the quality of public spaces, the availability of play spaces for children and of green spaces for recreation. Another neighbourhood focused on the quality of housing in the private rented sector. Accounts demonstrated how these activities had led to new partnerships and opened up formal governance spaces to more inclusive participation. For example, one neighbourhood established a partnership with the British Lung Foundation, the Lancaster University Environment Centre, the City Council's Environmental Unit, and the Public Health team to carry out a participatory, resident-led enquiry on air pollution that involved local schools through a 'citizen science' model. As a result of their work with the NRP, two residents were invited to join the steering Group of the Liverpool Combined Region Air Pollution Study.

Collaborative, local action on the environment also restored and reinvigorated local spaces and as this resident comments, improved safety:

> *The road had bumps and they repaired those as a result of the programme. Pavement tiles and children that were falling, we kept telling them, and they even sorted them out. It feels like slowly as the project goes on things are happening and the programme is working*. (Resident Adviser G)

The local economy

Three neighbourhoods prioritised the local economy as a focus of action with initiatives addressing a range of issues. Several neighbourhoods succeeded in bringing in additional external funding for local projects. These initiatives were often led by residents. In one case, for example, as this local authority officer comments:

> *the Resident Advisers came up with a project around social isolation and got £8,000 of funding from the council to run mental health coffee mornings with therapy sessions running alongside them ... they applied for the funding themselves and got it themselves and that's the first time that's ever happened for that particular group.* (Professional C)

In another case, two Resident Advisers obtained external funding to expand a lunch club they ran to reduce social isolation among older residents to another location:

> *it was ten thousand pound not pennies and it's said you have got the grant [for the lunch club] ... But if that*

hadn't been for [NRP] I would not have got that grant. (Resident Adviser H)

In other neighbourhoods, the action aimed to raise awareness of economic problems. In one area, for example, the NRP LOG worked with the local Council, a local Migrant Workers Community Group, the National Illegal Money Lending Team (IMLT) in England, and Handstead Films to co-produce a short video to raise awareness of the risks involved in getting money from illegal lenders ('loan sharks'). The video is available in six languages and can be viewed on video-sharing platforms.[43] With funding from the Stop Loan Sharks Community Fund of the IMLT, the same LOG supported the creation and delivery of a school-based drama workshop exploring the risks of gambling and of receiving loans from loan sharks.

Some actions aimed to revive the local economy and build a stronger *sense of community*. For example, in one area two residents started a community magazine as a platform for local businesses and third sector organisations to promote their services. The magazine[44] was launched at the beginning of 2018 with an initial print run of 8000 copies. Its production and distribution carried on past the end of the NRP and was only stopped by the COVID-19 pandemic:

... we both identified that [the area] doesn't have a dedicated community news magazine whereas more leafy suburbs generally do. We have the skill set to make it happen, so we put our heads together and made it happen. And we have been going for a year now we have a print run of ten thousand copies which we run quarterly, we have got a team of about thirty volunteers who hand deliver them to every home in the ward. (Resident Adviser I)

This local authority worker in another area described how the work in their local programme had lead to the establishment of an intersectoral group to identify solutions to local employment concerns:

we have a new network that [local authority officer] leads on [...] called the Working Skills network, which is obviously all the people involved in the local area who either deliver training or skills or employment or whatever, but all around that topic [...] I honestly don't think that group would have come together so quickly or been set up in the way that it has if we hadn't have done this work in [the NFL]. (Professional D)

DISCUSSION

We have argued that place-based initiatives in the health field need to replace the dominant focus on nurturing and/or building resilience among local residents as a mechanism for local action on social and health inequalities with a focus on system resilience. Understanding resilience as the property of a neighbourhood system rather than a resident community isn't just a language change. It is a mindset change that can transform local action on social and health inequalities. It requires place-based initiatives to activate, share, and use the *collective adaptive capacities* of all individuals and agencies, living, working, and operating within a neighbourhood working in equal partnerships towards achieving a common goal. A prerequisite for this form of co-production is that all players in a system have a '*credible commitment to one another*' (p. 1083),[17] which in turn requires significant shifts in the power dynamics usually operating between resident communities and other players in neighbourhood systems. It also requires the active participation of, rather than support from, workers in the public and third sector.

We have described the NRP implemented in NW England that sought to 'test' a system resilience approach to co-producing action on social determinants of health in nine relatively disadvantaged neighbourhoods. In assessing the impact of the NRP, it is important to remember that the programme was implemented during a period of significant cuts in public spending on services, tightened eligibility for welfare benefits and increasing economic insecurity. All of which would have been felt more sharply in the disadvantaged areas in which the NRP was implemented. In addition, the programme involved relatively modest new resources in cash and kind: on average around £50,000 p.a. per neighbourhood excluding the evaluation costs, plus around ½ day a week in-kind contribution from local agencies.

A key aim of the NRP was to establish and nurture more inclusive governance spaces and greater social connectivity to engage everyone with a stake in the neighbourhood and enable their adaptive capacities and resources to be activated, shared, and used for the common good. These spaces needed to enable residents to have real influence over actions that impacted on their lives and to work in equal partnerships with other neighbourhood system players. Quantitative findings show that the programme was effective at increasing levels of perceived influence among residents in the programme neighbourhoods compared to comparator areas, and it may have contributed to a reduction in anxiety at a population level.

The qualitative findings illuminate the pathways through which the quantitative impacts were likely to have been achieved and also suggest that the people involved in the programme perceived the impacts to have been more pervasive than the survey findings suggest. The programme was reported to have enabled diverse system players in these relatively disadvantaged neighbourhoods to craft a new shared identity as an intentional, purposeful, and self-defined collectivity, to increase the breadth and depth of connections between them, to utilise and integrate diverse types of knowledge (ranging from research evidence to stories of lived experience), and to deliver improvements (albeit modest) in economic and environmental conditions.

The most significant influence on the capacity for effective, co-produced action in the NRP neighbourhoods was the increased social connectivity that was created (see Townsend et al.[45] for a similar finding in the evaluation of a large, place-based, community initiative). The

structures and processes put in place to support the delivery of the NRP facilitated the creation and development of these new connections and the repair of ruptured connections. These included the LOGs, local meetings and events, and the range of activities (including the resident-led enquiries) that brought people together. The expansion of social connectedness relied on intensive 'relational work'[46] performed by a range of players involved in the NRP: the Resident Advisers, the COREN facilitators, the COREN Manager, Academic Leads, and the Local Authority Leads.

A key implication of a system resilience approach to place-based programme design is the strong focus on supporting the development of collaborative and equitable relationships between all system players with the shared aim of addressing local problems. Such relationships are supported by investing time and resources in facilitating and sustaining formal and informal opportunities for dialogue across the system; building trust; developing a shared understanding of the issues to be addressed and a vision for future collective action; exploring ways to align goals, resources, priorities, and actions; supporting the active involvement of local people working as equals alongside other system players; integrating different types of knowledge whether professional, experiential, or research-based; and finally, recognising that key players with power in the system may be located outside the neighbourhood.

The COVID-19 pandemic has made visible in the most pressing way that public health is a collective 'commons' whereby the disadvantages burdening some sections of the population ultimately impact negatively on the health and wellbeing of the entire population.[47–49] In contrast to 'community resilience', the concept of neighbourhood system resilience explicitly recognises and foregrounds this fundamental interdependence of everyone with a stake in a particular place. Initiatives informed by this concept would seek to create the practical framework required to support inclusive equitable collaborative efforts to address the social determinants of health inequalities that are amenable to local action.

ACKNOWLEDGEMENTS

The views expressed in this paper are those of the authors team and not necessarily those of the NIHR or the Department of Health and Social Care or other funders. The authors wish to thank the Public Advisers, local authority staff and COREN facilitators and all the other local workers who contributed to the design, delivery and evaluation of the Neighbourhood Resilience Programme. They are too numerous to list here but their names and descriptions of their work can be found on the NRP website and in particular on NRP case studies (https://neighbourhoodresilience.uk/knowledge-to-action/). We are also grateful to the support of academic colleagues including in particular Professor Mark Gabbay Director of the CLAHRC NWC/ARC NWC and Jane Cloke the CLAHRC/ARC manager.

CONFLICT OF INTEREST

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

FUNDING

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: The Neighbourhood Resilience Programme (NRP) was funded by the National Institute of Health Research (NIHR) and the academic, local authority and university partners in the NIHR Collaboration for Applied Health Research & Care, now the NIHR Applied Research Collaboration for the Northwest Coast.

ORCID ID

Harris Kaloudis https://orcid.org/0000-0002-0606-6292

NOTE

i. Examples of these can be found here: https://neighbourhoodresilience.uk/coren-and-the-nrp-members-experiences-and-outputs/

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