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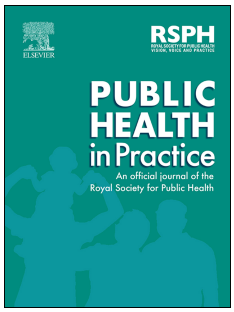

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Abstract:

Background: Strategies to embed research knowledge into decision making contexts include the Embedded Research (ER) model, which involves the collocation of academic researchers in non-academic organisations such as hospitals and local authorities. A local authority in Doncaster, United Kingdom (UK) has adopted an embedded researcher model within the National Institute for Health and Care Research (NIHR), Health Determinants Research Collaboration (HDRC). This five-year collaboration enables universities and local authorities to work together to reduce health inequalities and target the social determinants of health. Building on previous embedded research models, this approach is unique due to its significant scale and long-term investment. In this opinion paper Embedded Researchers (ERs) reflect on their experiences of the first year of the collaboration.

Study design: A reflective consultation exercise.

Methods: Observation of HDRC delivery meetings minutes, informal discussions with ERs, as well as a short proforma with embedded researchers (N=8).

Results: ERs valued the five-year timeframe which provided a unique opportunity for strengthened relationships and to apply formative learning as the programme progressed. However, differences in knowledge of undertaking research across the HDRC team and between practitioners and academics require each to respect different professional experiences and to avoid potential power imbalances. Diverse projects required researchers to be generalists, applying their expertise to multiple topics. This requires careful priority setting alongside workload and expectation management.

Conclusions: The significant scale and investment of the HDRC provides a unique opportunity for developing the ER role by applying formative learning as the programme progresses. However, success will require careful management of workload allocation and relationships between ERs and practitioners. Further learning on how to embed ERs within local authority contexts will emerge as the programme matures.

Key words: embedded research, health determinants research collaborations, local government

What this study adds

- The HDRC collaboration has facilitated strengthened relationship building between academics, practitioners and the public including those from marginalised communities.
- Several initial challenges have emerged including potential power imbalances and differences in knowledge in undertaking research which need to be carefully managed.

- The long-term investment of the scheme provides a unique opportunity to develop the embedded research model and to apply formative learning to the programme as it develops.

Implications for policy and practice

- Our reflections on the benefits and challenges of the embedded research role within the HDRC are timely given the significant investment of the programme and will be of use to other HDRCs delivering similar models.
- This paper builds on previous studies on the role of embedded research but is unique due the significant scale and long-term investment of the HDRC which provides an opportunity to further develop the ER role within local authority contexts.

Introduction

Embedding evidence into decision making within public health is critical to improving health outcomes and the cost effectiveness of interventions [1] [2]. Consequently, diverse strategies seek to bridge the gap between research and practice. One such approach is the role of the Embedded Researcher (ER). Despite diverse definitions ERs are typically understood as academic researchers who are collocated within non-academic organisations such as health services, charities and local authorities [3]. These researchers build collaborations between universities and practice to enable research activity, develop research capacity and infrastructure and mobilise research evidence. To date, ERs are largely based in healthcare contexts including primary care and social prescribing services (e.g. [4] [5] [6]). Increasing use of ERs within UK local authority settings has been driven by recognition of the need for greater capacity to support production and utilisation of evidence within local government [7][8].

In the United Kingdom (UK), local authorities (LAs) are responsible for numerous public services ranged across public health, social care, housing, waste management and the management of public spaces. LAs are well placed to address health inequalities through place-based interventions [9] yet disparities in health in the UK continue to widen [10]. In response to a need for further investment, the National Institute for Health and Care Research (NIHR) developed the Health Determinants Research Collaboration (HDRC) programme. The NIHR has awarded £150 million to 30 HDRCs across the UK, to provide the capacity and capability for local authorities to undertake public health research to address the wider determinants of health and health inequalities [11]. These 5-year collaborations enable local authorities to become more research-active, embedding a culture of evidence-based decision making. Each HDRC is adopting a slightly different model, but many have chosen the use of ERs. One such programme mobilises 8 academic employed researchers from early career to professorial level, embedded within Doncaster local authority. Previous research on the ER role within LAs has shown the potential for capacity building and organisational change, but often initiatives are too short term and "take much longer for observable change in research production to occur" [12:p8]. In this paper we reflect on the experiences of the ER model over the first year of the HDRC programme. The significant scale and long-term investment of the HDRC provides a unique opportunity to further develop the ER role within LA contexts by applying formative learning as the programme develops. Benefits and challenges of the role may well extend to other LAs as they develop similar models.

Methods

A reflective consultation exercise sought to gather insights on the benefits, challenges and emerging learning from the ER role. The aim of the consultation exercise was to capture emerging reflections of embedded researchers whilst the HDRC is in it's infancy. It is not a formal research project but rather a learning exercise to support future delivery of HDRCs and other research within local authorities.

We gathered insights from observations of HDRC delivery meetings minutes and informal discussions with ERs. We supplemented this with a short proforma emailed to each ER to provide people with an opportunity to reflect on the challenges, benefits and learning from the role (N=8). We utilised thematic analysis informed by Braun and Clarke's [13] six step analytical approach to draw out key themes.

Findings

Prominent themes emerged from the consultation exercise: (1) The need to build relationships and have mutual respect of knowledge and (2) Priority setting and managing expectations.

1. **The need to build relationships and have mutual respect of knowledge**

Embedded ERs within local authorities act as conduits for bringing different stakeholders together, notwithstanding several challenges. The five-year duration of the scheme offers unique opportunities to "*develop working relationships over a longer period of time as the work evolves"* (ER proforma response). ERs reported having the time to build trust and relationships especially between academics, practitioners and people from marginalised communities. Examples included: ERs working with local veterans to explore a suicide prevention project and supporting practitioners by analysing feedback from the local community on current health and wellbeing concerns.

Alongside longevity of the partnership, differences in skills and experiences of the different ERs were considered an asset providing opportunities for *"learning lots from the strengths of others in team"* (ER proforma response) but there was a risk of power-imbalances. The varied backgrounds of ERs positioned them at different points of the practice/academic spectrum. For example, some ERs were experienced academics whereas others were early career researchers with previous careers in the public and voluntary sector. The HDRC model differed from traditional ER models by including a team of ERs working together rather than mobilising one ER to a specific project. It was acknowledged that such differences, though an important strength of the collaboration, need to be carefully managed to avoid power imbalances between more and less experienced academics. For example, one ER encountered resistance to their ideas from other academic colleagues within the HDRC team and described how non-traditional methods and approaches were sometimes "*lost in translation*" (ER proforma response).

Further tensions relate to managing different skills, experiences and methods of working between the ERs and practitioners. It was acknowledged that engagement with those with lived experience through the HDRC is complex, challenging and should be guided by the needs of local communities. As such, traditional academic approaches or frameworks may not be appropriate, creating a tension between achieving academic rigour and the practicalities of delivering research within a local authority context. For example, there were emerging differences in understanding of ethical procedures between academics and practitioners within early evaluations, such as: practitioners not

understanding the need for participant information sheets, or contacting potential participants multiple times to ask for consent despite previous disengagement. In addition, academic research often takes much longer than practitioners anticipate due to the need to apply for ethical approval and develop project protocols, whilst timescales for applying for external research funding do not always align with LA processes. Practitioners sometimes wanted evaluations to yield favourable outcomes to support commissioning decisions. ERs felt this put them in difficult position in terms of reporting more critical or less 'favourable' findings and they felt conscious of this pressure because of working 'for' the LA. It was acknowledged that working within a political context where researchers may feel constrained in how they report findings could be a challenge for ERs and create an imbalance of power whereby the LA has the control over the information provided by the research and how it is used.

The different perspectives and experiences of ERs highlight the need to develop research capacity and knowledge within LAs. However, such challenges are recognised as common within the development of new programmes and particularly prominent within an HDRC which aims to generate innovative approaches. Despite occasional tensions between stakeholders, embedding ERs within LAs was considered a great opportunity for genuine coproduction and long-term partnership building between academia and practitioners to enable LAs to develop a research and evidence-based culture.

2. Priority setting and managing expectations

The breadth of initial projects initiated within the HDRC presented both opportunities and challenges. At the time of writing ERs were working on 25 projects with an average of 5 projects per ER (with some ERs working full/half time on HDRC work). Projects encompassed diverse areas of public health and wider local authority services such as housing, mental health, addiction, waste management and suicide prevention amongst marginalised communities. This required ERs to be willing to consider themselves 'generalists' and to apply their skills to new, and often unfamiliar, research topics. Conversely, practitioners served as the 'topic experts' working alongside ERs. Coproducing projects in this way through sharing skills and responsibilities helps to mitigate potential imbalance raised earlier. However, it was important to manage expectations on what ERs could deliver for each project. ERs were spread across multiple projects whereas practitioners maintained a single-project focus. The ERs wanted to meet the goals of each project to facilitate relationship building but had to balance providing significant support to a small number of projects against offering less support across a larger number of projects. This was a unique challenge for the HDRC model, given that previous ER models generally mobilise one researcher per project.

The core resource for each project was ER time. None of the projects had a specific budget for non-staff costs posing a key challenge within early projects e.g., for transcription of interview data. The significant long-term scale and investment of the HDRC added unique value by allowing the team to respond to challenges and apply formative learning as the HDRC progressed. In this case, this led to development of an approach to review budgets and reprofile resources to specific projects where appropriate. Practitioners were supported in learning to identify whether their topic warranted a full research project or whether a smaller, service evaluation, or even user feedback exercise, was sufficient. This highlights how a core ER role is to build practitioner research capacity and interest by exploring what information they require and how they could use the work to improve practice.

A supportive management structure alongside the development of clear processes for decision-making and resource allocation has been essential to manage priority setting and to ensure that

resource allocation decisions were not detrimental to relationships and engagement with the HDRC. For example, having a transparent process for deciding what topics should warrant a research study and allocated ER resource proved another unique challenge for HDRCs, given that ERs are typically allocated to one specific project**.**

Conclusion

This paper provides emerging reflections from a consultation exercise aimed at understanding the early benefits and challenges from the embedded research role within Doncaster LA. The long-term funding of the HDRC provides a unique opportunity to foster relationships and collaboration between academia, local government and marginalised communities and to use learning to develop the intervention. Nevertheless, the broad remit to develop research capacity and change the evidence-use culture results in tensions in managing expectations and competing project priorities. Early projects have also provided researchers with experience and exposure to diverse public health areas and teams. However, potential power imbalances, differential valuing of knowledge between academics and practitioners and the prioritisation of resources need careful management for the HDRC to realise its full potential. The HDRC Doncaster ER model remains in its infancy with further learning continuing to emerge as it is implemented within a local authority context.

Author statements

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Competing interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethical approval

As this work includes findings from a consultation exercise ethical approval was not required.

References

[1] Brownson RC, Fielding JE, Maylahn CM. Evidence-based public health: a fundamental concept for public health practice. Annu Rev Public Health 2009;30:175–201, doi: 10.1146/annurev.publhealth.031308.100134

[2] Kneale D., Rojas-García A, Raine R, Thomas J. The use of evidence in English local public health decision-making: a systematic scoping review. Implementation Science 2017;12:53, DOI 10.1186/s13012-017-0577-9

[3] McGinity R, Salokangas, M. Introduction: 'embedded research' as an approach into academia for emerging researchers. Management in Education 2014; 28(1), 3-5

[4] Westlake D, Elston J, Gude A, Gradinger F, Husk K. Impact on Covid-19 on social prescribing across an Integrated Care System: A Researcher in Residence study. Health and Social Care in the Community 2022;30(6):e4086-e4094. doi: 10.1111/hsc.13802

[5] Hazeldine E, Gowen G, Wigglesworth R, Pollard J, Asthana S, Husk K. Link worker perspectives of early implementation of social prescribing: A 'Researcher-in-Residence' study. Health and Social Care in the Community 2021;29(6), 1844-1851

[6] Wolfenden L, Yoong SL, Williams CM, Grimshaw J, Durrheim DN, Gillham K, Wiggers, J. Embedding researchers in health service organizations improves research translation and health service performance: the Australian Hunter New England Population Health example. Journal of Clinical Epidemiology 2017;85:3–11. doi: 10.1016/j.jclinepi.2017.03.00730

[7] Homer C, Woodall J, Freeman C, South J, Cooke J, Holliday J, Hartley A, Mullen S. Changing the culture: a qualitative study exploring research capacity in local government. BMC Public Health 2022; 22:1341, https://doi.org/10.1186/s12889-022-13758-w

[8] West J, Wright J, Bridges S, Cartwright C., et al. Developing a model for health determinants research within local government: lessons from a large, urban local authority. Welcome Open Research 2022;6:276

[9] Campbell F. A matter of justice Local government's role in tackling health inequalities. London: Local Government Association; 2018. Accessed here: https://www.local.gov.uk/sites/default/files/documents/1.42%20public%20health%20inequalities_web.pdf. Last accessed: 12/12/2013

[10] Marmot M, Allen J, Boyce T, Goldblatt P, Morrison J. Health equity in England: The Marmot Review 10 years on. London: Institute of Health Equity 2020. Access here: https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on. Last accessed: 28/11/2023

[11] National Institute for Health and Care Research Health Determinants Research Collaborations. https://www.nihr.ac.uk/explore-nihr/support/health-determinants-research-collaborations.htm; 2023 [accessed 12 December 2023]

[12] Edwards CR, Kneale D, Stansfield C, Lester C. What are the mechanisms driving the early stages of embedded researcher interventions? A qualitative process evaluation in English local government. Social Science & Medicine 2023;340, 116407

[13] Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. Qualitative research in psychology, 3(2), pp.77-101.