

BMJ Open

BMJ Open is committed to open peer review. As part of this commitment we make the peer review history of every article we publish publicly available.

When an article is published we post the peer reviewers' comments and the authors' responses online. We also post the versions of the paper that were used during peer review. These are the versions that the peer review comments apply to.

The versions of the paper that follow are the versions that were submitted during the peer review process. They are not the versions of record or the final published versions. They should not be cited or distributed as the published version of this manuscript.

BMJ Open is an open access journal and the full, final, typeset and author-corrected version of record of the manuscript is available on our site with no access controls, subscription charges or pay-per-view fees (<http://bmjopen.bmj.com>).

If you have any questions on BMJ Open's open peer review process please email info.bmjopen@bmj.com

BMJ Open

A mixed-methods study of challenges and benefits of clinical academic careers for nurses, midwives and allied health professionals

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2019-030595
Article Type:	Research
Date Submitted by the Author:	28-Mar-2019
Complete List of Authors:	Trusson, Diane; University of Nottingham, School of Medicine Rowley, Emma; University of Nottingham, Business School Bramley, Louise; Nottingham University Hospitals NHS Trust, Institute of Nursing and Midwifery Care Excellence; University of Nottingham Faculty of Medicine and Health Sciences,
Keywords:	Clinical Academic careers, Nurses, midwives and AHPs, Mixed methods, Interviews

SCHOLARONE™
Manuscripts

1
2
3 A mixed-methods study of challenges and benefits of clinical
4 academic careers for nurses, midwives and allied health
5 professionals
6
7
8
9

10 Authors: Diane Trusson, Emma Rowley, Louise Bramley
11
12

13 Correspondence address: Dr Diane Trusson, NIHR Collaboration for
14 Leadership in Applied Health Research and Care (CLAHRC) East Midlands,
15 Institute of Mental Health, University of Nottingham Innovation Park,
16 Triumph Road, Nottingham, NG7 2TU. Diane.Trusson@nottingham.ac.uk
17
18
19
20
21
22

23 Phone: 0115 7484249
24
25

26 **Diane Trusson PhD:** Research Fellow NIHR CLAHRC East Midlands
27
28 (corresponding author); University of Nottingham School of Medicine,
29 Nottingham, UK. Orcid ID: 0000-0002-6995-1192
30
31
32

33
34 **Emma Rowley PhD:** Capacity Development (Training Lead) NIHR
35 CLAHRC East Midlands; Nottingham University Business School,
36 Nottingham, UK. Orcid ID: 0000-0002-6668-1350
37
38
39
40
41

42 **Louise Bramley RN PhD:** Clinical Lead Research and Innovation,
43 Institute of Nursing and Midwifery Care Excellence, Nottingham University
44 Hospitals NHS trust, Nottingham, UK. Orcid ID: 0000-0002-0425-1734
45
46
47
48
49
50

51 **Key words:** Clinical Academic careers; Nurses, midwives and AHPs;
52 Mixed methods; Interviews
53
54
55

56
57 **Word count:** 3,999
58
59
60

ABSTRACT

Objectives: The clinical academic trajectory for doctors and dentists is well-established, with research embedded in their career development. Recent years have also seen a burgeoning interest and push for nurses, midwives and allied health professionals (NMAHPs) to pursue a clinical academic career. However, the NIHR 10 year review suggested that there may be problems with progression post Masters degree level for this group, with nurses and midwives receiving less NIHR funding than AHPs. This study responds to these concerns, tracking the progression and exploring experiences of NMAHPs in the East Midlands region of England.

Design: An online survey and in-depth interviews were used to capture a wide range of experiences.

Participants: 67 NMAHPs who were pursuing a clinical academic career were surveyed, supplemented by 16 semi-structured in-depth interviews.

Results: Three themes emerged during data analysis: Coming to a clinical academic career; barriers; and benefits.

Conclusions: NMAHPs are motivated to pursue a clinical academic career not only for personal development and career progression, but also a drive to improve services for the benefit of patients and the NHS as a whole. People working in these roles have opportunities to explore possible solutions to issues that they encounter in their clinical role through academic study. Findings reveal benefits emanating from the

1
2
3 individual level through to (inter)national levels, therefore academic study
4
5 should be encouraged and supported. However, investment is needed to
6
7 establish more clinical academic roles to enable NMAHPs to continue to
8
9 utilise their experience and expertise post-PhD, otherwise the full extent
10
11 of their value will not be recognised.
12
13
14
15

16 **ARTICLE SUMMARY**

17 **STRENGTHS AND LIMITATIONS OF THIS STUDY –**

- 22 • Online survey gathered the views of 67 respondents outside of
23 medicine and dentistry, representing a wide range of occupations
24 and academic achievements.
25
26
- 27 • In-depth interviews with 16 respondents enabled exploration of
28 issues around career progression and impact resulting from
29 academic study.
30
31
- 32 • The study was limited geographically to one area of the UK.
33
34
35
36
37
38
39
40
41

42 **INTRODUCTION**

43 **Background**

44
45
46
47
48
49
50
51
52
53 There is a long tradition of doctors and dentists pursuing academic
54
55 research alongside their clinical practice.¹ However, it is increasingly
56
57 acknowledged that nurses, midwives and allied health professionals
58
59
60

1
2
3 (AHPs) (henceforth NMAHPs) are also well-placed to devise solutions to
4
5 the problems that they observe first hand in their day-to-day clinical
6
7 practice.² A research-active workforce is important to the NHS, which
8
9 aims to 'build the capacity and capability of our current and future
10
11 workforce to embrace and actively engage with research and
12
13 innovation'.^{3,p.6} Furthermore, 'the NHS supports and harnesses the best
14
15 research and innovations to improve patient outcomes, transform services
16
17 and ensure value for money'.^{4,p.4} Health Education England (HEE) and the
18
19 National Institute of Health and Social Care Research (NIHR) have
20
21 developed schemes to encourage NMAHPs to pursue postgraduate study
22
23 in partnerships with the NHS and Higher Education Institutions (HEIs)
24
25 across the UK, giving them 'the chance to bring their questioning minds,
26
27 and expertise, to the research table'.^{2,p.2}

28
29 However, in its 10 year report, the NIHR expressed concerns about the
30
31 'poor academic progression for non-medical professions from the Masters
32
33 level',^{5,p.2} particularly for nurses and midwives. This contrasts heavily with
34
35 anecdotal evidence in the East Midlands area of England which suggests
36
37 good levels of progression achieved by NMAHPs. Previous studies have
38
39 explored the experiences of doctors and dentists embarking on a clinical
40
41 academic career,^{6,7} yet there is a gap in understanding about the
42
43 experiences of NMAHPs. The first practitioner network for clinical
44
45 academics⁸ (a joint innovation between NIHR CLAHRC East Midlands and
46
47 Nottingham University Hospitals NHS Trust), offered an opportunity to
48
49 close this gap.
50
51
52
53
54
55
56
57
58
59
60

1
2
3 The study aimed to track progression of clinical academic NMAHPs in the
4 East Midlands; to explore challenges in combining academic study with
5 clinical practice; and to demonstrate the impact on patient outcomes and
6 value of investing in clinical academic careers for NMAHPs.
7
8
9
10
11
12

13 **METHODS**

14 **Study design**

15
16
17
18
19
20 The study had two data-gathering components. In the first stage, a
21 Bristol Online Survey⁹ was created, aiming to:
22
23
24

- 25 I. Track the progression of clinical academics across the pathway and
- 26 II. Explore the ways in which training programmes and clinical
27 academic roles had impacted on the respondents' clinical practice.
28
29

30
31
32
33
34
35
36
37
38 The survey was open for a 2 month period. The second stage of the study
39 involved 16 semi-structured, in-depth interviews.
40
41
42

43 **Recruitment**

44
45
46
47 A link to the online survey was sent to members of the East Midlands
48 Clinical Academic Network⁹ and was publicised through social media
49 platforms.
50
51
52

53
54
55
56
57
58
59
60
60 Most of the interviewees were self-selected having volunteered as part of
the survey, while the rest were recruited through snowball sampling.

Ethical considerations

Ethical clearance was not needed for this study because it explored experiences of a current provision, with participants recruited by virtue of their participation in educational programmes, rather than their NHS status. Nevertheless, good research governance was observed with participants assured of confidentiality and anonymity. All participants gave informed consent.

Interview sample

Case study	Clinical role	Stage of study (at interview)	PhD year	Age group	Gender
1	Nurse/midwife	Thesis pending		20-30	Female
2	Nurse/midwife	PhD	2	41-50	Female
3	Nurse/midwife	PhD	4	41-50	Female
4	Nurse/midwife	Post-doc		41-50	Female
5	Nurse/midwife	PhD	3	41-50	Female
6	AHP	PhD	4	41-50	Female
7	AHP	PhD	2	41-50	Female
8	Nurse/midwife	PhD	5	41-50	Female
9	Nurse/midwife	Post-doc		31-40	Male
10	AHP	PhD	2	41-50	Female
11	AHP	PhD	1	41-50	Female
12	AHP	PhD	4	51+	Male
13	AHP	PhD	3	31-40	Male
14	AHP	PhD	3	41-50	Male
15	AHP	Post-doc		51+	Male
16	AHP	PhD	1	31-40	Male

Table 1. Interview sample characteristics

Data analysis

Responses were collated and summarised using the Bristol Online Survey⁹ software. Descriptive numerical data were represented in graphs and tables.

1
2
3 The interviews were digitally recorded and professionally transcribed
4
5 verbatim. Qualitative data from the free-text survey responses and the
6
7 interview transcripts were combined and analysed using thematic
8
9 analysis. This involved reading through the data to identify 'patterned
10
11 responses or meaning within the data set'.^{10, p.82} Emerging themes were
12
13 discussed and agreed with the co-authors to assure quality.
14
15
16
17

18 **RESULTS**

19 **Respondents**

20
21
22 There were 81 responses to the online survey; however 14 responses
23
24 were excluded because they were not members of the East Midlands
25
26 Clinical Practitioner Network. This is a limitation of using social media to
27
28 publicise the survey.
29
30
31
32
33

34
35 The following sections report the findings from a combination of survey
36
37 and interview data with a particular focus on the academic pathway.
38

39
40 Three major themes are discussed: coming to the clinical academic
41
42 career; overcoming barriers; and benefits of clinical academic research.
43

44
45 Within this discussion are issues around funding, management support,
46
47 impact, and encouraging future clinical academic leaders. Participants are
48
49 identified by their interview case study (CS) or survey respondent (SR)
50
51 number and professional group only, to preserve anonymity.
52
53
54

55 *Gender*

56
57
58 *Figure 1. How participants described their gender*
59
60

1
2
3
4
5
6 The gender split of participants was expected, due to the predominantly
7 'female gendered' occupations being questioned. For example, the
8 majority of nurses (who outnumber AHPs considerably) and midwives,
9 identify as female.¹¹
10
11
12
13
14
15

16 *Age*

17
18
19 *Figure 2. Survey respondents' age groups*

20
21 Despite the HEE aim of producing future clinical academic leaders early in
22 their career,³ results illustrate that funding is currently being used to
23 support mid/late careers. Consequently, there may be potential
24 implications for the career level and impact NMAHPs are able to achieve
25 before retirement. This contrasts to the rhetoric of investing in future
26 leaders, while also suggesting that 'the potential of high-achieving
27 graduates is underexploited'^{12,p.8} as participants were waiting some years
28 post-undergraduate award, to pursue clinical academic ambitions.
29
30
31
32
33
34
35
36
37
38
39

40
41 The current culture within the clinical setting was described as a particular
42 barrier for clinical academic progression by participants in the 20-30 year
43 age bracket:
44
45
46
47
48

49 I have come across lots of negativity in pursuing a clinical academic
50 career as a nurse who is only a few years qualified (SR13
51 nurse/midwife).
52
53
54
55
56

57 They think to be an expert in your field you must've been qualified
58 for like fifteen plus years. Well that's just ridiculous because I know
59
60

1
2
3 a lot more than some colleagues who've been working double the
4
5 amount of time that I have and that's just because I like to
6
7 understand why I'm doing what I'm doing (CS1 nurse/midwife).
8
9

10
11 This indicates a need for a culture change so that NMAHPs are supported
12
13 to join the clinical academic career trajectory at an earlier stage, for
14
15 instance through the apprenticeship model.¹³ It seems that in some
16
17 cases, individuals are expected to have a number of years' experience
18
19 and a secure clinical role before they are supported to embark on the
20
21 clinical academic pathway, rather than being able to have parallel roles
22
23 like their medical colleagues.
24
25
26
27

28 29 **Coming to the clinical academic career**

30 31 *Motivation*

32
33 In contrast to doctors and dentists, research has not traditionally been a
34
35 career route for NMAHPs. Participants described being self-motivated to
36
37 pursue research, rather than follow a pre-defined path:
38
39
40

41
42 I've always, from very early on in my clinical career, had an interest
43
44 in evidencing the work that I was doing. So I self-motivated really,
45
46 did service audits and evaluations (CS14 AHP).
47
48
49

50
51 Participants often considered leadership of other people in their decision
52
53 to pursue academic study:
54
55

56
57 I want to do this for me, but I also want to do it for my daughters
58
59 to show that women can be in science and can lead in these fields
60

1
2
3 and yes we might have to juggle family things and children, but
4
5 you can do it (CS7 AHP).
6
7

8
9 It's essential for me to have a PhD because we need people to
10
11 mentor, to supervise. I need to be at that level for the staff coming
12
13 through, to help them (CS8 nurse/midwife).
14
15

16
17 As well as wanting to improve their (and others') prospects, participants
18
19 were also driven to improve patient care:
20
21

22
23 Clinical academics are part of the solution. We can innovate and
24
25 generate the solutions for these age-old problems that we're
26
27 seeing, having a robust methodological approach to understanding
28
29 and exploring the phenomena. But also developing and testing
30
31 interventions to address these problems (CS9 nurse/midwife).
32
33
34

35
36 This illustrates the potential value of investing in clinical academic careers
37
38 for NMAHPs who can move change from an idea into a tested intervention
39
40 within their clinical practice. Having doctoral training and following a clinical
41
42 academic career was also about leadership opportunities and potential, as
43
44 well as building a culture within the NMAHP professions so that many others
45
46 could follow the path started by the few.
47
48
49

50 51 **Overcoming barriers** 52 53

54 55 56 57 *Seeking funding* 58 59 60

1
2
3 Unless they successfully secured a highly competitive and prestigious
4 fellowship such as the NIHR Clinical Research Doctoral Fellowship, PhD
5 students were likely to be offered standard UK Research and Innovation
6 stipends (approx. £14.5K per year)¹⁴ compared to the £40K+per year
7 salaries for a senior band 7/8 practitioner.¹⁵ This was problematic for
8 participants who had often reached high pay bands by the time they
9 embarked on an academic pathway; it also meant they faced tricky
10 decisions and negotiations about pension and employment rights:
11
12
13
14
15
16
17
18
19
20
21
22

23
24 Clearly I think an obstacle is when you get to that high clinical
25 level and you've got mortgages and things, it makes it very
26 difficult to do it on a basic stipend (CS14 AHP).
27
28
29
30

31
32 This limited the type of award that participants applied for:
33
34

35
36 With a mortgage, a baby, one on the way it was only an NIHR
37 fellowship... it was that or nothing (CS13 AHP).
38
39

40
41 I'm the main breadwinner, I earn more than my husband ... so that
42 financial part was a big barrier for me. I knew that the best financial
43 support were the NIHR ones, so I took that time to develop that
44 application. It didn't just affect me, it would affect the whole family
45 (CS7 AHP).
46
47
48
49
50
51
52

53
54 Some participants had received financial support from their employer
55 which enabled them to make the move into academic study:
56
57
58
59
60

1
2
3 My employers said that if I applied for a stipend and was successful
4 they would top me up to my full salary which would allow me to do
5
6 it essentially full-time (CS14 AHP).
7
8
9

10
11 However, this experience was not the norm; rather, NMAHPs were being
12
13 forced to make sacrifices in order to develop their career portfolio and
14
15 skills.
16
17

18 19 *Maintaining a clinical role*

20
21
22 The NIHR's guide to the Integrated Clinical Academic Programme
23 describes how 'the individual's academic and clinical 'jobs' are not
24 mutually exclusive but are instead complementary, informing and
25 supporting each other, and definable within a single role'.^{16,p6} Participants
26 described the benefits of working in their clinical setting:
27
28
29
30
31
32
33

34
35 When I was on the ward I could kind of forget about the PhD but
36 also recognise how it was shaping me as a nurse. (CS1
37 nurse/midwife).
38
39
40
41
42

43 However, working at the same time as doing a PhD was identified as
44
45 challenging:
46
47

48
49 If you haven't finished [the PhD] and come back to practice and you
50 get a promotion, you're in deep shit because the promotion is
51 massive and the PhD is hugely important. You've got to somehow
52 survive with the work and academia all at once and not fall down
53
54
55
56
57
58
59
60

1
2
3 the rabbit hole and get lost. Yeah that's a big challenge (CS8
4
5 nurse/midwife).
6
7

8
9 Recognising this challenge, the Council of Deans of Health recommend
10
11 'support from the clinical side including agreed study time'^{12,p.9} for clinical
12
13 academics. However, a recurring theme in the data was that managers
14
15 were unwilling, or unable, to release staff to do research:
16
17

18
19 You have to get your line manager to sign the application form to
20
21 say they'll support you and it took a lot of effort to get that signed.
22
23 They only gave in because my contract was 22½ hours a week.
24
25 They said "what you do in the rest of the time is your own business,
26
27 but it can't impact on this, we're not giving you any time off". It
28
29 was "what's this got to do with your job"? (CS5 nurse/midwife).
30
31
32
33
34
35

36 A common, potentially problematic issue encountered by the respondents
37
38 was an apparent lack of recognition of the value of research:
39
40

41
42 There's a huge untapped workforce...with the right support and time
43
44 we could be doing things more effectively and more efficiently, but
45
46 that isn't necessarily valued in organisations. We've got to see this
47
48 many patients, [we're] not using our skills of criticality, reflectivity;
49
50 we're not going to innovate and change practice (CS7 AHP).
51
52
53

54 Despite their achievements during the PhD, many participants expressed
55
56 anxieties about their future careers, having been made to move aside
57
58 clinically in order to progress their academic ambitions, rather than being
59
60

1
2
3 able to develop their academic and clinical skills in tandem. For example a
4
5 dietician said:

6
7
8
9 Recently I've had to step out of my area of expertise... I'm just doing
10
11 general, allergies, weight management, which is not my area, but I
12
13 need to pay the mortgage (CS10 AHP).
14
15
16

17 This indicates a serious lack of organisational and professional value
18
19 placed on the knowledge and skills achieved by some clinical academics.
20
21 As a result, some participants felt there might be no option to stay in their
22
23 clinical role post-PhD:
24
25

26
27 I would be keen to stay more NHS-based but constraints with
28
29 funding and time might end up pushing quite a few of us out into
30
31 university (CS2 nurse/midwife).
32
33
34

35 I currently work for an NHS trust, but the lack of support makes me
36
37 wonder if the only option is to not work clinically, or work
38
39 bank/agency, which to me is not embracing the value clinical
40
41 academics can bring to the clinical area (CS13 nurse/midwife).
42
43
44

45
46 In contrast to the clear career trajectory for doctors and dentists, 'early
47
48 career clinical academics face uncertain career paths and may choose the
49
50 comparably stable worlds of clinical practice where their skills are in high
51
52 demand, or a dedicated academic career.'^{3,p.9} The main reason being; 'the
53
54 scarcity and highly competitive nature of NMAHP postdoctoral research
55
56
57
58
59
60

1
2
3 positions (...) and the comparative lack of research funding for healthcare
4
5 professions other than medicine^{3,p.9} as this participant articulated:

6
7
8
9 My frustration [is that] the pathway is a pyramid therefore some
10
11 people will not progress up (CS12 AHP).

12
13
14
15 The participants who had successfully negotiated this 'pyramid' were aware
16
17 of the uniqueness of their position:

18
19
20 I have a very supportive divisional head nurse and have been
21
22 appointed into a trailblazer post; we haven't got anything similar
23
24 within the organisation. So there's real potential to forge out
25
26 innovative ways in which clinical academics can fulfil that remit of
27
28 working in clinical practice and undertaking research, but also pave
29
30 the way for others that want to come up (CS9 nurse/midwife).

31
32
33
34
35
36 Similarly, the chief medical officer argues that 'developing the next
37
38 generation of research leaders in clinical research is essential to the
39
40 UK'^{15,p.502} but the data suggest a cliff-edge in the pathway; greater
41
42 numbers of practitioners are embarking on clinical academic careers, but
43
44 following PhD, opportunities are scarce. The fortunate have the
45
46 organisational backing to 'trail-blaze', but others face a decision to return
47
48 to their pre-PhD clinical role (and hence not have their academic skills
49
50 recognised and utilised) or follow a traditional academic research pathway
51
52 and leave their clinical post behind (thus negating the whole reason for
53
54 pursuing a clinical academic career).

Benefits and impact

The data revealed multiple levels of impact and the value of academic research as the ecological model¹⁸ below illustrates:

Figure 3. Ecological model

Individual level

Participants reported benefits such as job satisfaction, increased awareness of research, enhanced skills and sense of achievement. The clinical academic pathway had also presented opportunities for progression. One participant had been 'talent-spotted' and offered 'numerous extra employment and development opportunities'. Other participants had made huge advances in their careers, with one becoming a consultant midwife, and another achieving a clinical lectureship (a pivotal post in the NIHR funded clinical academic trajectory).

Patients and their carers

The research undertaken by the participants could potentially make a big difference to patient outcomes and experiences. For example, an AHP had identified an element of practice that could extend and improve the lives of seriously ill children. Another participant had introduced a pre-surgery exercise programme which helped patients to feel involved in the process and was highly rated in a patient satisfaction survey.

1
2
3 These examples illustrate how NMAHPs on a clinical academic pathway
4 are uniquely placed to develop interventions which can be easily
5
6 implemented with positive results for patient care.
7
8
9

10 11 *Peers/colleagues* 12

13
14
15 Many participants described their pride at becoming role models, able to
16 support other colleagues into academic study:
17
18
19

20
21 I've mentored a lot of different kinds of professions to actually
22 realise that it is doable. That's a really rewarding side to the job to
23 think that you might have helped somebody [to] be a more able
24 clinician, a more able academic which can then impact on the
25 patient (CS7 AHP).
26
27
28
29
30
31
32
33

34 This demonstrates the important role of mentors in encouraging future
35 clinical leaders by providing 'pastoral support and help[ing] mentees deal
36 with the demands of a clinical academic research career.'^{12,p.10} It also
37 reveals the value of investing in staff who then give back.
38
39
40
41
42
43
44

45 *NHS Trust* 46 47 48 49

50 Recognising that research intensive organisations have better patient
51 outcomes, the Care Quality Commission have introduced research into its
52 quality framework.¹⁹ Respondents described numerous benefits for the
53 NHS organisations who supported clinical academic careers. For example:
54
55
56
57
58
59
60

1
2
3 At the hospital they want this Magnet status.²⁰ The three domains
4 are good clinical outcomes; patient experience; and staff experience
5 and part of [that] is having well qualified nurses. They really want
6 to increase the academic underpinnings of nurses and have research
7 leaders...what I'm doing really ticks the boxes of Magnet (CS5
8 nurse/midwife).
9
10
11
12
13
14
15
16

17
18
19 Participants highlighted how supporting clinical academic careers could
20 address current issues with recruitment and retention:
21
22

23
24 Forty thousand nurses we have a national deficit of, so people can
25 choose where they want to work. They'll be looking for
26 organisations that are aspirational. So actually offering innovative
27 career pathways that can intellectually challenge, but also have that
28 direct patient care element, is going to be attractive to a lot of
29 people (CS9 nurse/midwife).
30
31
32
33
34
35
36
37
38
39

40 These comments resonate with the NIHR's advice for aspiring clinical
41 academics 'to base themselves within organisations where the importance
42 of research is well understood and clinical academic careers are
43 appropriately supported.'^{16,p.6}
44
45
46
47
48
49

50 The data revealed numerous examples of impact resulting from
51 participants' clinical academic careers, including the potential for
52 substantial savings. For example, one participant's intervention removes
53 the need for GPs' referral for physiotherapy, potentially saving
54 'multimillion pounds' across the NHS, and has subsequently been
55
56
57
58
59
60

1
2
3 recognised in the NHS long-term plan.²¹ This illustrates how clinical
4 academics can develop 'well informed and relevant research'^{4,p.5} that can
5
6 quickly be transferred into practice for the benefit of the NHS.
7
8
9

10 *Inter(national)*

11
12
13
14
15

16 Participants provided details of multiple academic journal articles and
17 conference presentations enabling worldwide dissemination of their
18 research. In addition, one participant was invited to join an International
19 Working Party developing consensus guidelines for treating children with
20 kidney disease.
21
22
23
24
25
26
27
28

29 In another example, an open-access resource to help professionals to deal
30 with children in mental health crises, specifically those at risk from self-
31 harm, had been 'disseminated nationally, not just within health, but also
32 in social care and education settings'. This illustrates the wide-ranging
33 impact of clinical academics' research which can occur more speedily than
34 traditional research.
35
36
37
38
39
40
41
42
43

44 These reported experiences represent a small snapshot of the benefits of
45 supporting NMAHPs to pursue clinical academic careers and the need to
46 do so, as one participant articulated:
47
48
49
50
51

52
53 Moving forward we have to look at more sustainable and integrated
54 approaches to embedding clinical academic careers. I'm excited to
55 hear that there's an apprenticeship framework coming out because
56
57
58
59
60

1
2
3 for clinical academic careers to be truly embedded within non-
4
5 medical professional career pathways, it has to be driven by the
6
7 NHS. Universities get the value of clinical academics and they're on
8
9 board, but for it to truly work, we need to have change within the
10
11 NHS (CS9 nurse/midwife).
12
13
14
15
16
17
18
19

20 **DISCUSSION**

21
22
23
24
25 This study has explored the experiences of NMAHPs in the context of the
26
27 NIHR 10 year report which expressed concern about the 'poor academic
28
29 progression for non-medical professions from the Masters level'.^{5,p.2} The
30
31 data reveal that NMAHPs do progress; albeit through alternative means
32
33 than the NIHR pathway. For example, 11 respondents who had
34
35 progressed from the NIHR funded Masters in Research Methods had
36
37 funding from other sources including Collaborations for Leadership in
38
39 Applied Health Research and Care (CLAHRC), Economic and Social
40
41 Research Council (ESRC), charities and university funding. However,
42
43 according to the NIHR metrics, these individuals have not progressed
44
45 their clinical academic careers. In addition, the findings indicate good
46
47 levels of career progression post-PhD, including consultant midwife and
48
49 clinical lectureship roles, and far-reaching impact of research. Success
50
51 was achieved despite barriers such as a lack of support for NMAHPs
52
53 wanting to pursue this path. This suggests a need for a change of culture
54
55
56
57
58
59
60

1
2
3 in line with NHS recommendations for a research-active workforce,
4
5 especially in under-represented roles such as nurses and midwives.
6
7

8
9 The mixed methods used in this study enabled data collection from a wide
10
11 range of health professionals, providing an overview of NMAHPs'
12
13 experiences of embarking on a clinical academic pathway. Although
14
15 limited in number and by geographical location, the data provide useful
16
17 insights into the experiences of this under-researched group.
18
19

20
21 The study demonstrates the multi-level value of investing in NMAHPs
22
23 whose innovative research is focussed on finding the best solutions to
24
25 meet patients' needs, with potential cost-benefits for the NHS.
26
27

28 Encouraging a research-active workforce is also important for recruitment
29
30 and retention of talented staff.
31
32

33
34 NMAHPs are committed to conducting high-quality research alongside
35
36 their clinical role. However, pursuing a clinical academic pathway was
37
38 likened to a pyramid where progression becomes increasingly challenging.
39
40 In contrast to their medical colleagues, many participants undertaking
41
42 PhDs were faced with the prospect of having no job to return to, or taking
43
44 pay cuts or reduced hours. Consequently, some participants were
45
46 considering a purely academic career with a resultant loss of expertise for
47
48 the NHS. The findings indicate an urgent need for a clear clinical
49
50 academic pathway to be developed for NMAHPs post-PhD. As the Council
51
52 of Deans of Health point out, 'a PhD is the 'end of the beginning' of
53
54 research training rather than an end in itself.'^{12,p.10}
55
56
57
58
59
60

CONCLUSION

This study shows how investing in training for NMAHPs is vital in developing and retaining a research-active workforce where patient care remains the central consideration. Ensuring a clear academic career path will ensure that expertise and experience continue to be utilised fully for the benefit of patients and the NHS as a whole.

REFERENCES

1. Westwood G, Richardson A, Latter S, et al. Building clinical academic leadership capacity: sustainability through partnership. *Journal of Research in Nursing*, 2018;23(4)346-357.
2. Trueland J. Birth of a new breed. *Health Service Journal supplement* 2015; <https://www.hsj.co.uk/Uploads/y/r/i/Research--Impact-supplement-18th-Nov-2015.pdf> accessed 13/2/2019
3. Health Education England <https://www.hee.nhs.uk/sites/default/files/documents/HEE%20research%20and%20innovation%20strategy.pdf> accessed 18/2/2019
4. NHS England research plan <https://www.england.nhs.uk/wp-content/uploads/2017/04/nhse-research-plan.pdf>
5. NIHR Trainees Coordinating Centre <https://www.nihr.ac.uk/our-research-community/documents/TCC-NIHR-Strategic-Review-of-Training-2017.pdf>

- 1
2
3 6. Funston G, Cerra C, Kirkham D, et al. The road to a clinical academic
4
5 career. *BMJ* 2015;350:h786
6
7
- 8
9 7. Lopes J, Ranieri V, Lambert T, et al. The clinical academic workforce of
10
11 the future: a cross-sectional study of factors influencing career decision-
12
13 making among clinical PhD students at two research-intensive UK
14
15 universities. *BMJ Open* 2017;7.8:e016823.
16
17
- 18
19 8. East Midlands Clinical Academic Practitioner Network
20
21 [http://www.clahrc-em.nihr.ac.uk/about/east-midlands-clinical-academic-
24
25 practitioner-network](http://www.clahrc-em.nihr.ac.uk/about/east-midlands-clinical-academic-
22
23 practitioner-network)
26
- 27 9. Bristol Online Survey <https://www.onlinesurveys.ac.uk>
28
29
- 30 10. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative*
31
32 *research in psychology* 2006;3(2):77-101.
33
34
- 35 11. Nursing and Midwifery Council. The NMC register 2018:
36
37 [https://www.nmc.org.uk/globalassets/sitedocuments/other-
40
41 publications/nmc-big-picture-september-18.pdf](https://www.nmc.org.uk/globalassets/sitedocuments/other-
38
39 publications/nmc-big-picture-september-18.pdf) accessed 22/1/2019
42
43
- 44 12. Baltruks D, Callaghan P. [https://councilofdeans.org.uk/wp-
49
50 academic-research-careers-in-the-UK.pdf](https://councilofdeans.org.uk/wp-
45
46 content/uploads/2018/08/Nursing-midwifery-and-allied-health-clinical-
47
48 academic-research-careers-in-the-UK.pdf) Accessed 18/2/2019
51
52
- 53 13. [https://www.healthcareers.nhs.uk/career-planning/study-and-
56
57 Training/apprenticeships-traineeships-and-cadet-schemes](https://www.healthcareers.nhs.uk/career-planning/study-and-
54
55 Training/apprenticeships-traineeships-and-cadet-schemes)
58
59
- 60 14. [https://mrc.ukri.org/skills-careers/studentships/studentship-
guidance/minimum-stipend-and-allowances/](https://mrc.ukri.org/skills-careers/studentships/studentship-
guidance/minimum-stipend-and-allowances/) Accessed 18/2/2019

1
2
3 15. NHS Agenda for change [https://www.healthcareers.nhs.uk/working-](https://www.healthcareers.nhs.uk/working-health/working-nhs/nhs-pay-and-benefits/agenda-change-pay-rates)
4 [health/working-nhs/nhs-pay-and-benefits/agenda-change-pay-rates](https://www.healthcareers.nhs.uk/working-health/working-nhs/nhs-pay-and-benefits/agenda-change-pay-rates)
5
6

7
8 Accessed 8/1/2019
9

10
11 16. NHS Health Education England and National Institute for Health
12
13 Research 2017; [https://www.nihr.ac.uk/funding-and-](https://www.nihr.ac.uk/funding-and-support/documents/ICA/TCC-ICA-GUIDE.pdf)
14 [support/documents/ICA/TCC-ICA-GUIDE.pdf](https://www.nihr.ac.uk/funding-and-support/documents/ICA/TCC-ICA-GUIDE.pdf) accessed 16/1/2019
15
16

17
18 17. Davies SC, Walley T, Smye S, et al. The NIHR at 10: transforming
19
20 clinical research. *Clinical Medicine* 2015;16(6):501-210.
21
22

23
24 <http://www.clinmed.rcpjournal.org/content/16/6/501.full.pdf+html>
25
26

27 18. Bronfenbrenner U, 1979. *The ecology of human development*.
28
29 Harvard university press.
30

31
32 19. NIHR [https://www.nihr.ac.uk/news/partners-announce-latest-](https://www.nihr.ac.uk/news/partners-announce-latest-progress-with-cqc-aimed-at-ensuring-research-is-a-priority-for-quality-patient-care/8496ere)
33 [progress-with-cqc-aimed-at-ensuring-research-is-a-priority-for-quality-](https://www.nihr.ac.uk/news/partners-announce-latest-progress-with-cqc-aimed-at-ensuring-research-is-a-priority-for-quality-patient-care/8496ere)
34 [patient-care/8496ere](https://www.nihr.ac.uk/news/partners-announce-latest-progress-with-cqc-aimed-at-ensuring-research-is-a-priority-for-quality-patient-care/8496ere)
35
36
37

38
39 20. <https://www.nursingworld.org/organizational-programs/magnet/>
40
41
42 accessed 4/1/2019
43
44

45
46 21. NHS [https://www.longtermplan.nhs.uk/wp-](https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf)
47 [content/uploads/2019/01/nhs-long-term-plan.pdf](https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf) accessed 18/3/2019
48
49

50
51 **Figures:**
52

- 53
54
55
56
57
58
59
60
- Figure 1. How participants described their gender
 - Figure 2. Age groups of survey respondents
 - Figure 3. Ecological model

1
2
3 **Author Contributions:** All authors were involved with the study design,
4 data analysis and preparing this paper. The first author conducted all
5 interviews.
6
7
8
9

10
11 **Funding:** This work was supported by the National Institute for Health
12 Research (NIHR) Collaboration for Leadership in Applied Health Research
13 and Care East Midlands (CLAHRC EM), grant number S-CLA-0113-10014.
14 The views expressed are those of the authors and not necessarily those of
15 the NIHR or the Department of Health and Social Care.
16
17
18
19
20
21
22

23
24 **Competing interests:** All authors have completed the ICMJE uniform
25 disclosure form at www.icmje.org/coi_disclosure.pdf and declare: all
26 authors had financial support from the National Institute for Health
27 Research (NIHR) Collaboration for Leadership in Applied Health Research
28 and Care East Midlands (CLAHRC EM) for the submitted work; no financial
29 relationships with any organisations that might have an interest in the
30 submitted work in the previous three years; no other relationships or
31 activities that could appear to have influenced the submitted work.
32
33
34
35
36
37
38
39
40
41
42
43

44 **Patient and public involvement:** We did not involve patients or the
45 public in our work.
46
47
48

49 **Data sharing statement:** Raw transcripts are held by the authors who
50 will consider requests for further information.
51
52
53
54
55
56
57
58
59
60

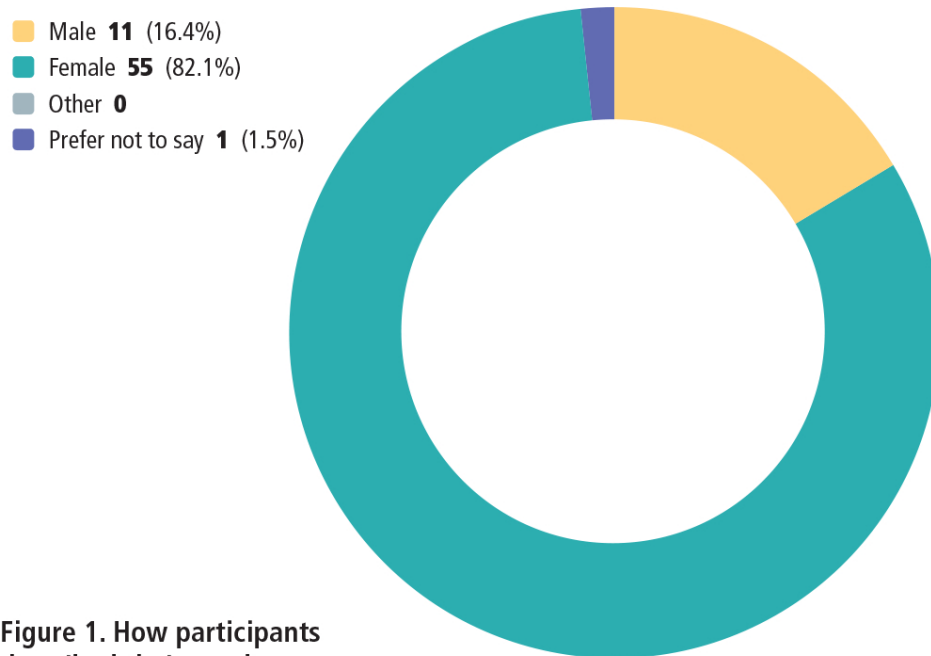


Figure 1. How participants described their gender

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

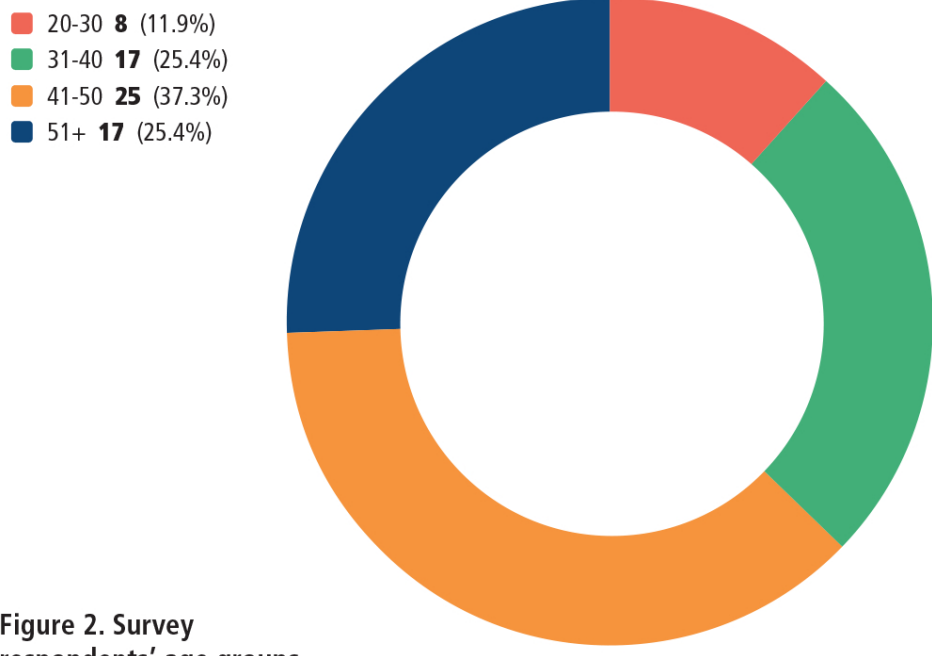


Figure 2. Survey respondents' age groups

Figure 2. Survey respondents' age groups

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

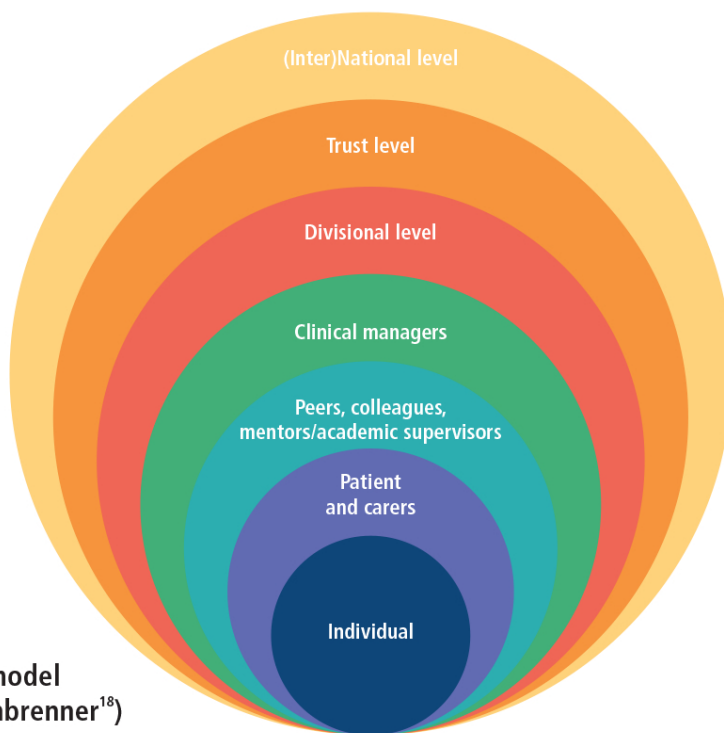


Figure 3. Ecological model (adapted from Brofenbrenner¹⁸)

Figure 3. Ecological model

BMJ Open

A mixed-methods study of challenges and benefits of clinical academic careers for nurses, midwives and allied health professionals

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2019-030595.R1
Article Type:	Original research
Date Submitted by the Author:	15-Aug-2019
Complete List of Authors:	Trusson, Diane; University of Nottingham, School of Medicine Rowley, Emma; University of Nottingham, Business School Bramley, Louise; Nottingham University Hospitals NHS Trust, Institute of Nursing and Midwifery Care Excellence; University of Nottingham Faculty of Medicine and Health Sciences,
Primary Subject Heading:	Medical education and training
Secondary Subject Heading:	Qualitative research
Keywords:	Clinical Academic careers, Nurses, midwives and AHPs, Mixed methods, Interviews

SCHOLARONE™
Manuscripts

1
2
3 A mixed-methods study of challenges and benefits of clinical
4
5
6 academic careers for nurses, midwives and allied health
7
8
9 professionals
10

11
12 Authors: Diane Trusson, Emma Rowley, Louise Bramley
13

14
15 Correspondence address: Dr Diane Trusson, NIHR Collaboration for
16
17 Leadership in Applied Health Research and Care (CLAHRC) East Midlands,
18
19 Institute of Mental Health, University of Nottingham Innovation Park,
20
21 Triumph Road, Nottingham, NG7 2TU. Diane.Trusson@nottingham.ac.uk
22
23
24

25 Phone: 0115 7484249
26

27
28 **Diane Trusson PhD:** Research Fellow NIHR CLAHRC East Midlands
29
30 (corresponding author); University of Nottingham School of Medicine,
31
32 Nottingham, UK. Orcid ID: 0000-0002-6995-1192
33
34

35
36 **Emma Rowley PhD:** Capacity Development (Training Lead) NIHR
37
38 CLAHRC East Midlands; Nottingham University Business School,
39
40 Nottingham, UK. Orcid ID: 0000-0002-6668-1350
41
42
43

44
45 **Louise Bramley RN PhD:** Clinical Lead Research and Innovation,
46
47 Institute of Nursing and Midwifery Care Excellence, Nottingham University
48
49 Hospitals NHS trust, Nottingham, UK. Orcid ID: 0000-0002-0425-1734
50
51
52

53
54 **Key words:** Clinical Academic careers; Nurses, midwives and AHPs;
55
56 Mixed methods; Interviews
57
58

59 **Word count:** 4923
60

ABSTRACT

Objectives: The clinical academic trajectory for doctors and dentists is well-established, with research embedded in their career development. Recent years have also seen a burgeoning interest and push for nurses, midwives and allied health professionals (NMAHPs) to pursue a clinical academic career. However, the NIHR 10 year review suggested that there may be problems with progression post Master's degree level for this group, with nurses and midwives receiving less NIHR funding than AHPs. This study responds to these concerns, tracking the progression and exploring experiences of NMAHPs in the East Midlands region of England.

Design: An online survey and in-depth interviews were used to capture a wide range of experiences.

Participants: 67 NMAHPs who were pursuing a clinical academic career were surveyed, supplemented by 16 semi-structured in-depth interviews.

Results: Three themes emerged during data analysis: Embarking on a clinical academic career; overcoming barriers; and benefits.

Conclusions: NMAHPs are motivated to pursue a clinical academic career by a drive to improve services for the benefit of patients and the NHS more widely, as well as for personal development and career progression. People working in these roles have opportunities to explore possible solutions to issues that they encounter in their clinical role through academic study. Findings reveal benefits emanating from the individual

1
2
3 level through to (inter)national levels, therefore academic study should be
4
5 encouraged and supported. However, investment is needed to establish
6
7 more clinical academic roles to enable NMAHPs to continue to utilise their
8
9 experience and expertise post-PhD, otherwise the full extent of their
10
11 value will not be recognised.
12
13
14
15

16 **ARTICLE SUMMARY**

17 **STRENGTHS AND LIMITATIONS OF THIS STUDY –**

- 22 • Online survey gathered the views of 67 respondents outside of
23 medicine and dentistry, representing a wide range of occupations
24 and academic achievements.
25
26
- 27 • In-depth interviews with 16 respondents enabled exploration of
28 issues around career progression and impact resulting from
29 academic study.
30
31
- 32 • The study was limited geographically to one area of the UK.
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

INTRODUCTION

Background

There is a long tradition of doctors and dentists pursuing academic research alongside their clinical practice.¹ However, it is increasingly acknowledged that nurses, midwives and allied health professionals (AHPs) (henceforth NMAHPs) are also well-placed to devise solutions to the problems that they observe first hand in their day-to-day clinical practice.² A research-active workforce is important to the NHS, which aims to 'build the capacity and capability of our current and future workforce to embrace and actively engage with research and innovation'.^{3,p.6} Furthermore, 'the NHS supports and harnesses the best research and innovations to improve patient outcomes, transform services and ensure value for money'.^{4,p.4} Health Education England (HEE) and the National Institute of Health and Social Care Research (NIHR) have developed schemes to encourage NMAHPs to pursue postgraduate study in partnerships with the NHS and Higher Education Institutions (HEIs) across the UK, giving them 'the chance to bring their questioning minds, and expertise, to the research table'.^{2,p.2}

However, in its 10 year report, the NIHR expressed concerns about the 'poor academic progression for non-medical professions from the Masters level',^{5,p.2} particularly for nurses and midwives. This contrasts heavily with anecdotal evidence in the East Midlands area of England which suggests good levels of progression achieved by NMAHPs. Previous studies have

1
2
3 explored the experiences of doctors and dentists embarking on a clinical
4
5 academic career,^{6,7} yet there is a gap in understanding about the
6
7 experiences of NMAHPs. The first regional practitioner network for clinical
8
9 academics⁸ (a joint innovation established between NIHR CLAHRC East
10
11 Midlands and Nottingham University Hospitals NHS Trust), offered an
12
13 opportunity to close this gap.
14
15
16

17
18 The study aimed to track progression of clinical academic NMAHPs in the
19
20 East Midlands; to explore challenges in combining academic study with
21
22 clinical practice; and to demonstrate the impact on patient outcomes and
23
24 value of investing in clinical academic careers for NMAHPs.
25
26
27

28 29 **METHODS**

30 31 **Study design**

32
33
34 The study had two data gathering components. In the first stage a
35
36 questionnaire enabled demographic details and progression data to be
37
38 gathered, with opportunities for free text responses. The second stage of
39
40 the study used qualitative methodology to enable deeper exploration of
41
42 experiences from the interviewees' perspective. An interpretive approach
43
44 was adopted to gather experiences including feelings, emotions and
45
46 motivation which cannot be measured in an objective way.⁹
47
48
49
50
51
52
53
54
55
56

57
58 This manuscript has been prepared according to the Standards for
59
60 Reporting Qualitative Research¹⁰ (see online supplementary file 1).

Research Team

The team, who are all experienced researchers, consisted of a medical sociologist, a knowledge translation manager and a clinical academic lead nurse. Authors b and c established the East Midlands Clinical Academic Practitioner Network;⁸ author a who conducted all the interviews, had no prior relationship with the target population.

Context

The research took place in the East Midlands area of England which encompasses 8 acute Trusts, 5 mental health Trusts, 1 ambulance service and 17 CCGs.^{11,12}

Recruitment

A link to the online survey¹³ was emailed to members of the East Midlands Clinical Academic Practitioner Network⁸ and was publicised through social media platforms. Potential respondents were informed that the study aimed to track their progression and identify how they had overcome any challenges along the way. It was emphasised how sharing their experiences could help to ensure smooth progression for future trainees.

The interviewees were self-selected, having indicated their willingness to be interviewed in their survey responses. The rest were recruited through snowball sampling. Although this method has implications for confidentiality and anonymity, it was an effective way of identifying individuals whose experiences were relevant to the research.¹⁴

Ethical considerations

Under the guidance provided by the Health Research Authority,¹⁵ ethical approval was not required for this study because participants were recruited by virtue of their participation in educational programmes, rather than their NHS status. Nevertheless, good research governance was observed, i.e. information was provided to participants and verbal consent was obtained prior to each interview. Participants were made aware of their right to withdraw from the study, assured that any data published would be anonymised, and that data would be stored confidentially on secure University systems.

Data collection methods

A Bristol Online Survey¹³ was created (see online supplementary file 2), aiming to:

- I. Track the progression of clinical academics across the pathway and
- II. Explore the ways in which training programmes and clinical academic roles had impacted on the respondents' clinical practice.

The survey was open for a 2 month period. This was followed by 16 semi-structured, in-depth interviews.

Data collection instruments

The survey and interview topic guide (see online supplementary file 3) were designed by the research team. Interviews began with an open question inviting participants to describe their experiences of being a

1
2
3 clinical academic followed by a series of questions aimed at exploring
4 changes to clinical practice as a result of academic training, the impact of
5 their research and any influence on their colleagues. The topic guide
6 enabled cross-case comparability while the semi-structured format
7 enabled flexibility with the order of the questions so that topics could
8 emerge naturally through the interview and allowing participants to
9 elaborate and give examples to support their answers.¹⁴ Participants were
10 also invited to add further comments at the end of the interview. Each
11 interview lasted around one hour; they were digitally recorded with
12 participants' consent.

Interview sample

Case study	Clinical role	Stage of study (at interview)	PhD year	Age group	Gender
1	Nurse/midwife	Thesis pending		20-30	Female
2	Nurse/midwife	PhD	2	41-50	Female
3	Nurse/midwife	PhD	4	41-50	Female
4	Nurse/midwife	Post-doc		41-50	Female
5	Nurse/midwife	PhD	3	41-50	Female
6	AHP	PhD	4	41-50	Female
7	AHP	PhD	2	41-50	Female
8	Nurse/midwife	PhD	5	41-50	Female
9	Nurse/midwife	Post-doc		31-40	Male
10	AHP	PhD	2	41-50	Female
11	AHP	PhD	1	41-50	Female
12	AHP	PhD	4	51+	Male
13	AHP	PhD	3	31-40	Male

14	AHP	PhD	3	41-50	Male
15	AHP	Post-doc		51+	Male
16	AHP	PhD	1	31-40	Male

Table 1. Interview sample characteristics

Data processing

Following professional transcription, data were anonymised with all identifying aspects removed from the transcripts prior to analysis. In the results section below, participants are identified by their interview case study (CS) or survey respondent (SR) number and professional group only, to preserve anonymity.

Data analysis

Survey responses were collated and summarised using the Bristol Online Survey¹³ software. Descriptive numerical data were represented in graphs and tables.

Qualitative data from the free-text survey responses and the interview transcripts were combined and analysed using thematic analysis. This involved reading through the data to manually identify 'patterned responses or meaning within the data set'.^{16,p.82} Themes which arose iteratively from the data, were discussed and agreed by the research team which enhanced trustworthiness of the analysis.¹⁴

Rigour

1
2
3 All three authors were involved in the research design and in data
4 verification throughout the data collection and analysis processes to
5 assure quality and rigour.
6
7
8
9

10 **RESULTS**

11 **Respondents**

12
13
14
15
16
17 There were 81 responses to the online survey; however 14 responses
18 were excluded because they were not members of the East Midlands
19 Clinical Academic Practitioner Network. This is a limitation of using social
20 media to publicise the survey.
21
22
23
24
25
26

27
28 The following sections report the findings from a combination of survey
29 and interview data with a particular focus on the academic pathway.

30
31
32 Three major themes are discussed: embarking on a clinical academic
33 career; overcoming barriers; and benefits of clinical academic research.
34
35
36 Within this discussion are issues around funding, management support,
37 impact, and encouraging future clinical academic leaders.
38
39
40
41
42

43 *Gender*

44
45
46 *Figure 1. How participants described their gender*
47
48

49 The gender split of participants (see figure 1) was expected, due to the
50 predominantly 'female gendered' occupations being questioned. For
51 example, the majority of nurses (who outnumber AHPs considerably) and
52 midwives, identify as female.¹⁷ There were 26 respondents in the study
53 who held these roles.
54
55
56
57
58
59
60

Age

Figure 2. Survey respondents' age groups

Despite the Health Education England (HEE) aim of producing future clinical academic leaders early in their career,³ results in figure 2 illustrate that funding is currently being used to support individuals at mid/late career stage. Consequently, there may be potential implications for the career level (progression) and impact NMAHP clinical academics are able to achieve before they reach retirement age. This contrasts to the rhetoric of investing in future leaders, while also suggesting that 'the potential of high-achieving graduates is underexploited'^{18,p.8} as participants were waiting some years post-undergraduate award, to pursue clinical academic ambitions.

The current culture within the clinical setting was described as a particular barrier for clinical academic progression by participants in the 20-30 year age bracket:

I have come across lots of negativity in pursuing a clinical academic career as a nurse who is only a few years qualified (SR13 nurse/midwife).

They think to be an expert in your field you must've been qualified for like fifteen plus years. Well that's just ridiculous because I know a lot more than some colleagues who've been working double the amount of time that I have and that's just because I like to understand why I'm doing what I'm doing (CS1 nurse/midwife).

1
2
3 This indicates a need for a culture change so that NMAHPs are supported
4 to join the clinical academic career trajectory at an earlier stage, for
5
6 instance through the apprenticeship model.¹⁹ It seems that in some
7
8 cases, individuals are expected to have a number of years' experience
9
10 and a secure clinical role before they are supported to embark on the
11
12 clinical academic pathway, rather than being able to develop parallel roles
13
14 like their medical colleagues.
15
16
17
18
19
20

21 **Embarking on a clinical academic career**

22 *Motivation*

23
24 In contrast to doctors and dentists, research has not traditionally been a
25
26 career route for NMAHPs. Participants described being self-motivated to
27
28 pursue research, rather than follow a pre-defined path:
29
30
31
32
33

34 I've always, from very early on in my clinical career, had an interest
35
36 in evidencing the work that I was doing. So I self-motivated really,
37
38 did service audits and evaluations (CS14 AHP).
39
40
41

42 Participants overwhelmingly described how their interest in research was
43
44 driven by improvements to patient care:
45
46
47

48 Clinical academics are part of the solution. We can innovate and
49
50 generate the solutions for these age-old problems that we're
51
52 seeing, having a robust methodological approach to understanding
53
54 and exploring the phenomena. But also developing and testing
55
56 interventions to address these problems (CS9 nurse/midwife).
57
58
59
60

1
2
3 This illustrates the potential value of investing in clinical academic careers
4 for NMAHPs who can move change from an idea into a tested intervention
5 within their clinical practice.²⁰
6
7
8
9

10
11 Participants often considered leadership of other people in their decision
12 to pursue academic study:
13
14

15
16
17 I want to do this for me, but I also want to do it for my daughters
18 to show that women can be in science and can lead in these fields
19 and yes we might have to juggle family things and children, but
20 you can do it (CS7 AHP).
21
22
23
24
25
26

27
28 Undertaking doctoral training and following a clinical academic career was
29 also perceived to be about leadership opportunities and potential, as well
30 as building a culture within the NMAHP professions so that many others
31 could follow the path started by the few.
32
33
34
35
36

37
38 It's essential for me to have a PhD because we need people to
39 mentor, to supervise. I need to be at that level for the staff coming
40 through, to help them (CS8 nurse/midwife).
41
42
43
44
45
46
47
48

49 **Overcoming barriers**

50 51 52 53 54 55 **Funding** 56 57 58 59 60

1
2
3 The survey respondents included 35 current PhD students and 10 post-
4
5 doctoral NMAHP clinical academics. Of these, 11 respondents' PhDs were
6
7 funded by the NIHR, 2 of which were the highly competitive and
8
9 prestigious NIHR Clinical Research Doctoral Fellowship:
10
11

12
13
14 With a mortgage, a baby, one on the way it was only an NIHR
15
16 fellowship... it was that or nothing (CS13 AHP).
17

18
19 I'm the main breadwinner, I earn more than my husband ... so that
20
21 financial part was a big barrier for me. I knew that the best financial
22
23 support were the NIHR ones, so I took that time to develop that
24
25 application. It didn't just affect me, it would affect the whole family
26
27 (CS7 AHP).
28
29
30
31

32
33 Students who did not manage to get NIHR funding were likely to be
34
35 offered standard UK Research and Innovation stipends (approx. £14.5K
36
37 per year).²¹ This was problematic for participants who had often reached
38
39 high pay bands by the time they embarked on an academic pathway (e.g.
40
41 the £40K+per year salaries for a senior band 7/8 practitioner).²² It also
42
43 meant they faced tricky decisions and negotiations about pension and
44
45 employment rights:
46
47
48
49

50
51 Clearly I think an obstacle is when you get to that high clinical
52
53 level and you've got mortgages and things, it makes it very
54
55 difficult to do it on a basic stipend (CS14 AHP).
56
57
58
59
60

1
2
3 Some participants had received financial support from their employer
4
5 which enabled them to make the move into academic study:
6
7

8
9 My employers said that if I applied for a stipend and was successful
10
11 they would top me up to my full salary which would allow me to do
12
13 it essentially full-time (CS14 AHP).
14
15

16
17 However, this experience was not the norm; rather, NMAHPs were being
18
19 forced to make sacrifices in order to develop their career portfolio and
20
21 skills. Nevertheless, 23 respondents (including 11 who had progressed
22
23 from the NIHR funded Master's degree in Research Methods) secured PhD
24
25 funding from alternative sources as indicated in figure 3 below:
26
27
28

29
30 *Figure 3. Non-NIHR PhD funding*
31
32

33
34
35 These 23 respondents included 11 nurses and 1 midwife which is
36
37 interesting in terms of the NIHR 10 year report which says that **nurses**
38
39 **and non-healthcare professionals are less successful** and, 'For ICA,
40
41 the **lower success for nurses is a particular concern**'^{5,p.11} (emphasis
42
43 added). Our (regional) findings suggest that nurses are successful in
44
45 securing alternative funding for their PhD studies, therefore NIHR metrics
46
47 may not be appropriately capturing all NMAHP progression. By restricting
48
49 progression metrics to purely NIHR funding sources, they are providing a
50
51 narrative that does not reflect the experiences of clinical academics from
52
53 these occupations working across the East Midlands region.
54
55
56
57
58
59
60

Maintaining a clinical role

The NIHR's guide to the Integrated Clinical Academic (ICA) Programme describes how 'the individual's academic and clinical 'jobs' are not mutually exclusive but are instead complementary, informing and supporting each other, and definable within a single role'.^{23,p6} Participants described the benefits of working in their clinical setting:

When I was on the ward I could kind of forget about the PhD but also recognise how it was shaping me as a nurse. (CS1 nurse/midwife).

However, working at the same time as doing a PhD was identified as challenging. One participant who had secured a prestigious post before completing her PhD said:

The promotion is massive and the PhD is hugely important. You've got to somehow survive with the work and academia all at once and not fall down the rabbit hole and get lost. Yeah that's a big challenge (CS8 nurse/midwife).

Recognising this challenge, the Council of Deans of Health recommend 'support from the clinical side including agreed study time'^{18,p.9} for clinical academics. However, a recurring theme in the data was that managers are often dealing with operational care delivery challenges and were unwilling, or unable, to release staff to do research:

1
2
3 You have to get your line manager to sign the application form to
4 say they'll support you and it took a lot of effort to get that signed.
5
6 They only gave in because my contract was 22½ hours a week.
7
8 They said "what you do in the rest of the time is your own business,
9
10 but it can't impact on this, we're not giving you any time off". It
11
12 was "what's this got to do with your job"? (CS5 nurse/midwife).
13
14
15
16
17
18
19

20 A common, potentially problematic issue encountered by the respondents
21
22 was an apparent lack of recognition of the value of research:
23
24

25 There's a huge untapped workforce...with the right support and time
26
27 we could be doing things more effectively and more efficiently, but
28
29 that isn't necessarily valued in organisations. We've got to see this
30
31 many patients, [we're] not using our skills of criticality, reflectivity;
32
33 we're not going to innovate and change practice (CS7 AHP).
34
35
36
37

38 Despite their achievements during the PhD, many participants expressed
39
40 anxieties about their future careers, having been made to move aside
41
42 clinically in order to progress their academic ambitions, rather than being
43
44 able to develop their academic and clinical skills in tandem. For example a
45
46 dietician said:
47
48
49

50
51 Recently I've had to step out of my area of expertise... I'm just doing
52
53 general, allergies, weight management, which is not my area, but I
54
55 need to pay the mortgage (CS10 AHP).
56
57
58
59
60

1
2
3 This indicates a serious lack of organisational and professional value
4 placed on the knowledge and skills achieved by some clinical academics.
5
6
7
8 As a result, some participants felt there might be no option to stay in their
9
10 clinical role post-PhD:
11

12
13 I would be keen to stay more NHS-based but constraints with
14 funding and time might end up pushing quite a few of us out into
15 university (CS2 nurse/midwife).
16
17
18
19

20
21 I currently work for an NHS trust, but the lack of support makes me
22 wonder if the only option is to not work clinically, or work
23 bank/agency, which to me is not embracing the value clinical
24 academics can bring to the clinical area (CS13 nurse/midwife).
25
26
27
28
29

30
31
32 In contrast to the clear career trajectory for doctors and dentists, 'early
33 career clinical academics face uncertain career paths and may choose the
34 comparably stable worlds of clinical practice where their skills are in high
35 demand, or a dedicated academic career.'^{3,p.9} The main reason being; 'the
36 scarcity and highly competitive nature of NMAHP postdoctoral research
37 positions (...) and the comparative lack of research funding for healthcare
38 professions other than medicine'^{3,p.9} as this participant articulated:
39
40
41
42
43
44
45
46
47
48

49 My frustration [is that] the pathway is a pyramid therefore some
50 people will not progress up (CS12 AHP).
51
52
53
54

55 The participants who had successfully negotiated this 'pyramid' generally
56 did so with the help and support of key individuals within the organisation
57
58
59
60

1
2
3 who were able to champion the cause of aspiring clinical academics at
4
5 board level. For example:
6
7

8
9 I have a very supportive divisional head nurse and have been
10
11 appointed into a trailblazer post; we haven't got anything similar
12
13 within the organisation. So there's real potential to forge out
14
15 innovative ways in which clinical academics can fulfil that remit of
16
17 working in clinical practice and undertaking research, but also pave
18
19 the way for others that want to come up (CS9 nurse/midwife).
20
21
22

23
24 Similarly, the chief medical officer argues that 'developing the next
25
26 generation of research leaders in clinical research is essential to the
27
28 UK'^{24,p.502} but the data suggest a cliff-edge in the pathway; greater
29
30 numbers of practitioners are embarking on clinical academic careers, but
31
32 following PhD, opportunities are scarce. The fortunate have the
33
34 organisational backing to 'trail-blaze', but others face a decision to return
35
36 to their pre-PhD clinical role (and hence not have their academic skills
37
38 recognised and utilised) or follow a traditional academic research pathway
39
40 and leave their clinical post behind (thus negating the whole reason for
41
42 pursuing a clinical academic career).
43
44
45
46
47
48

49 **Benefits and impact**

50
51 The data revealed multiple levels of impact and the value of academic
52
53 research as the ecological model²⁵ in figure 4 illustrates:
54
55
56

57 *Figure 4. Ecological model*
58
59
60

Individual level

Participants reported benefits such as job satisfaction, increased awareness of research, enhanced skills and sense of achievement. Progression post-master's level was achieved by 52 respondents, of whom 19 were nurses/midwives. Although this echoes concerns for the relatively low progression rates of nurses/midwives when compared to AHPs⁵, 6 nurses/midwives were pursuing Master's level courses at the time of the survey and may have since progressed.

The clinical academic pathway had presented opportunities for career progression. One participant had been 'talent-spotted' and offered 'numerous extra employment and development opportunities'. When asked about any changes to their employment/role/grade since embarking on the clinical academic pathway, almost half (31) of the 63 survey responses described positive changes, although 5 of these reported no change in their pay band. Six had been seconded but risked reverting to their lower pay band when the secondment ended.

Respondents who had gained clinical academic roles described having separate contracts of employment (i.e. one each for NHS and academia) with separate employment and pension rights. Nine respondents had been promoted with one becoming a consultant midwife, and another achieving a clinical lectureship (a pivotal post in the NIHR ICA funded clinical academic trajectory).

Patients and their carers

The research undertaken by the participants could potentially make a big difference to patient outcomes and experiences. For example, an AHP had identified an element of practice that could extend and improve the lives of seriously ill children. Another participant had introduced a pre-surgery exercise programme which helped patients to feel involved in the process and was highly rated in a patient satisfaction survey.

These examples illustrate how NMAHPs on a clinical academic pathway are uniquely placed to develop interventions which can be easily implemented with positive results for patient care.

Peers/colleagues

Many participants described their pride at becoming role models, able to support other colleagues into academic study:

I've mentored a lot of different kinds of professions to actually realise that it is doable. That's a really rewarding side to the job to think that you might have helped somebody [to] be a more able clinician, a more able academic which can then impact on the patient (CS7 AHP).

This demonstrates the important role of mentors in encouraging future clinical leaders by providing 'pastoral support and help[ing] mentees deal

1
2
3 with the demands of a clinical academic research career.^{18,p.10} It also
4
5 reveals the value of investing in staff who then give back.
6
7

8 9 *NHS Trust*

10
11
12
13
14 Recognising that research intensive organisations have better patient
15
16 outcomes, the Care Quality Commission have introduced research into its
17
18 quality framework.²⁶ Respondents described numerous benefits for the
19
20 NHS organisations who supported clinical academic careers. For example:
21
22

23
24
25 At the hospital they want this Magnet status.²⁷ The three domains
26
27 are good clinical outcomes; patient experience; and staff experience
28
29 and part of [that] is having well qualified nurses. They really want
30
31 to increase the academic underpinnings of nurses and have research
32
33 leaders...what I'm doing really ticks the boxes of Magnet (CS5
34
35 nurse/midwife).
36
37
38

39
40 Participants highlighted how supporting clinical academic careers could
41
42 address current issues with recruitment and retention:
43
44

45
46 Forty thousand nurses we have a national deficit of, so people can
47
48 choose where they want to work. They'll be looking for
49
50 organisations that are aspirational. So actually offering innovative
51
52 career pathways that can intellectually challenge, but also have that
53
54 direct patient care element, is going to be attractive to a lot of
55
56 people (CS9 nurse/midwife).
57
58
59
60

1
2
3 These comments resonate with the NIHR's advice for aspiring clinical
4 academics 'to base themselves within organisations where the importance
5 of research is well understood and clinical academic careers are
6 appropriately supported.'^{23,p.6}
7
8
9
10
11

12
13 The data revealed numerous examples of impact resulting from
14 participants' clinical academic careers, including the potential for
15 substantial savings. For example, one participant's intervention removes
16 the need for GPs' referral for physiotherapy, potentially saving
17 'multimillion pounds' across the NHS, and has subsequently been
18 recognised in the NHS long-term plan.²⁸ This illustrates how clinical
19 academics can develop 'well informed and relevant research'^{4,p.5} that can
20 quickly be transferred into practice for the benefit of the NHS.
21
22
23
24
25
26
27
28
29
30
31
32

33 *Inter(national)*

34
35
36
37
38

39 Participants provided details of multiple academic journal articles and
40 conference presentations enabling worldwide dissemination of their
41 research. In addition, one participant was invited to join an International
42 Working Party developing consensus guidelines for treating children with
43 kidney disease.
44
45
46
47
48
49
50

51 In another example, an open-access resource to help professionals to deal
52 with children in mental health crises, specifically those at risk from self-
53 harm, had been 'disseminated nationally, not just within health, but also
54 in social care and education settings'. This illustrates the wide-ranging
55
56
57
58
59
60

1
2
3 impact of clinical academics' research which can occur more speedily than
4
5 traditional research.
6
7

8
9 These reported experiences represent a small snapshot of the benefits of
10
11 supporting NMAHPs to pursue clinical academic careers and the need to
12
13 do so, as one participant articulated:
14
15

16
17 Moving forward we have to look at more sustainable and integrated
18
19 approaches to embedding clinical academic careers. I'm excited to
20
21 hear that there's an apprenticeship framework coming out because
22
23 for clinical academic careers to be truly embedded within non-
24
25 medical professional career pathways, it has to be driven by the
26
27 NHS. Universities get the value of clinical academics and they're on
28
29 board, but for it to truly work, we need to have change within the
30
31 NHS (CS9 nurse/midwife).
32
33
34
35
36
37
38
39
40

41 **DISCUSSION**

42
43 This study has explored the experiences of NMAHPs in the context of the
44
45 NIHR 10 year report which expressed concern about the 'poor academic
46
47 progression for non-medical professions from the Masters level'.^{5,p.2} Our
48
49 data reveal that NMAHPs do progress post-Masters; albeit through
50
51 alternative means than the NIHR pathway. In addition, the findings
52
53 indicate good levels of career progression post-PhD, including progression
54
55 into consultant midwife and clinical lectureship fellowship roles, and the
56
57
58
59
60

1
2
3 far-reaching impact of research. Success was achieved despite barriers
4 such as a lack of organisational and managerial support for NMAHPs
5
6 wanting to pursue a clinical academic career path. Although operational
7
8 challenges to care delivery are to be acknowledged, this suggests a need
9
10 for a change of culture in line with NHS recommendations for a research-
11
12 active workforce, especially in under-represented roles such as nurses
13
14 and midwives.⁵

15
16
17
18
19
20
21 The results of this study confirm that AHPs are more likely than
22
23 nurses/midwives to progress post-Master's degree.⁵ One possible
24
25 explanation is that there may be some association with the length of time
26
27 that AHPs have been an all degree profession whereas until relatively
28
29 recently, only a small proportion of nurses graduated with a degree.²⁹
30
31
32
33 Once the degree pathway becomes more embedded and clinical academic
34
35 role models more common, nurses may make earlier career decisions to
36
37 engage with research training, and choose to follow a clinical academic
38
39 trajectory, rather than management or specialist services which are the
40
41 more traditional career pathways. Also of concern is the relatively late age
42
43 of NMAHPs embarking on the clinical academic pathway. To address this,
44
45 the Council of Deans recommend that all health professionals are exposed
46
47 to the benefits of health research at undergraduate level¹⁸ and
48
49 encouraged to embark on a clinical academic pathway earlier in their
50
51 careers. This aims to promote a culture where research is the norm,
52
53 rather than the exception, supporting the HEE aim of 'raising the profile of
54
55 research and innovation amongst the potential future workforce as an
56
57
58
59
60

1
2
3 integral part of all healthcare roles'.^{3,p,10} A recurrent theme amongst
4
5 NMAHPs who had achieved success was having champions and role
6
7 models who mentored them and were able to promote the benefit of
8
9 supporting clinical academics at the Executive Board level. The national
10
11 Clinical Academic Roles Development Group recommend mentorship as an
12
13 enabler of success²⁰ which this study's findings support, whilst also
14
15 showing how current clinical academics mentor their junior colleagues.
16
17
18 Critical mass is important and therefore it is essential that aspiring
19
20 NMAHP clinical academics bring others with them.
21
22
23
24
25
26
27

28 Like previous research, this study's findings suggest a disconnect between
29
30 priorities at senior management level and 'what happens on the ground'.
31
32
33 ^{30,p39} To combat this, the Clinical Academic Roles Development Group
34
35 recommends that 'evidence of the link between clinical academic roles
36
37 and improved outcomes/patient benefit/research activity etc.' is vital for
38
39 securing ongoing investment in clinical academic careers.^{20, p.18} This study
40
41 has demonstrated how NMAHPs' innovative research has potential to
42
43 increase efficiency, with potential cost-benefits for the NHS, as well as
44
45 benefitting HEIs through grants and publications they generate, providing
46
47 a bridge between tensions in priorities of the NHS (efficient services and
48
49 improved patient outcomes) and HEIs (grants income generation and
50
51 publications).²⁹ It follows that close partnerships between NHS and HEI
52
53 organisations should be developed following Southampton's model, where
54
55 NHS and HEI partners have successfully collaborated to build academic
56
57
58
59
60

1
2
3 pathways and increase research capacity.^{1,20} Encouraging a research-
4
5 active workforce is also important for recruitment and retention of 'highly
6
7 motivated clinicians who often become the leaders of tomorrow'.^{20, p.11}
8
9
10
11 NMAHPs are committed to conducting high-quality research alongside
12
13 their clinical role. However, pursuing a clinical academic pathway was
14
15 likened to a pyramid where progression becomes increasingly challenging.
16
17 In contrast to their medical colleagues whose medical and academic
18
19 training occurs in tandem, many NMAHP participants undertaking PhDs
20
21 were faced with the prospect of having no job to return to, or taking pay
22
23 cuts or reduced hours. The findings indicate an urgent need for a clinical
24
25 academic pay scale, whereby clinical and academic skills are valued
26
27 equally by NHS and HEI organisations, and a coherent career pathway to
28
29 be developed for NMAHPs post-PhD, where research experience is valued
30
31 and utilised.²⁰ Having a job description which enables research within a
32
33 clinical role would avoid the dilemma faced by some participants in this
34
35 study who were considering a purely academic career with a resultant loss
36
37 of expertise for the NHS. Similarly, the Council of Deans recommend
38
39 allocating funding and mentoring to enable clinicians with doctorates to
40
41 develop both sets of skills; pointing out that 'a PhD is the 'end of the
42
43 beginning' of research training rather than an end in itself'.^{18,p.10}
44
45
46
47
48
49
50
51
52

53 **Strengths and limitations**

54
55
56 The mixed methods used in this study enabled data collection from a wide
57
58 range of health professionals using strengths of different approaches¹⁴ to
59
60

1
2
3 create a fuller picture of NMAHPs' experiences of embarking on a clinical
4
5 academic pathway. Although limited in number and by geographical
6
7 location, the data provide useful insights into the experiences of this
8
9 under-researched group and provide a foundation for future studies of
10
11 NMAHPs' experiences in other locations. A further limitation is that
12
13 although comparisons were made with medical colleagues, their
14
15 experiences were not sought for this study. However, a comparative
16
17 study with medical clinical academics in the East Midlands is currently
18
19 underway.
20
21
22
23
24
25
26
27
28

29 **CONCLUSION**

30
31
32
33
34 This study has discussed NMAHPs' motivations for embarking on a clinical
35
36 academic pathway and how challenges were overcome along the way. It
37
38 shows how investing in clinical academic training for NMAHPs is vital in
39
40 developing and retaining a research-active workforce where patient care
41
42 remains the central consideration. However, in order to do this, there
43
44 needs to be support at all organisational levels to enable NMAHPs to
45
46 engage in developing a clinical academic career, and preferably at an
47
48 earlier stage in their career development. In addition, investment is
49
50 needed to establish more clinical academic roles post PhD. The Clinical
51
52 Academic Roles Development Group (formally hosted by and known as
53
54 the AUKUH group) have produced a range of recommendations in this
55
56
57
58
59
60

1
2
3 respect, along with concrete examples of successful implementation of
4
5 clinical academic posts from across the UK²⁰ Developing and facilitating a
6
7 clear clinical academic career path will ensure that both the clinical and
8
9 research expertise and experience of clinical academic NMAHPs continues
10
11 to be utilised fully for the benefit of patients and the NHS as a whole.
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For peer review only

REFERENCES

1. Westwood G, Richardson A, Latter S, et al. Building clinical academic leadership capacity: sustainability through partnership. *Journal of Research in Nursing*, 2018;23(4)346-357.
2. Trueland J. Birth of a new breed. *Health Service Journal supplement* 2015; <https://www.hsj.co.uk/Uploads/y/r/i/Research--Impact-supplement-18th-Nov-2015.pdf> accessed 13/2/2019
3. Health Education England <https://www.hee.nhs.uk/sites/default/files/documents/HEE%20research%20and%20innovation%20strategy.pdf> accessed 18/2/2019
4. NHS England research plan <https://www.england.nhs.uk/wp-content/uploads/2017/04/nhse-research-plan.pdf>
5. NIHR Trainees Coordinating Centre <https://www.nihr.ac.uk/our-research-community/documents/TCC-NIHR-Strategic-Review-of-Training-2017.pdf>
6. Funston G, Cerra C, Kirkham D, et al. The road to a clinical academic career. *BMJ* 2015;350:h786
7. Lopes J, Ranieri V, Lambert T, et al. The clinical academic workforce of the future: a cross-sectional study of factors influencing career decision-making among clinical PhD students at two research-intensive UK universities. *BMJ Open* 2017;7.8:e016823.

1
2
3 8. East Midlands Clinical Academic Practitioner Network
4

5 [http://www.clahrc-em.nihr.ac.uk/about/east-midlands-clinical-academic-](http://www.clahrc-em.nihr.ac.uk/about/east-midlands-clinical-academic-practitioner-network)
6 [practitioner-network](http://www.clahrc-em.nihr.ac.uk/about/east-midlands-clinical-academic-practitioner-network)
7
8

9
10
11 9. Benton T, Craib I. *Philosophy of Social Science: The Philosophical*
12 *Foundations of Social Thought*, Basingstoke, Palgrave 2001
13
14

15
16 10. O'Brien BC, Harris IB, Beckman TJ, et al. Standards for Reporting
17 Qualitative Research: A Synthesis of Recommendations. *Academic*
18 *Medicine*, 2014;89(9):1245-1251.
19
20
21

22
23
24 11. Regional Voices
25

26 [http://www.oneeastmidlands.org.uk/whoswhoeastmidshealthsocialcare#E](http://www.oneeastmidlands.org.uk/whoswhoeastmidshealthsocialcare#East%20Midlands%20Hospitals)
27 [ast%20Midlands%20Hospitals](http://www.oneeastmidlands.org.uk/whoswhoeastmidshealthsocialcare#East%20Midlands%20Hospitals) (accessed August 2019)
28
29
30

31
32 12. NHS England and NHS Improvement Midlands
33

34 <https://www.england.nhs.uk/midlands/ccgs-and-acute-trusts/> (accessed
35 August 2019)
36
37
38

39
40 13. Bristol Online Survey <https://www.onlinesurveys.ac.uk>
41

42
43 14. Bryman A. *Social Research methods*, 4th edn. Oxford: Oxford
44 University Press 2012
45
46

47
48 15. Health Research Authority <https://www.hra.nhs.uk/> (accessed August
49 2019)
50
51
52

53
54 16. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative*
55 *research in psychology* 2006;3(2):77-101.
56
57
58
59
60

- 1
2
3 17. Nursing and Midwifery Council. The NMC register 2018:
4
5 <https://www.nmc.org.uk/globalassets/sitedocuments/other->
6
7 [publications/nmc-big-picture-september-18.pdf](https://www.nmc.org.uk/globalassets/sitedocuments/other-publications/nmc-big-picture-september-18.pdf) accessed January 2019
8
9
10
11 18. Baltruks D, Callaghan P. [https://councilofdeans.org.uk/wp-](https://councilofdeans.org.uk/wp-content/uploads/2018/08/Nursing-midwifery-and-allied-health-clinical-academic-research-careers-in-the-UK.pdf)
12
13 [content/uploads/2018/08/Nursing-midwifery-and-allied-health-clinical-](https://councilofdeans.org.uk/wp-content/uploads/2018/08/Nursing-midwifery-and-allied-health-clinical-academic-research-careers-in-the-UK.pdf)
14
15 [academic-research-careers-in-the-UK.pdf](https://councilofdeans.org.uk/wp-content/uploads/2018/08/Nursing-midwifery-and-allied-health-clinical-academic-research-careers-in-the-UK.pdf) Accessed February 2019
16
17
18
19 19. [https://www.healthcareers.nhs.uk/career-planning/study-and-](https://www.healthcareers.nhs.uk/career-planning/study-and-Training/apprenticeships-traineeships-and-cadet-schemes)
20
21 [Training/apprenticeships-traineeships-and-cadet-schemes](https://www.healthcareers.nhs.uk/career-planning/study-and-Training/apprenticeships-traineeships-and-cadet-schemes)
22
23
24 20. Association of UK University Hospitals (AUKUH) Clinical Academic
25
26 Roles Development Group
27
28 [https://www.bda.uk.com/professional/research/transforming_healthcare](https://www.bda.uk.com/professional/research/transforming_healthcare_through_clinical_academic_roles_in_nursing_midwifery_and_allied_health_professionals)
29
30 [through_clinical_academic_roles_in_nursing_midwifery_and_allied_health](https://www.bda.uk.com/professional/research/transforming_healthcare_through_clinical_academic_roles_in_nursing_midwifery_and_allied_health_professionals)
31
32 [_professionals](https://www.bda.uk.com/professional/research/transforming_healthcare_through_clinical_academic_roles_in_nursing_midwifery_and_allied_health_professionals) Accessed July 2017
33
34
35
36
37 21. [https://mrc.ukri.org/skills-careers/studentships/studentship-](https://mrc.ukri.org/skills-careers/studentships/studentship-guidance/minimum-stipend-and-allowances/)
38
39 [guidance/minimum-stipend-and-allowances/](https://mrc.ukri.org/skills-careers/studentships/studentship-guidance/minimum-stipend-and-allowances/) Accessed February 2019
40
41
42
43 22. NHS Agenda for change [https://www.healthcareers.nhs.uk/working-](https://www.healthcareers.nhs.uk/working-health/working-nhs/nhs-pay-and-benefits/agenda-change-pay-rates)
44
45 [health/working-nhs/nhs-pay-and-benefits/agenda-change-pay-rates](https://www.healthcareers.nhs.uk/working-health/working-nhs/nhs-pay-and-benefits/agenda-change-pay-rates)
46
47
48 Accessed January 2019
49
50
51 23. NHS Health Education England and National Institute for Health
52
53 Research 2017; [https://www.nihr.ac.uk/funding-and-](https://www.nihr.ac.uk/funding-and-support/documents/ICA/TCC-ICA-GUIDE.pdf)
54
55 [support/documents/ICA/TCC-ICA-GUIDE.pdf](https://www.nihr.ac.uk/funding-and-support/documents/ICA/TCC-ICA-GUIDE.pdf) accessed January 2019
56
57
58
59
60

1
2
3 24. Davies SC, Walley T, Smye S, et al. The NIHR at 10: transforming
4 clinical research. *Clinical Medicine* 2015;16(6):501-210.

5
6
7
8 <http://www.clinmed.rcpjournals.org/content/16/6/501.full.pdf+html>
9

10
11 25. Bronfenbrenner U, 1979. *The ecology of human development*.
12 Harvard University press.
13

14
15
16 26. NIHR [https://www.nihr.ac.uk/news/partners-announce-latest-](https://www.nihr.ac.uk/news/partners-announce-latest-progress-with-cqc-aimed-at-ensuring-research-is-a-priority-for-quality-patient-care/8496ere)
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

26. <https://www.nursingworld.org/organizational-programs/magnet/>
accessed January 2019

28. NHS [https://www.longtermplan.nhs.uk/wp-](https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf)
content/uploads/2019/01/nhs-long-term-plan.pdf accessed March 2019

29. Royal College of Nursing 'Nursing through time'

[https://www.rcn.org.uk/-/media/royal-college-of-](https://www.rcn.org.uk/-/media/royal-college-of-nursing/documents/publications/2017/april/pub-005736.pdf)
nursing/documents/publications/2017/april/pub-005736.pdf

30. Springett K, Norton C, Louth S, et al. (2014) Eliminate tensions to
make research work on the front line. Available

at: [https://www.hsj.co.uk/leadership/eliminate-tensions-to-make-](https://www.hsj.co.uk/leadership/eliminate-tensions-to-make-research-work-on-the-front-line/5075013.article?blocktitle=Resource-Centre&contentID=8630#.VDgAEfldVI5)
research-work-on-the-front-line/5075013.article?blocktitle=Resource-
Centre&contentID=8630#.VDgAEfldVI5 (accessed July 2017).

Figures:

- Figure 1. How participants described their gender
- Figure 2. Age groups of survey respondents
- Figure 3. Alternative sources of PhD funding
- Figure 4. Ecological model

Author Contributions: All authors (DT, ER and LB) were involved with the study design and data analysis. DT collected the data and drafted the manuscript as lead author. ER and LB contributed comments and edits to the manuscript. Final approval was given by all authors.

Funding: This work was supported by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care East Midlands (CLAHRC EM), grant number S-CLA-0113-10014. The views expressed are those of the authors and not necessarily those of the NIHR or the Department of Health and Social Care.

Competing interests: All authors have completed the ICMJE uniform disclosure form at www.icmje.org/coi_disclosure.pdf and declare: all authors had financial support from the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care East Midlands (CLAHRC EM) for the submitted work; no financial relationships with any organisations that might have an interest in the submitted work in the previous three years; no other relationships or activities that could appear to have influenced the submitted work.

1
2
3 **Patient and public involvement:** We did not involve patients or the
4
5 public in our work.
6
7

8 **Data sharing statement:** Raw transcripts are held by the authors who
9
10 will consider requests for further information.
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

For peer review only

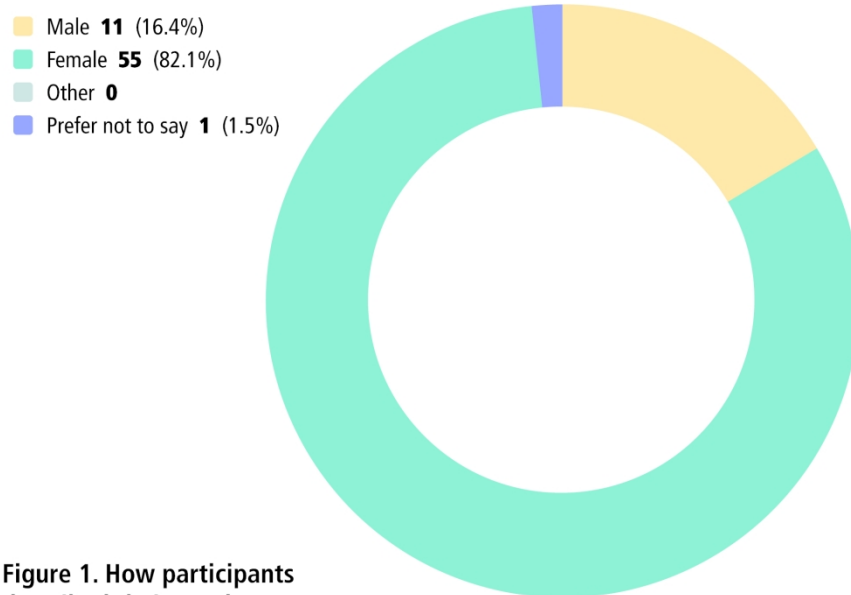


Figure 1. How participants described their gender

Figure 1. How participants described their gender

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

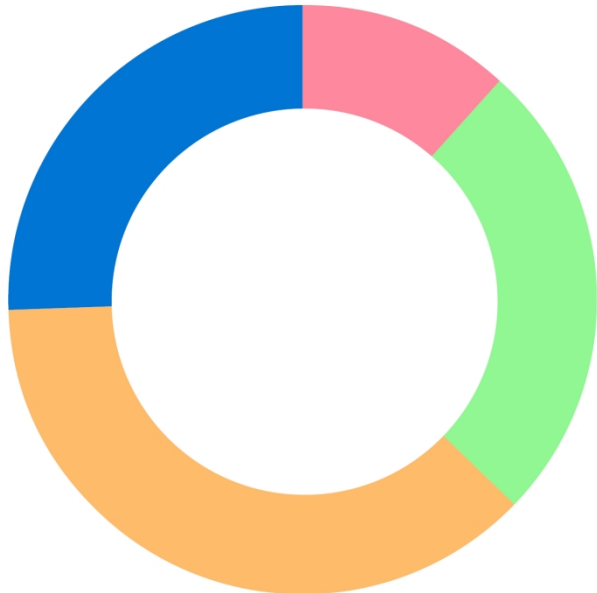
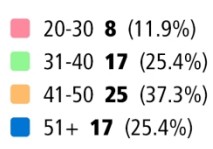


Figure 2. Survey respondents' age groups

Figure 2. Survey respondents' age groups

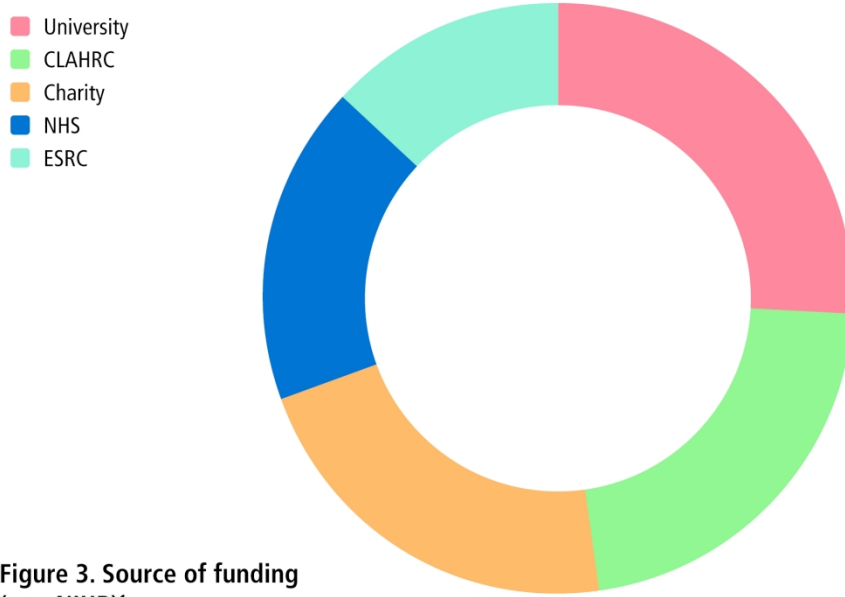


Figure 3. Source of funding (non NIHR)¹

Figure 3. Non-NIHR PhD funding

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

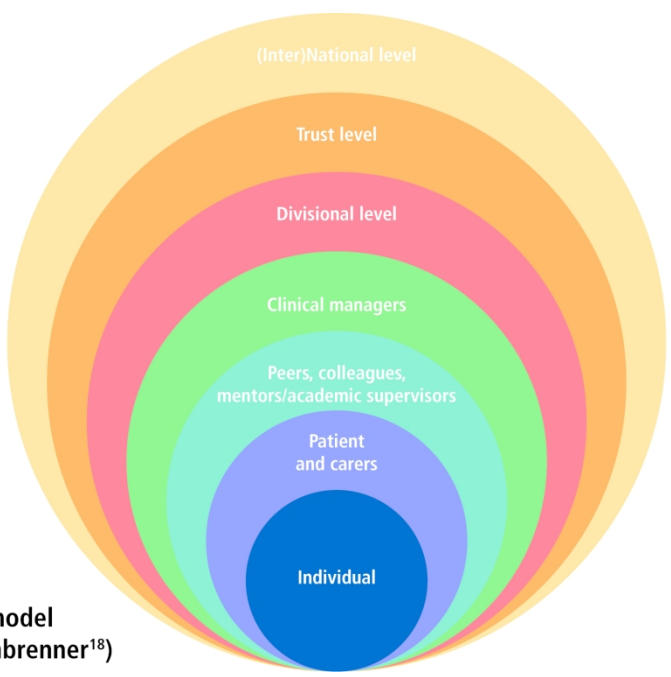


Figure 4. Ecological model (adapted from Brofenbrenner¹⁸)

Figure 4. Ecological model

Standards for Reporting Qualitative Research (SRQR)

O'Brien B.C., Harris, I.B., Beckman, T.J., Reed, D.A., & Cook, D.A. (2014). Standards for reporting qualitative research: a synthesis of recommendations. *Academic Medicine*, 89(9), 1245-1251.

No.	Topic	Item	Page
	Title and abstract		
S1	Title	Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	1
S2	Abstract	Summary of key elements of the study using the abstract format of the intended publication; typically includes objective, methods, results, and conclusions	2
	Introduction		
S3	Problem formulation	Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	4
S4	Purpose or research question	Purpose of the study and specific objectives or questions	5
	Methods		
S5	Qualitative approach and research paradigm	Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., positivist, constructivist/interpretivist) is also recommended	5
S6	Researcher characteristics and reflexivity	Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, or transferability	6
S7	Context	Setting/site and salient contextual factors; rationale ^a	6
S8	Sampling strategy	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale ^a	6
S9	Ethical issues pertaining to human subjects	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	7
S10	Data collection methods	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale ^a	7
S11	Data collection	Description of instruments (e.g., interview guides, questionnaires)	7-8

	instruments and technologies	and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	
1	S12 Units of study	Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	8
2			
3	S13 Data processing	Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/deidentification of excerpts	9
4			
5	S14 Data analysis	Process by which inferences, themes, etc., were identified and developed, including researchers involved in data analysis; usually references a specific paradigm or approach; rationale ^a	9
6			
7	S15 Techniques to enhance trustworthiness	Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale ^a	10
8			
9			
10			
11			
12			
13			
14			
15			
16	Results/Findings		
17			
18	S16 Synthesis and interpretation	Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	10-24
19			
20	S17 Links to empirical data	Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	10-24
21			
22			
23			
24			
25	Discussion		
26			
27	S18 Integration with prior work, implications, transferability, and contribution(s) to the field	Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	25-28
28			
29			
30			
31			
32	S19 Limitations	Trustworthiness and limitations of findings	28
33			
34			
35			
36	Other		
37			
38	S20 Conflicts of interest	Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	34
39			
40	S21 Funding	Sources of funding and other support; role of funders in data collection, interpretation, and reporting	34
41			
42			

^aThe rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.



East Midlands
Clinical-Academic
Practitioner Network

Clinical Academic Survey

Clinical academic survey

The East Midlands Clinical Academic Steering Group are hoping to demonstrate the impact of clinical academic training programmes so that future cohorts are able to benefit from the same opportunities that you have had.

With this in mind, we would be extremely grateful if you could take a few minutes to complete this questionnaire in Part 1 and also, if possible, to answer the additional questions in Part 2 (approx. 10 minutes). Part 3 is for people who are currently on a clinical academic training programme.

We appreciate that some work on this has already been undertaken by others, so if you have already taken part in a similar survey, we do not expect you to repeat the information.

Please be assured that all of your responses will be treated confidentially. Also, any quotes from the data that we may use when disseminating the results, will be anonymised.

All returned responses will be entered into a **prize draw** for a chance to **win a book of your choice up to a value of £50**. Please return the form by **20th April, 2018** and provide your name and email address here so that we can contact the prize winner.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60



Thank you very much in advance for your help. Good luck in the prize draw!

For peer review only

Part 1

Age group *Optional*

- 20-30
- 31-40
- 41-50
- 51+

How would you describe your gender?

- Male
- Female
- Other
- Prefer not to say

Current employment

- NHS
- University
- Both NHS and University
- Other employer

Please give the name(s) of your employer(s)

Please give your job title(s) and professional role (e.g assistant professor and nurse)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Are you employed:

Full-time

Part-time

At what level? (e.g. AFC Band or HEI scale)

Review only

Training programmes

Which of these clinical academic training programmes have you undertaken/are you undertaking? Please tick all that apply:

- Bronze fellowship
- Silver fellowship
- MARM
- NIHR funded MARM
- Masters in Clinical Research Studentship
- Other Masters programme
- Professional Doctorate
- NIHR funded PhD
- PhD not funded by NIHR
- Gold fellowship
- Other

Where did you undertake each training? (please list details for all courses that you have done) * *Required*

How was your PhD funded?

If you selected Other, please specify: **Was it clinical academic training or another type of training?** Please provide details such as training provider; course completed/predicted completion date; qualification:

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Which is the last training that you have done and when did it/will it finish? (month/year)

What were your reasons for stopping training at that point?

For current PhD students: When did you start your PhD? (month/year)

Is it NIHR funded?

Yes

No

If not, how is your PhD funded?

Where are you on the PhD journey?

- Year 1
- Year 2
- Year 3
- Year 4
- Year 5
- Year 6
- Thesis pending

What is your anticipated end date? (month/year)

Please give brief details below of what you have done as a consequence of your funding/training:

Have you changed your employment in any way? For example, new roles; grades etc?

Please describe ways in which your training has had an impact or changed your clinical practice:

Have you disseminated your research:

- Locally
- Nationally
- Both

Please provide details of how you have disseminated your research (e.g. publications, conference presentations/posters). If possible, please provide links or cut and paste details.

Have you had any successful grant applications or other collaborations?

- 1
2
3
4
5
6
7
8
- Yes
 - No

9
10
11
12

If so, please provide details (e.g. the funding body, research project, grant reference (if any), and whether you were the lead or co-applicant)

13
14
15
16
17
18
19

20
21
22
23
24
25
26
27
28
29

Thank you for the answers you have provided so far. We would be grateful if you could also take a few minutes to complete some or all of the questions in part 2. Current clinical academics are also invited to complete part 3. Otherwise, please skip to the finish at the end of part 3 to submit your survey.

- 30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
- Proceed to part 2
 - Skip to part 3

Part 2

In this part of the questionnaire, we want to find out what the term 'clinical academic' means to you, and how the clinical academic training you have received has influenced your career.

The description 'clinical academic' is varied. We want to try to find a way to best explain what the role is. Please explain what you understand by the title 'clinical academic':

Do you consider yourself to be a clinical academic?

Yes

No

If so why? (for example, do you have funded research and clinical sessions?)

How has the clinical academic training you have received helped you in your career and/or clinical practice?

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

How did you overcome any challenges in achieving success and/or progressing to the next level in your clinical academic career?

What types of support did you find most helpful during your clinical academic training?

Have your goals changed during your training?

- Yes
- No

If so, please explain how and why your goals have changed:

1 **Are there any resources that you found beneficial in developing your clinical**
2 **academic role which you would be happy to share for the benefit of others?**

3
4 These might include, for example, a job description or a report which was helpful in
5 gaining the support of your managers for your training.
6
7

8
9
10
11 If you have any resources that you think might be useful, please send them as an attachment to
12 the following email: diane.trusson@nottingham.ac.uk . Alternatively, please give link(s) to
13 electronic resources here:
14

15
16
17
18
19
20
21
22



23
24
25
26
27 What advice would you give to people who are considering undertaking training and
28 embarking on a clinical academic career?
29

30
31
32
33
34
35
36
37



38
39
40
41
42 Is there anything else that you want to add?
43

44
45
46
47
48
49
50



51
52
53 **If you are currently on a clinical academic training programme (e.g.**
54 **MRes/MARM/Bronze or Silver scholar/PhD/Post-doc), please complete the**
55 **questions in Part 3. Otherwise, please press 'next' to finish on the final page.**
56
57

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

Part 3. If you are currently on a clinical academic training programme e.g. MRes/MARM/Bronze or Silver scholar/PhD/Post-doc

Would you be interested in taking part in a focus group to discuss your experiences?

- Yes
 No

If so, please provide your contact details here:

We would also like to develop some case studies to demonstrate the impact that clinical academic training can have both in relation to your career and your clinical practice. Would you be willing to be interviewed about your experiences?

- Yes
 No

If so, please provide your contact details here:

Thank you for taking the time to complete this survey, your responses are very important to us.

For peer review only

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1. Can you tell me a bit about your experience of being a clinical academic?
2. What was/is your motivation for doing clinical academic training?
3. In what ways do you think your training has helped you to develop as a clinician?
4. What are you doing differently?
5. How have you brought your research into your clinical practice – what have you done because of your training?
6. Can you give me examples of ways that your clinical practice has changed as a result of your training?
7. How have your changes been beneficial? Do you have any evidence of benefits to practice?
8. Research project impact
9. Influence on the practice of others?
10. Is there anything else you want to add?