Research Champions: mixed methods evaluation of an interdisciplinary programme for community nurses and allied health professionals to build research capacity

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KEYWORDS
Practice development | research capacity | nurses | midwives and allied health professionals (NMAHPs) | clinical-academics | professional development | service development

ABBREVIATIONS
NMAHPs - Nurses, Midwives and Allied Health Professionals
NIHR - National Health Service
NHS - National Institute for Health Research
OT – Occupational Therapist
SLT – Speech Language Therapist

All author(s) made substantive intellectual contributions to this study by making substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; drafting the article or revising it critically for important intellectual content; and giving final approval of the version to be published.
Accepted for publication: Aug 14th 2023

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Chief Editor: Dr Claire Parkin. Current affiliation: Kent and Medway Medical School, Canterbury, Kent. CT2 7NT. UK.
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https://journals.kent.ac.uk/index.php/ajpp/index
ISSN Number: Online 2059-3198.

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FINANCIAL DISCLOSURE: The programme was funded by Health Education England Kent, Surrey and Sussex (Cohorts 1 and 2) and Kent Community Health NHS Foundation Trust (funding after Cohort 2)
This evaluation was funded by Kent Community Health NHS Foundation Trust

CONFLICTS OF INTEREST: All authors declare that they have no known conflict of interest, including any competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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What this paper adds:

Practitioners' enthusiasm had positive impact on colleagues, helping develop a research culture within their service. Managerial buy-in during and post-programme were essential, as was a dedicated research facilitator. Embedding a culture of research takes time and needs organisational commitment and research infrastructure. The impact on retention requires further monitoring.

Abstract:

Aims: to evaluate the Research Champions programme and learn what practitioners perceived as key challenges/benefits; to identify measurable outcomes; and to identify ways of increasing programme uptake.

Background: research within healthcare services is a priority, highlighted throughout UK policy and reflected internationally. The one-year programme was designed to enable nurses, midwives and allied health professionals to develop their practice by learning about research as part of practice development.

Design: mixed methods longitudinal: questionnaires/focus groups with practitioners and their managers.

Methods: Practitioners in three cohorts (2018-21) were asked to complete baseline and post-programme questionnaires; managers were asked to complete post-programme questionnaires; practitioners in the third cohort participated in focus groups. The research facilitator tracked practitioners' progress for evidence of measurable outcomes. Qualitative data was analysed thematically, underpinned by a realist approach, with strategies to maximise rigour. Reporting complies with the COREQ qualitative checklist.

Results: Twenty-seven (of 31) practitioners completed the pre-programme questionnaire, 19 the post-programme questionnaire; and 13 (of 29) managers completed their questionnaire. Measurable outcomes included Masters degree, research internships, conference presentations, further research projects and promotion. Nine practitioners participated in two focus groups. Three themes were identified. *Aspirations and challenges* reflected tension between wanting to develop their professional practice using research while negotiating barriers. *Coming together, learning*

together concerned the importance of time to reflect and develop research knowledge/skills, alongside developing confidence to innovate practice. *Moving forward, maximising impact* evidenced how the programme was a steppingstone to further professional and service development and transforming culture.

Conclusion: Practitioners' aspirations spanned individual, service and organisational goals. This introductory programme provided the first step to further clinical-academic opportunities for the most capable and motivated practitioners. Key mechanisms included developing research knowledge/skills and the confidence to translate learning into practice. Immediate gains included practitioners sharing their knowledge, skills and enthusiasm for research with colleagues. Medium to longer term gains included changes in clinical practice with direct patient benefit, developing a research network, ongoing research activities and embarking on a clinical-academic pathway.

Introduction:

Practice development encapsulates a commitment to person-centred and evidence-based healthcare. It involves practitioners in a continuous process of learning to facilitate better clinical outcomes and improve the quality of care (Bradd, Travaglia and Hayen, 2017). Evidence-based healthcare incorporates the integration of best research evidence, individual clinical expertise, patient choice and information from the local context (Rycroft-Malone et al., 2004). While nurses, midwives and allied health professionals (NMAHPs) have a strong tradition of reflecting on clinical practice to improve patient care, research is less embedded in practice (NHS Health Education England, 2022).
Research capacity building is defined as 'a process of individual and institutional development which leads to higher levels of skills and greater ability to perform useful research' (Trostle, 1992, p. 1321).

The importance of research within the National Health Service (NHS) has been highlighted through the NHS Constitution for England (Department of Health and Social Care, 2021) and endorsed by subsequent strategies for NMAHPs (NHS England, 2021; NHS Health Education England, 2022). This reflects a wider push in similar high-income (Carrick-Sen et al., 2019; King et al., 2022; Newington et al., 2021) and low-middle income countries (Bowsher et al., 2019; Elmore et al., 2022; Haregu et al., 2019).

Building research capacity is based on the premise that research active practitioners can drive service improvements with direct patient benefit and contribute to building organisational research capacity (Boaz et al., 2015; Schmidt et al. 2022). The evidence spans building individual research capabilities and building organisational research capacity, with inconsistent definitions and parameters making it difficult to compare studies.

There is some evidence that research active practitioners and healthcare organisations can improve healthcare performance, but the mechanism for this remains unclear (Boaz et al., 2015). Building research capacity is a complex and dynamic process (Trostle, 1992) which is difficult to monitor, evaluate or sustain (Henshall et al., 2021; King et al., 2022;

Slade, Phillip and Morris, 2018). Positive outcomes depend on multiple factors, particularly organisational and financial support, management structures and strong leadership (Boaz et al., 2015; Henshall et al., 2021; King et al., 2022; Matus et al., 2018; Slade, Philip and Morris, 2018).

Doctors and dentists have an established tradition of evidence-based practice underpinned by a strong research culture (Slade, Phillip and Morris, 2018) and established clinical-academic pathways (Henshall et al., 2021). However, NMAHPs do not have this tradition and face considerable barriers including limited opportunities or funding (Westwood et al., 2018); lack of time, knowledge, skills and competence; motivation, associated fear of research; and lack of organisational support (D'Arrietta et al., 2022). The National Institute for Health Research (NIHR) funds a range of opportunities to support NMAHPs develop a clinical-academic career (Health Education England, 2017) but funding is highly competitive and often deemed out of reach (Cooper at al. 2019). Despite this, development opportunities coupled with career progression have the potential to help attract and retain staff alongside developing 'effective cultures of learning at every level of the system to enable change to be embedded' within an organisation (Manley et al., 2022, p. 20).

In contrast to the acute sector, community health and social care organisations do not have a history of leading research, lack appropriate infrastructure and most services are led by NMAHPs with limited research experience. Within a local NHS Community Trust, the Research Team recognised NMAHPs wanted guidance on how to take the first steps into research. However, practitioners felt that applying for national funding was too daunting, too big a commitment and beyond their capabilities. The Research Champions programme brought together practitioners across services and specialities to enable them to develop an understanding and appreciation of research; to increase their confidence in using research to improve clinical practice; to initiate improvements in care; and to work collaboratively, widening their networks. The programme was broadened in 2021 to include other local health and social care organisations who wanted to participate. The programme content was initially developed by Canterbury Christ Church University in collaboration with the Research Team. It was later mapped onto an existing framework for building research capacity that considers process and outcomes for individuals, services/teams, organisations and wider supporting units (Cooke, 2005).

Table 1 demonstrates how the principles of building research capacity were translated into the programme with key elements including three taught days, academic supervision and clinical mentoring; and various activities to disseminate outputs and raise awareness.

The assignment, a literature review and poster abstract, was designed to enable practitioners to develop their own idea related to clinical practice and/or service development, explore the evidence, identify recommendations for practice, and highlight areas for future research.

Table 1: Research Champions Programme: mapping principles

Principle (Cooke, 2005)	Research Champion Programme components
1. Research capacity is built by developing appropriate skills and confidence, through training and creating opportunities to apply skills.	• **Taught sessions** (3 days, University based) include: what is research; developing research questions; searching and critiquing the literature; qualitative, quantitative, and mixed methods approach; ethics; patient and public involvement. • **Academic supervision** (1:1, University staff): monthly sessions and email contact in between to support skill development and writing assignments. Academic supervisors are matched for topic area and/or method where possible. • **Library/IT support:** taught sessions and 1:1 support provided by University subject librarian. • **NHS Trust internal sessions**: ideas and development sessions to bring group together to share experiences and tips. • **Clinical mentor** (based in practitioner's own organisation) constitutes 3 meetings over the academic year to talk through progress and to support clinical application during and post programme.
2. Research capacity building should support research close to practice for it to be useful.	• **Research question** must be based on their current role/setting and supported by their line-manager. The question is developed/refined in group sessions and 1:1 with their academic supervisor.
3. Developing linkages, partnerships and collaborations enhances research capacity building	• **Individual level**: academic links developed through academic supervisor's networks; partnerships with other colleagues across other organisations, including networking via their research departments; developing links with profession specific organisations.
4. Research capacity building should ensure appropriate dissemination to maximise impact	• **Team/service** level: practitioners provide regular feedback at team meetings; present their findings as a poster; and display the poster in clinical setting for colleagues and patients to view. • **Organisational (NHS Trust)** level: practitioners each write a monthly blog that is circulated on the organisation's intranet to share progress/findings and raise awareness of the programme; champions present posters to senior staff including Chief Nurse, Allied Health Lead and Research Lead (or representatives); work fed into senior level board meetings; research as an agenda item at team meetings (i.e., each practitioner's team). • **Regional and national**: encouraged to submit abstracts to conferences, with support for funding.
5. Research capacity building should include elements of continuity and sustainability	• **Next step**: Research facilitator supports practitioners to identify next opportunity and apply for funding and opportunities in national studies. • **Peer support**: previous Research Champions mentor new ones to embed a network of champions across the organisation. • **County wide**: the programme is now offered to other health and social care organisations in Kent to build regional research capacity.
6. Appropriate infrastructures enhance research capacity building	• **Service support**: practitioners must have management support before applying and clinical support during the programme. • **Backfill of** 24 days with flexibility of how/when it is taken, agreed between practitioner and manager. • **Research Team**: supports practitioners during and beyond the programme e.g., funding applications, supervision. • **Dissemination**: information/blogs are shared through the intranet for all staff to access; the Research Interest Group disseminates information on all research/professional development opportunities. • **Steering group** meets bi-yearly to maintain overview of the programme and to inform its continuing development.

The initial pilot (2018-19) was managed by the NHS Trust's Research Team and funded by Health Education England Kent, Surrey and Sussex. The programme was co-created by research leaders at Canterbury Christ Church University and University of Kent and is now run solely by the latter. The programme was advertised to all registered practitioners, with a minimum of one-year clinical practice. After the first running, it was accredited at Masters level (15 credits) and has subsequently been opened to all health and social care organisations locally, including non-registered practitioners.

Aiming to explore practitioners' perceptions of the programme and how to develop the programme, sub-questions asked:

1. What did practitioners perceive as the benefits and challenges of the programme?
2. What outcomes did practitioners identify individually, for their service and/or their organisation?
3. How can a larger and more diverse number of practitioners be encouraged to participate in the programme?

Methods:

Design: Evaluation for all cohorts constituted an on-line pre- and post-programme questionnaire (supplementary file 1), and a post-programme questionnaire for managers (supplementary file 2). Additional focus groups were carried out with the most recent cohort (2021/22) whose participation had been delayed one year due to the Covid-19 pandemic. The intention was to supplement questionnaire data with in-depth exploration of practitioners' experiences, in the current post-pandemic context, to inform the next running of the programme (2022/23).

The evaluation took a realist stance, concerned with understanding and explanation in a real-world setting (Maxwell, 2012). A distinctive feature is the belief that the world is independent of our understanding of it and that 'all knowledge is partial, incomplete and fallible' (Maxwell, 2012, p. 5). Realism acknowledges that there can be different yet valid interpretations of a phenomenon based on a particular perspective or outlook (Maxwell, 2012) which aligns with exploring practitioners' (and managers') perspectives and the mechanisms by which different outcomes are reached in different contexts. The Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines was used (Tong, Sainsbury and Craig, 2007).

Participants and setting:
The term 'practitioner' is used to refer to Research Champions, including NMAHPs and non-registered professions (e.g. postural-stability instructors). All practitioners were asked to complete a baseline and post-programme questionnaire; managers were asked to complete a post-programme questionnaire; and focus groups were held with the third cohort.

Data Collection:
Practitioners' baseline and post-programme questionnaires: The questionnaires were non-standardised, informed by an established approach (Artino et al., 2014) using a mixture of Likert scales, yes/no answers and free text

comments. The questions included service details, confidence in academic and research capabilities (Likert scales) and expectations for the programme and beyond. Two questions were included to compare pre- and post-scores: 'How confident do you feel in your academic abilities? E.g. following lectures, taking notes or writing essays' and 'Which research activities do you feel confident taking part in?' both with 4-point Likert scales. The first running constituted the pilot and a few minor wording changes were made for subsequent cohorts. The questionnaire was administered using the platform Snap Surveys (https://www.snapsurveys.com), already used by the organisation for auditing purposes. The advantages of this approach included no additional costs, quick and easy for practitioners to access via email and accurately recorded data.

Managers' post-programme questionnaires: Short on-line questionnaires were emailed to managers after programme completions using Snap Surveys. Questions related to logistics including managing backfill and the impact on the service. Nine questions required free text answers, the tenth a yes/no response, asking if managers would 'recommend and allow more of your staff to participate in the programme?'.

Focus groups: The idea of a focus group was discussed with practitioners (cohort 2021-22) early in the year and received positively. The aim was to provide a forum for practitioners to openly discuss their views and the topic guide (supplementary file 3) was informed by their initial expectations (a group exercise on the first taught day) and baseline questionnaires. Questions included what they found beneficial/challenging, suggested improvements, and how to encourage more practitioners to participate and increase the diversity (in any sense of the word) of those who do.

All practitioners were emailed the information sheet, consent form and topic guide a week before the last taught session (June 2022) and asked to return the signed consent form, with the option of completing it on the day.

Practitioners were able to 'opt out' by leaving at the end of taught sessions held at the University, without explanation. As nine practitioners wanted to participate (the tenth was off sick), two focus groups of one hour were run to ensure everyone had opportunity to express their views in-depth. The groups were facilitated by two experienced (female) researchers not involved in the programme. They were briefed in advance about the aims, topic guide, consent and logistics. The focus groups were recorded with an encrypted digital voice recorder and transcribed professionally.

Tracking post-programme outputs: The Research Facilitator offers ongoing support and about half of practitioners remain in contact post-programme. Support includes inviting practitioners to a Research Interest Group, held alternate months; inviting practitioners to mentor future Research Champions and supporting those who do; joining the Research Champions Steering Committee; signposting to research activities/opportunities; and supporting applications for research/educational funding. While this is not a formal method

of data collection, it has enabled tracking of measurable outcomes stemming from those who completed the programme. Post-programme outputs were tabulated for each person and whether immediate, one-, or two-years post-programme. Outputs were collated to ensure confidentiality (Table 3).

Data Analysis: Focus groups and questionnaires (downloaded into Excel) were imported into Nvivo, which allows more flexibility when analysing and integrating across data sets, compared to using spreadsheets or other methods (Bazeley, 2013b). Figure 1 outlines the approach, based on Bazeley (2013a) and underpinned by realist logic (Maxwell, 2012). Data was organised by source and type (Bazeley, 2013b). Initial exploration, reading and reflecting on the data, was followed by developing descriptive codes. A mixture of deductive coding was used, using Cooke's (2005) framework, and inductive for data that did not fit within the framework. Initially, each of Cooke's (2005) principles were divided by individual, team and organisation (adjusted from Cooke's terminology of teams, organisations, and wider supporting units) but found this resulted in excess duplication of coding, so these sub-nodes were collapsed.

Refining, naming and organising codes was a continuous process, pausing with each iteration to reflect and interrogate coding decisions. This led into constructing themes and developing theoretical understanding drawing on abductive/retroductive reasoning where the aim is to identify mechanisms that explain the findings (Jagosh, 2020). Abductive logic allows the researcher to think creatively about what might explain the data while retroduction looks for causal mechanisms and what context is needed to trigger them (Jagosh, 2020). After several iterations, a conceptual model was developed, initially by hand, in preference to using Nvivo functions for visualising data.

Given the size of the focus group, data saturation was not anticipated, however the free text comments in the questionnaires were richer than expected and appeared to reach theoretical saturation. Hennink, Kaiser and Marconi (2017, p. 594) offer a useful distinction between code saturation and meaning saturation: the former refers to 'the point when no additional issues are identified and the codebook begins to stabilise' while the latter is defined as 'the point when we fully understand issues and when no further dimensions, nuances, or insights of issues can be found'. This latter interpretation was used and ensured that all aspects of the data had been comprehensively explored. However, it is acknowledged that a more diverse sample over a longer time may have provided new insights.

To aid rigour, Guba and Lincoln's (1982) concepts of trustworthiness were used, reflected in the criterion of credibility, transferability, dependability and confirmability, alongside Bazeley's (2013b, 2013a) practical guidance. Figure 1 provides examples. Key strategies included one researcher leading analysis while the other reviewed/interrogated all decisions; using reflexivity to challenge any assumptions and expectations; using multiple sources of evidence which were

Figure 1: Data analysis and addressing rigour

On-line questionnaires (all cohorts):
Research Champions (**n=31**):
- Pre-programme completed (**n=27**)
- Post-programme completed (**n=19**)

Managers (**n=29**, two clinicians from same service). Post-programme questionnaires completed: **n=9**

Focus groups:
2021/22 cohort (n=9).
Two groups each with one facilitator and audio-recorded

Focus groups transcribed verbatim.

Downloaded from survey portal into Excel.

Nvivo: data imported and organised using files (focus groups) and cases (questionnaires).

Initial exploration: read, reflect and annotate all data.

Developing descriptive codes:
- **Deductively**: using Cooke's (2008) framework, six parent nodes (six principles); each parent node subdivided into child nodes, for level of individual, service and organisation.
- **Inductively**: data that did not sit within the above.

Naming and organising codes:
- Added descriptive summary for each node & sub-node.
- Highlighted overlap between and within sub-nodes (e.g. double coding to individual & service)
- Collapsed sub-nodes where appropriate.
- Reviewed coded data in Nvivo, alongside the coding log, and identified overlap between parent nodes.

Constructing themes and developing theoretical understanding:
- Themes developed using retroductive/abductive reasoning (asking 'what made this possible?').
- Used mind maps to help build understanding and test/refine developing themes ('describe, compare and relate').
- Considered how themes intersected to develop interrelationships and build overall understanding.
- Built conceptual model to understand/explain outcome patterns.

ADDRESSING RIGOUR

Focus groups:
- Carried out at the end of the last study day so practitioners could exempt themselves without reason.
- Facilitated by qualitative researchers unconnected to the programme.
- Professionally transcribed.

Range of data: three cohorts; clinicians and managers; questionnaires and focus groups; facilitator's field notes; annotation feature in Nvivo to keep track of coding decisions and queries.

Data management: able to track source of data and maintain audit trail.

Coding:
- Discussion of initial impressions with focus group facilitators
- Descriptive coding, grounded in the data (direct quotes) and in context
- Iterative process with regular review of the dataset to refine coding
- Used annotations feature of Nvivo to record developing ideas
- Exported coding log for each refinement; summarised key points per node/sub-node with reflections/queries
- Each iteration of coding log and reflections/queries shared with second researcher to interrogate coding decisions
- Each new iteration of Nvivo file saved separately to maintain audit trail.

Themes:
- Nvivo queries functions (e.g. word search) used to help interrogate the data.
- Explanation building involved examining and reflecting on all plausible rival explanations and considering context, outcomes and underlying mechanisms that could explain the findings.
- Developed theories interrogated by core team members who had not been involved in data collection or coding.

likely to generate 'stronger outcomes, that is, better supported by evidence, or more generalisable, or both' (Bazeley, 2012, p. 816); explanation building and analysing instances that did not appear to fit with the majority (Bazeley, 2013a); developing theories were discussed with, and interrogated by, team members who had not been involved in data collection or analysis; and maintaining an audit trail of all steps and decisions (Bazeley, 2013a). Member checking (giving the transcribed interview or completed analysis back to participants for comment) was not used in-line with Morse's (2015) argument that it does not enhance validity.

Ethics and Data Protection: Ethical approval was gained from University of Kent (Application Ref: 585) and governance approval from the NHS Trust Research and Development department. Independent researchers facilitated the focus groups because practitioners were unlikely to have felt able to share negative perceptions of the programme with those who taught it. Practitioners had been supportive of the idea of holding a focus group when discussed earlier in the year and, as with all research, could chose to participate or opt out. The focus groups were professionally transcribed and anonymised.

Patient or Public Contribution:
The original Research Champions programme was informed by the Steering Committee which has patient representatives and practitioners (including previous Research Champions) and met twice yearly. Given the size and remit of this evaluation, patient or public involvement has been limited to that of the Steering Committee.

Results:

Participant characteristics: Table 2 summarises characteristics of the 31 practitioners who completed the programme. Eleven were nurses, 15 AHPs and 5 others. Highest qualification ranged from Masters degree (3), Batchelors degree (15), diploma (7) and BTEC/other (2). All but three participants were female, reflecting the disciplines represented and the organisation's ratio of 2:1 nurses to AHPs (approximately 1500:750). Twenty-seven submitted and passed the assignment (although for the first cohort this was not formally accredited). The reasons for not submitting were illness, personal circumstances and/or struggling with academic requirements. Table 2 also details questionnaire completion.

The Research Facilitator stayed in contact with fifteen practitioners: cohort 1 (3 AHPs and 1 nurse); cohort 2 (5 AHPs, 1 nurse, 1 assistant practitioner); cohort 3 (3 AHPs, 1 nurse). Table 3 summarises aggregated outcomes.

Themes:

Theme 1: Aspirations and challenges:
This theme reflects the tension between practitioners wanting to study to the best of their abilities and challenges that had to be negotiated. All practitioners had strong aspirations to develop their understanding, knowledge and skills to improve clinical practice and contribute to service development:

I want to understand how to undertake a research project. I can't help but think without sound research underpinning our practice there is no way the NHS can move forward and be confident in its treatment or even survive. Cohort 2 (C2), baseline

Table 2: Research Champions characteristics and questionnaire completion

Academic year	Number of Research Champions	Discipline	Assignment submitted	Average mark (range)	Number who have left the Trust since completion	Nos practitioners completed pre-programme questionnaire	Nos practitioners completed post-programme questionnaire	Nos managers completed post-programme questionnaire
2018-19	11	• 6 nurses • 3 AHPs (SLT, OT, podiatrist) • 1 pharmacy technician • 1 healthy weight lead*****	10 (pre-accreditation)	N/A	2	9	7	8 (out of 9, 2 had the same manager)
2019-20	10	• 4 nurses • 5 AHPs (3 OTs; 2 physios) • 1 assistant practitioner*	9	63% (52-72%)	3 (1 did not complete)	9	5	0******
2021-22	10	• 1 nurse • 7 AHPs (3 physios; 2 dieticians; 2 OTs) • 1 associate practitioner* • 1 postural stability instructor*****	8	71% (60-76%)	0	9	7	5
Totals:	**31**	• 11 nurses • 15 AHPs • 5 Other	**27** (87%)	67%	5 (16%)	27 (87%)	19 (61%)	13 out of 29 (45%)

* Non-registered practitioners
** Unable due to redeployment of staff during covid-19 pandemic
N.B. **2019-21** No cohort due to Covid-19 pandemic

questionnaire (B). Several practitioners wanted to find answers to specific clinical queries, relevant to their own clinical practice. They identified the importance of service development based on evidence and 'patient needs':

I hope to make a contribution towards developing the service I work in, in line with current evidence-based practice. C3-B

A common aspiration was to develop the confidence to undertake post-graduate studies and some practitioners commented that this stemmed from the constraints of working during the Covid-19 pandemic:

Through the lockdowns and working in Covid it was quite tiring and then to allow your brain to sort of stop thinking about all these threats and think like positive about a future and not have to be in this crisis response all the time. C3 focus group (FG)

Practitioners also wanted to encourage their colleagues to engage in research and work together to improve their service:

I want to encourage my fellow nursing colleagues to take part in research and I look forward to working with colleagues and making positive changes. C3-B

Table 3: Evidence of outcomes and impact

	On completion	Following year	Two years on
Conference presentations			
National	6		
Regional	1		
Further studies			
Commenced Clinical Academic programme (nationally funded)	1	2	
Commenced Masters degree		2	2*
Occupational therapy apprenticeship	1		
Research activities			
Appointed Research Lead for their service		1	
Site Principal Investigator in nationally funded study		1	1
Participated in James Lind Alliance priority setting partnership	1		
Policy development for a specific area with Public Health and Local Authority.	1		
Funding applications with local University for an NIHR call.	3		
Other activities			
Promoted within the organisation	3	2	1
Appointed as lecturer in another organisation			1

*Completed Clinical Academic programme before starting Masters.

However, challenges were considerable and included finding time to study, having 'headspace' and maintaining motivation:

What I struggle most with is those gaps between doing the sessions, and then losing the momentum again and then having a load of work piling up from an NHS perspective, … I like to get in a headspace and just focus for a good few hours. C3-FG

All practitioners had to balance competing priorities and found it hard to protect study time. They worried about the impact on their patients, colleagues and the service but were reticent to absent themselves when studying:

I'm seeing patients remotely when I'm on study days which is not the ideal, … you're still responsible for your job, even though you're not there, and you feel like oh I just am quite a guilty person and I feel bad… obviously I could be really strict with myself and say I'm on a study day, but I wouldn't do that, so then I think some of it is self-discipline as well. C3-FG

However, practitioners developed strategies to protect their study time, including turning off all means of communication, using email 'out of office' notifications, using a non-NHS device, informing their team in advance when they would be unavailable, being 'strict' with themselves and making best use of supervision:

As soon as we came on the first day and met [XXX], my academic supervisor, then had the support from her on a monthly meeting and that has been really helpful … that kept me on track C3-FG

Strategies also included staying connected to their project, demonstrating commitment:

I've just got my comfort blanket of my research folder here, I just hold that to my heart.
… that's so funny because I've got my favourite articles all printed out in my bag and I'm carrying them around with me and it makes me feel better.
Yeah, I've printed all mine in a lever arch file and I carry it into work sometimes C3-FG

Other challenges were academic, including managing information technology, particularly for practitioners who had not studied for many years:

My own skills around using computers and academic writing is limited and this did hinder my approach to the writing of my research report. C1 post-questionnaire (P)

Others found it hard to pace themselves and wanted guidance of what to do by when:

I know it is getting us used to independent study but I found there was not much guidance on what we should get done by certain points in the programme and then more of a rush to get everything done towards the end. C3-P

Some practitioners wanted sessions closer together at the start of the year, to help them keep the momentum going, while others suggested split sessions with self-study in the afternoon. There were surprisingly few comments about struggling with the 'process of actually how to write and where to start' (C3-FG). The four practitioners who did not complete the assignment all had multiple challenges which constrained their ability to engage as fully as they wanted to.

Despite the challenges, all practitioners who completed the post-programme questionnaire said they would recommend it to colleagues. Linking to Theme 3, comments reflected a positive experience with sustainable personal impact:

This was an excellent opportunity to find out more about how to combine a clinical career with academic study, with a generous back-fill to allow time to explore different avenues, try things out and learn a lot about myself in the process. C1-P

Finally, managerial support was a crucial mechanism to managing challenges but spanned pre- and post-programme so is included in Theme 3.

Theme 2: 'Coming together, learning together': This theme encapsulates three interlinked areas: time to reflect with peers and feeling inspired by each other; developing skills and knowledge; and feeling supported. Together these led to increased confidence in academic/research capabilities and sustained aspirations to drive service improvements.
Practitioners all highlighted the importance of having time to reflect with peers who had a similar outlook:

I think it's coming together with other people has been a real kind of joy, outside of work, it's just a whole fresh load of faces, and new people to get to know. C3-FG

They valued meeting face-to-face, in the context of ongoing Covid-19 restrictions: *I also found meeting with others on the university days of real benefit. Being able to share experiences along the way helped enormously*. C3-P

Linked to this, learning about each other's work helped practitioners reflect on their own service and consider innovations across services and disciplines:

Finding out what other people do in their area… getting ideas about how things work elsewhere and, could we implement that where we are. C3-FG

Practitioners also highlighted a more collaborative approach during the programme, compared to 'silo working' in a large and geographically dispersed organisation:

It feels like… on this programme we are actually more working collaboratively whereas… we don't often get that chance to really widely network. C3-FG

Practitioners all valued increasing their understanding and knowledge about research, and developing skills including searching the literature, critically appraising papers, ethics, patient and public involvement and implementation/knowledge translation. Most emphasised the importance of one-to-one academic supervision alongside taught sessions:

My academic supervisor, he was a superstar and supported me throughout. I felt that I could contact him whenever I had a query or a wobble, which was a real help. C3-P

However, not all supervisors were available when needed and not all learning was perceived as relevant. For example, two individuals (this practitioner and a manager) questioned the assignment's purpose:

I wondered if more practical research rather than a literature review would have been more effective in terms of implementing changes to my service. C3-P

Conversely, other practitioners valued the opportunity to focus on one question:

I have really benefited from spending time on something of my choice and interest and really going into depth on topics. Having a completed essay at the end of it all is a massive bonus. C3-P

Most practitioners made their own connections and provided examples of using their learning to advocate for evidence-based service improvement:

The confidence and the courage in my convictions to make changes in the way we deliver services for falls prevention. Off the back of the research, I became more confident in leading a change in the way we deliver exercise C3-P

Alongside improved confidence, practitioners perceived increased independence to pursue research goals with the implication that they could drive improvements in practice:

I have gained far more confidence, but as well I feel I have more autonomy, you know, being able to do research in the first place because as nurses we were kind of not doing that. C3-FG

Not all practitioners wanted to continue research activities, but many regarded the programme as an opportunity to ascertain if research was for them:

I sort of saw it as a springboard essentially to get my feet wet in research, and then it would allow me, give me more confidence and allow me those contacts C3-FG

From the focus groups, there was a sense that it was the interaction between peer support, increased knowledge and academic support that met expectations:

Everything in the programme has been amazing, the communication, the times, the resources, support from [programme leads]. C3-FG

Theme 3: Moving forward, maximising impact: This theme encompasses how practitioners continued to sustain practice development activities post-programme. To enable this, practitioners needed buy-in from their managers and organisational infrastructure. Impacts were at the level of individual practitioners, the service, improved care and the organisation. Of those who completed the post-programme evaluation, most (15 out of 19, 79%) said they had plans and/or wanted to continue their involvement in research:

Things like the Research Interest Group, knowing that there are other opportunities… I don't want to stop now completely because I think that would be a shame and I don't think we should either. C3-FG

Immediate individual outcomes included presenting at regional/national conferences; applying for post-graduate courses; joining existing research activities; and applying for promotion:

I have grown in confidence in studying at level 7 which has enabled me to apply and be successful to study for an MSc in Advanced Clinical Practice. It is a great stepping stone back into the world of academia. C2-P

However, many outcomes had benefits for the service, reflecting practitioners' original ambitions:

The most realistic plan for me is to try to introduce to the service the concept of updating our practices which reflects the latest evidence base. I feel that this is extremely important and is achievable, because this can be broken down into bitesize chunks. C2-P

Similarly, other outcomes had direct clinical impact:

I have thought about outcome measures that were included in research and they were found to be more therapy based than patient based. Therefore now I use different ways to measure effectiveness and involve the patient throughout with them scoring themselves. C2-P

Practitioners also used their increased knowledge and confidence to advocate for patients:

It has made me more able to advocate for families who are needing rehousing. It has helped me make links with public health… and with local… team management boards. C2-P

Managers identified ways in which new learning had benefited the individual, for example:

Improved confidence, improved motivation, eagerness to continue to contribute to research and improve service delivery. C1 manager

And also benefited the team:

Having a member of the Team involved in the programme has given the rest of the Team an insight into the value of research and also raised the profile of the Team and the specialism. C1 manager

And patient care:

[Practitioner] has generated an interest in research within the team… [practitioner] was able to share her literature search…, which reinforces our evidence based clinical interventions. C3 manager

Networking opportunities were perceived as important to develop collaborations for (future) research opportunities:

Contact with other Research Champions affording new networking opportunities with like-minded colleagues. Opportunity to collaborate further with a London team who piloted the studies I was reviewing. Greater understanding and interaction with Trust's Research Group and members of that team. C1-P

Line-managers expressed mixed views about backfill - most regarded it as essential but were flexible how they managed practitioners' time. There were two examples where practitioners met resistance, leaving them demotivated:

I am surprised at how uninterested the managers are on the piece of work I have carried out, which has left me feeling deflated and uninspired C3-FG

This appeared to relate to wider issues happening within the service that had not been well managed:

My work hasn't allowed me the space… It's a bit contentious… bigger things than me and my project just got in the way unfortunately. C3-FG

However, most managers were supportive during and after the programme, with examples of involving practitioners in further research:

I am including [practitioner] in projects that correlate with her research. She is currently involved with a project to roll out exercise classes C3 manager

Additional to individual commitment and managerial support, it was clear that organisational infrastructure was important to provide/support opportunities to sustain individual practice development activities, embed a research culture within the organisation, and to build research capacity. The Research Team had mechanisms to raise awareness of the programme and disseminate outputs (e.g. poster conference) but these were limited.

Finally, practitioners were asked for suggestions about how to grow the programme, increasing the number and diversity of applicants. Ideas focused around better advertising and ongoing dissemination via internal communication channels. Two suggestions stood out – first to highlight immediate and tangible gains,

for example one practitioner had used their literature review to persuade the head of service to purchase equipment. Second, speaking to previous Research Champions:

I had a colleague who did it the year before, so I just spoke to him about what it was about and maybe I wouldn't have applied if I hadn't had that ability to get more understanding of it. C3-FG

Allied to this, previous Champions who became mentors actively encouraged colleagues to become involved. 'Word of mouth' was seen as the key method to increase the numbers and diversity of applicants, with the latter interpreted in any sense of the word, including men, ethnicities reflecting those in the organisation/Kent, nurses and (older) staff with diplomas. Managers also supported subsequent practitioners:

It [backfill] was not particularly disruptive to the service. Some cover needed but this was covered by existing staff… I already have another member of staff participating. C3 manager

Discussion:

The programme was designed as an introduction and provided a 'no-obligation' opportunity for those who were unsure if they were suited to research, were reticent to commit to larger programmes and/or lacked confidence in their academic abilities. This evaluation aimed to elucidate what practitioners perceived as key challenges/benefits; to identify measurable outcomes; and to identify ways of increasing programme uptake.

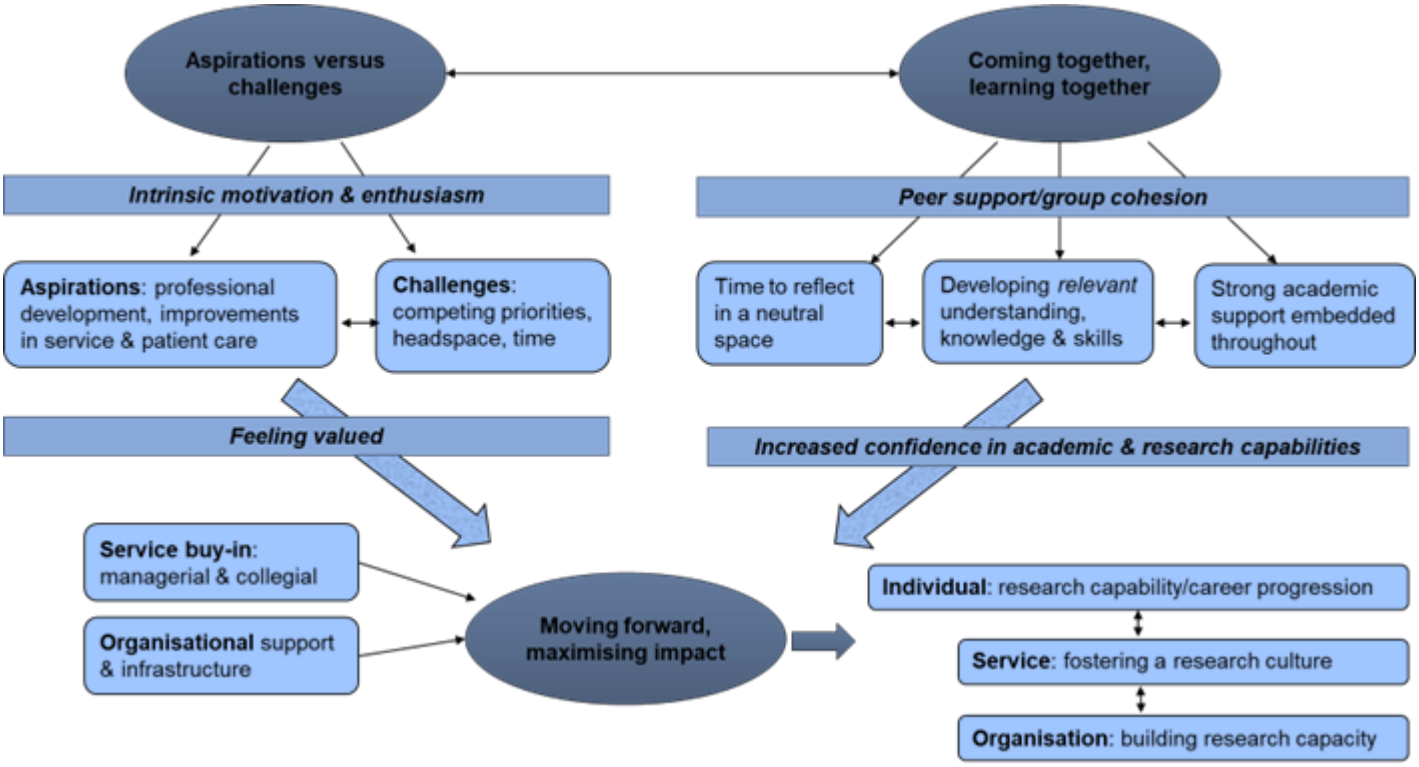
Figure 2 provides a conceptual map of the three themes and underpinning mechanisms.

First, practitioners were committed to improving (their own and others') practice and driving service improvements, underpinned by strong intrinsic motivation. This was balanced against significant challenges which practitioners were able to mitigate when they felt valued by their organisation and supported by their manager. Second, practitioners valued time and space to learn together, as a cohesive group, with strong academic support, enabling them to develop confidence in their new knowledge and skills. Third, practitioners used their learning as the first step in their research journey, providing further opportunities were available and again supported by their manager and/or organisation.

Regarding impact, organisational gains were hard to elucidate, as might be expected and given the time it takes to build organisational research capacity (Trostle, 1992). However, there were measurable outcomes for practitioners, even within this short timeframe (Table 3). Service level benefits included knowledge transfer of specific research skills, helping to develop a research culture and initiating changes in clinical practice with (self-reported) improvements in patient care.

Even practitioners who did not seek further formal research opportunities benefited from the programme. We did not find any practitioners who did not regard research as part of their job (D'Arrietta et al., 2022) although this likely reflects selection bias of those who joined the programme.

Table 3: Evidence of outcomes and impact



The programme enabled practitioners to decide whether they wanted to continue with research and identified those who were highly motivated.

Factors that facilitated engagement reflected those in the literature for large/ nationally funded programmes and included support to build relevant skills and confidence; collaborative working/networking opportunities; and valuing practitioners' engagement in research (Henshall et al., 2021; Matus, Walker and Mickan, 2018; Newington et al., 2021; Slade, Philip and Morris, 2018). D'Arrietta et al. (2022) categorised practitioners by attitude: *very positive*, marked by enthusiasm to advance clinical knowledge and patient health outcomes, and eager to develop their careers; *positive*, focused on improving clinical practice and care; and *negative* where costs outweighed gains. Practitioners were overwhelmingly 'very positive', and this acted as a catalyst to network with similarly minded colleagues whilst negotiating the barriers.

Barriers to research included time and competing priorities, reflecting existing literature but without the funding concerns of established clinical-academics (D'Arrietta et al., 2022; Henshall et al., 2021; Newington et al., 2021; Slade, Philip and Morris, 2018). Even the few practitioners who de-selected themselves from further formal opportunities were still motivated to use their learning in practice,

aligning with D'Arrietta et al.'s (2022) positive attitude, suggesting that even a limited but enjoyable experience of research paid dividends.

At an organisational level, the 'importance of commitment and multi-faceted support from all levels of leadership and management' (Matus, Walker and Mickan, 2018, p. 9) are essential for maximising evidence-based practice and building research capacity (Boaz et al., 2015; Henshall et al., 2021; Matus, Walker and Mickan, 2018; Slade, Philip and Morris, 2018; Trusson, Rowley and Bramley, 2019). Both Matus, Walker and Mickan (2018) and Slade (2018, p. 9) stress that research must be regarded as 'core business' which 'requires over-arching policies that enable the organisation and individuals to be research active'. Whilst UK policy for AHPs (NHS Health Education England, 2022) and NMCs (NHS England, 2021), and reflected internationally (Bowsher et al., 2019; Elmore et al., 2022; Haregu et al., 2019), supports research as core business, it appears that research is the first thing to be jettisoned when caseloads are busy (Trusson, Rowley and Bramley, 2019).

Although practitioners alluded to the fact that they felt the programme validated the importance of research as core business, not all of them managed to progress their initial aspirations.
Flenady et al. (2022) explored a research facilitator role for an eight-week Australian programme aiming to support novice researchers. Even with such a short programme, there was some evidence that having a facilitator embedded in the organisation helped practitioners address clinical problems and stay on-track. However, organisations also need to invest in collaborations with external partners, mentors and colleagues who can support practitioners to undertake research within their existing roles (Matus, Walker and Mickan, 2018) and longer-term.

Evidence relating to staff retention is very limited (Henshall et al., 2021; Schmidt et al., 2022; Trusson, Rowley and Bramley, 2019) and requires a longer time span than this study. However, there is some suggestion that a positive impact on retention is mediated by job satisfaction (Schmidt et al., 2022).

Strengths and limitations:
The programme started as a one-year pilot evaluated separately due to uncertainty over further funding, the programme leads have changed and there was no cohort in 2020-21 all contributing to data limitations. There were too few pre- and post-questionnaires to robustly compare Likert scale questions on academic and research capabilities. Practitioners were not asked years since qualifying or questions around diversity to protect anonymity. It was not possible to collect data from Cohort 2 managers due to relocation during Covid-19 pandemic, and manager feedback overall was limited. Tracking of post-programme outputs was limited and outputs were collated to protect anonymity, obscuring how many outputs belonged to which practitioner. We decided against attributing quotes at the level of the individual, to protect anonymity. Although data was analysed to the point of no new ideas, if the sample had been larger and more diverse, there may have been further insights. Additionally, it was not possible to gather data from practitioners who wanted

to participate in the programme but were not supported to do so.
The strengths of the study were a rigorous approach to data analysis across three cohorts, different data sources, and including practitioners and managers. The qualitative data was rich and illuminating and provided suggestions that were implemented for the current (2022/3) cohort.

Conclusion:

This introductory programme provided the most academically able and motivated practitioners with a first step to further clinical-academic opportunities. Practitioners' aspirations spanned individual, service and organisational goals. Key mechanisms included developing research knowledge/skills and the confidence to translate learning into practice. Immediate gains included practitioners sharing their knowledge, skills and enthusiasm for research with colleagues. Medium to longer term gains included changes in clinical practice with direct patient benefit, developing a research network, ongoing research activities and embarking on a clinical-academic pathway. Future research will focus on if/how the programme impacts on retention over the next five years of running the programme.

Acknowledgments:

The authors would like to thank Health Education England Kent, Surrey and Sussex for funding the pilot programme and Cohort 2, and Kent Community Health NHS Foundation Trust for funding subsequent cohorts.

References:

Artino, A. R., La Rochelle, J. S., Dezee, K. J., & Gehlbach, H. (2014) 'Developing questionnaires for educational research: AMEE Guide No. 87', *Medical Teacher*, 36(6), pp. 463–474. https://doi.org/10.3109/0142159X.2014.889814

Bazeley, P. (2012) 'Integrative analysis strategies for mixed data sources', *American Behavioral Scientist*, 56(6), pp. 814–828.

Bazeley, P. (2013a) *Qualitative data analysis: Practical strategies*. London: SAGE Publications.

Bazeley, P. (2013b) *Qualitative data analysis with NVivo* (2nd ed.). London: SAGE Publications.

Bradd, P., Travaglia, J., & Hayen, A. (2017) 'Practice development and allied health – a review of the literature', *International Practice Development Journal*, 7(2), pp. 1–25. https://doi.org/10.19043/ipdj.72.007

Boaz, A., Hanney, S., Jones, T., & Soper, B. (2015) 'Does the engagement of clinicians and organisations in research improve healthcare performance: A three-stage review', *BMJ Open,* 5:e009415, pp. 1-14. https://doi.org/10.1136/bmjopen-2015-009415

Bowsher, G., Papamichail, A., El Achi, N., Ekzayez, A., Roberts, B., Sullivan, R., & Patel, P. (2019) 'A narrative review of health research capacity strengthening in low and middle-income countries: Lessons for conflict-affected areas', *Globalization and Health,* 15(23), pp 1-13. https://doi.org/10.1186/s12992-019-0465-y

Carrick-Sen, D., Moore, A., Davidson P, Gendong H, Jackson D, & Davidson P. (2019) 'International Perspectives of Nurses, Midwives and Allied Health Professionals Clinical Academic Roles: Are We at Tipping Point?', *International Journal of Practice-Based Learning in Health and Social Care,* 7(2), pp. 1–15. https://doi.org/10.18552/ijpblhsc.v7i2.648

Cooke, J. (2005) 'A framework to evaluate research capacity building in health care', *BMC Family Practice*, 6(44), pp. 1–11. https://doi.org/10.1186/1471-2296-6-44

Cooper, J., Mitchell, K., Richardson, A., & Bramley, L. (2019) 'Developing the role of the clinical academic nurse, midwife and allied health professional in healthcare organisations', *International Journal of Practice-based Learning in Health and Social Care,* 7(2), pp. 16–24. https://doi.org/10.18552/ijpblhsc.v7i2.637

D'Arrietta, L. M., Vangaveti, V. N., Crowe, M. J., & Malau-Aduli, B. S. (2022) 'Rethinking Health Professionals' Motivation to Do Research: A Systematic Review', *Journal of Multidisciplinary Healthcare,* 15, pp. 185–216. https://doi.org/10.2147/JMDH.S337172

Department of Health and Social Care. (2021). *The NHS Constitution for England*. https://www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england

Elmore, C. E., Acharya, S. C., Dulal, S., Enneking-Norton, F., Hamal, P. K., Kattel, R., Maurer, M. A., Paudel, D., Paudel, B. D., Shilpakar, R., Shrestha, D. S., Thapa, U., Wilson, D. T., & LeBaron, V. (2022) Building a 'Virtual Library': continuing a global collaboration to strengthen research capacity within Nepal and other low- and middle-income countries. *Global Health Action*, 15(1), pp. 1-11. https://doi.org/10.1080/16549716.2022.2112415

Flenady, T., Dwyer, T., Kahl, J. *et al.* (2022) 'Research capacity-building for clinicians: understanding how the research facilitator role fosters clinicians' engagement in the research process', *Health Res Policy Sys,* 20(45), pp. 1-13 https://doi.org/10.1186/s12961-022-00849-8

Guba, E., & Lincoln, Y. (1982) 'Epistemological and methodological bases of naturalistic inquiry', *Educational Technology Research and Development*, *30*(4), pp. 233–252. https://doi.org/10.1007/BF02765185

Haregu, T. N., Byrnes, A., Singh, K., Sathish, T., Pasricha, N., Wickramasinghe, K., Thankappan, K. R., & Oldenburg, B. (2019) 'A scoping review of non-communicable disease research capacity strengthening initiatives in low and middle-income countries', *Global Health Research and Policy,* 4(1), pp. 1-11. https://doi.org/10.1186/s41256-019-0123-1

Health Education England. (2017) *Multi-professional framework for advanced clinical practice in England*. https://advanced-practice.hee.nhs.uk/multi-professional-framework-for-advanced-clinical-practice-in-england/

Hennink, M. M., Kaiser, B. N., & Marconi, V. C. (2017) 'Code saturation versus meaning saturation: how many interviews are enough?', *Qualitative Health Research*, *24*(4), pp. 591–608. https://doi.org/10.1177/1049732316665344

Henshall, C., Kozlowska, O., Walthall, H., Heinen, A., Smith, R., & Carding, P. (2021) 'Interventions and strategies aimed at clinical academic pathway development for nurses in the United Kingdom: A

systematised review of the literature', *Journal of Clinical Nursing*, 30(11–12), pp. 1502–1518. https://doi.org/10.1111/jocn.15657

Jagosh, J. (2020) 'Retroductive theorizing in Pawson and Tilley's applied scientific realism', *Journal of Critical Realism*, *19*(2), pp. 121–130. https://doi.org/10.1080/14767430.2020.1723301

King, O., West, E., Lee, S., Glenister, K., Quilliam, C., Wong Shee, A., & Beks, H. (2022) 'Research education and training for nurses and allied health professionals: a systematic scoping review', *BMC Medical Education*, *22*(1), p. 385. https://doi.org/10.1186/s12909-022-03406-7

Manley, K., Crouch, R., Ward, R., Clift, E., Jackson, C., Christie, J., Williams, H., & Harden, B. (2022) 'The role of the multi-professional consultant practitioner in supporting workforce transformation in the UK', *AJPP*, *3*(2), pp. 1–26. https://journals.kent.ac.uk/index.php/ajpp/index

Matus, J., Walker, A., & Mickan, S. (2018) 'Research capacity building frameworks for allied health professionals - A systematic review', *BMC Health Services Research,* 18(1), pp. 1-11. https://doi.org/10.1186/s12913-018-3518-7

Maxwell, J. A. (2012). *A realist approach for qualitative research*. London: SAGE Publications.

McCormack, B., Manley, K., Kitson, A., Titchen, A., & Harvey, G. (1999) 'Towards practice development - A vision in reality or a reality without vision?', *Journal of Nursing Management*, *7*(5), pp. 255–264. https://doi.org/10.1046/j.1365-2834.1999.00133.x

Morse, J. (2015) 'Critical Analysis of Strategies for Determining Rigor in Qualitative Inquiry', *Qualitative Health Research*, 25(9), pp. 1212–1222.

Newington, L., Wells, M., Adonis, A., Bolton, L., Bolton Saghdaoui, L., Coffey, M., Crow, J., Fadeeva Costa, O., Hughes, C., Savage, M., Shahabi, L., & Alexander, C. M. (2021) 'A qualitative systematic review and thematic synthesis exploring the impacts of clinical academic activity by healthcare professionals outside medicine', *BMC Health Services Research*, 21(1), pp. 1-20. https://doi.org/10.1186/s12913-021-06354-y

NHS England. (2021) *Chief Nursing Officer for England's strategic plan for research*. https://www.england.nhs.uk/publication/making-research-matter-chief-nursing-officer-for-englands-strategic-plan-for-research/

NHS Health Education England. (2022) *Allied Health Professions' Research and Innovation Strategy for England*. https://www.england.nhs.uk/publication/the-allied-health-professions-ahps-strategy-for-england/

Rycroft-Malone, J., Seers, K., Titchen, A., Harvey, G., Kitson, A., & McCormack, B. (2004) 'What counts as evidence in evidence-based practice?', *Journal of Advanced Nursing,* 47(1), pp. 81–90. https://doi.org/10.1111/j.1365-2648.2004.03068.x

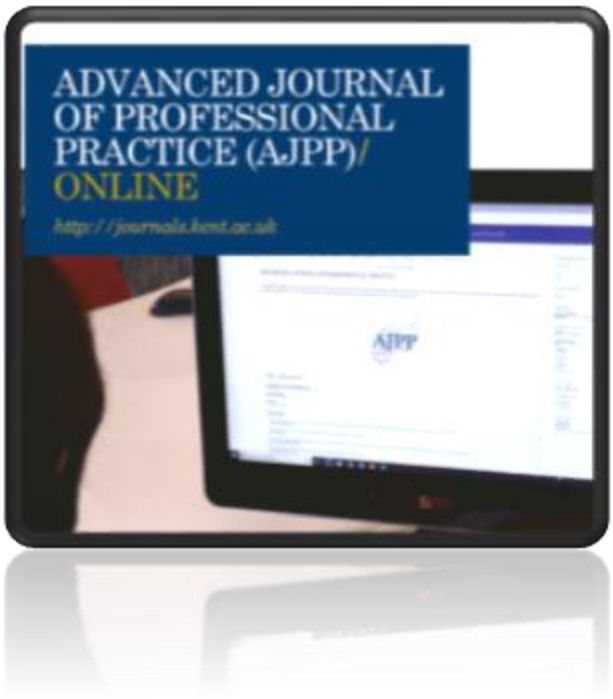
Schmidt, D., Duncanson, K., Webster, E., Saurman, E., & Lyle, D. (2022) 'Critical realist exploration of long-term outcomes, impacts and skill development from an Australian Rural Research Capacity Building Programme: a qualitative study', *BMJ Open*, *12*(12), e065972.

https://doi.org/10.1136/bmjopen-2022-065972

Slade, S. C., Philip, K., & Morris, M. E. (2018) 'Frameworks for embedding a research culture in allied health practice: A rapid review', *Health Research Policy and Systems,* 16(1), pp. 1-15. https://doi.org/10.1186/s12961-018-0304-2

Tong, A., Sainsbury, P., & Craig, J. (2007) 'Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups', *International Journal for Quality in Health Care*, 19(6), pp. 349–357.

Trostle, J. (1992) 'Research capacity building in international health: Definitions, evaluations and strategies for success', *Social Science & Medicine*, 35(11), pp. 1321–1324. https://doi.org/10.1016/0277-9536(92)90035-O

Trusson, D., Rowley, E., & Bramley, L. (2019) 'A mixed-methods study of challenges and benefits of clinical academic careers for nurses, midwives and allied health professionals', *BMJ Open*, 9(10), pp. 1-9. https://doi.org/10.1136/bmjopen-2019-030595

Westwood, G., Richardson, A., Latter, S., Macleod Clark, J., & Fader, M. (2018) 'Building clinical academic leadership capacity: sustainability through partnership', *Journal of Research in Nursing*, 23(4), pp. 346–357. https://doi.org/10.1177/1744987117748348