Evaluation of the 2021/2022 Early Career Researcher Development Pathway to support the development of research capacity and capability in nurses, midwives and allied health professionals

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NIHR | Clinical Research Network North West Coast

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1. Executive Summary

This report presents the findings from the evaluation of the 2021/22 Early Career Researcher Development Pathway (ECRDP) to support the development of research capacity and capability in nurses, midwives and allied health professionals (NMAHPs). It is a formative, process-based and summative, outcome-focused evaluation to understand and evidence the impact of the ECRDP programme on NMAHPs' development as early career researchers. The findings are used to assess outcomes against the documented objectives as well as to identify emerging outcomes. The evaluation is also designed to explore how the different components of the intervention work (or not) to inform future adaptations and iterations of the programme. To this end, a theory-based evaluation approach has been used to explore the extent of change and to test whether the causal chains thought to bring about these changes are supported by sufficiently strong evidence. To collect this evidence, multiple data sources have been used including participant-observation, documentary analysis and a set of self-assessment questionnaires implemented over the duration of the programme. Participants were also asked to score their development against the Vitae Researcher Development Framework (RDF) domains that describe specific researcher knowledge, skills and attributes. Data was analysed using descriptive statistics and thematic analysis, with the RDF also used as an analytical framework to structure some of the evaluation findings.

A total of 30 people started the programme from a range of NMAHP roles, with 25 participants going onto finish the course. Although every participant had to be employed by a CRN partner organisation, with a line manager to support their development and career planning, there was wide variation in organisational support for research and researcher development. The evaluation findings explore feedback from participants on different elements of the course, with a focus on their experience of the residential.

The residential was found to play a pivotal role in creating the conditions under which the cohort coheres as a community of practice and sparks the motivation, inspiration, excitement and confidence needed to drive participants to pursue research careers through building professional networks and accessing available opportunities. The residential is also where participants begin to develop their understanding of the attributes of successful researchers and research leaders, with increased importance placed on networking, and start to build enhanced self-reflection and self-awareness. Access to coaching, mentoring and a range of external speakers are all an important part of this process, aided by peer support and shared learning within the community of practice.

Development against the 'professional and career development' RDF sub-domain is a key mechanism through which this programme effects change, resulting in the clarification of development priorities and career aspirations to create personal career plans. The overall RDF self-assessment scores against this sub-domain showed the second highest percentage change across all the RDF sub-domains, with significant change in participants' assessment of their engagement with principal and/or chief investigators (PIs and CIs)

and knowledge of development opportunities outside their organisation. In addition, the results suggest marked improvements in participants' confidence to lead research and their knowledge of the attributes of successful research leaders. There were also notable increases in scores against other RDF sub-domains, including 'communication and dissemination', 'research management' and 'finance, funding and resources'. Despite the improvements in overall scores against these evaluation measures, the post-programme evaluation results suggests that some participants might benefit from additional support in some of these key development areas.

Overall, the ECRDP programme was very well-received, with all respondents to the post-programme evaluation agreeing that the programme had met their expectations. Attrition from the course was due to personal circumstances rather than any issues with the programme. There were very few suggestions for improvement, with the overall organisation, structure, approach and facilitation of the course praised throughout the evaluation process. Some of the comments left by participants point to this being an exceptional course in terms of its ability to inspire, support and motivate participants to develop their research careers, with evidence that all the stated objectives have been met.

Some participants have now made applications for further development opportunities such as the HEE/NIHR Integrated Clinical Academic Internship, with a number of people describing long-term ambitions to become clinical academics. A longer-term impact evaluation is needed to assess whether the ECRDP contributes to increased applications for the CRN NWC Research Scholars' programme and, later, uptake of roles as PIs and/or CIs. Ultimately, it is hoped that these longer-term outcomes will lead to improvements in organisational research capacity and opportunities for people to participate in high quality clinical research further down the line.

2. Introduction

"If you want to open doors into an amazing world of warmth, encouragement, knowledge and be equipped with the skills required to build research questions and activity into your clinical role, then the ECR programme is perfect for you"

2.1. Background

Developing NHS research capability and capacity is understood to play a vital role in addressing population health challenges within the North West, supported by a study demonstrating a positive correlation between organisational research activity and patient outcomes[1]. To this end, HEE identified a need to develop strategies that support staff to promote the adoption and spread of research and innovation. In line with this ambition, the NIHR Clinical Research Network in the North West Coast (CRN NWC) aims to develop research capability and capacity by increasing the opportunities available for people to participate in high quality clinical research. Yet, there remains few applications for researcher development schemes such as the CRN NWC Research Scholars' Programme from NMAHPs[2].

To address this issue, the Early Career Researcher Development Pathway (ECRDP) programme has been designed to support NMAHPS to develop the requisite attributes (knowledge, skills and behaviours) to do and lead research. This intervention helps to prepare participants for entry onto the CRN NWC Research Scholars' Programme and take on roles as principal or chief investigators in future. The course is primarily funded by the NIHR CRN NWC, with some additional funding from the NIHR CRH Greater Manchester (CRN GM), and is designed and facilitated by NHS R&D North West. The programme is also accredited as a Masters level course by the University of Liverpool.

2.1.1. Programme structure, content and learning approach

The programme runs for 12 months and begins with a residential weekend followed by 10 workshops, culminating in a 'celebration event' at which the participants present their learning journey.

Participants are first introduced to each other through WhatsApp, which continues to be used throughout the duration of the programme. During this time, participants must also find and work with a mentor, participate in group coaching, arrange a two-day shadow placement with a research leader and complete a set of assignments.

[1] NHS R&D North West Programme Outline.
[2] *Ibid.*

The residential weekend begins with a bus journey to a 'secret location' during which a facilitator leads a series of games involving all the participants. The destination is revealed to be a hotel and leisure centre, where the participants begin the first day of workshop sessions punctuated by fun, interactive and creative games and activities. Workshop sessions during the residential include:

- an introduction to the NIHR NWC CRN and regional research priorities and infrastructure
- an introduction to coaching and mentoring
- distinguishing between 'leadership and management'
- exploring individual 'learning styles'
- an introduction to 'social media and building your personal networks'
- completion of the Vitae Researcher Development Framework RDF self-assessment (see section 3.2).

In the evening, participants are invited to socialise, eat together and listen to presentations from two after-dinner speakers. The second day of the residential also includes the first group coaching session.

The content of the remaining 10 workshops is based on the RDF; a professional development framework for planning, promoting and supporting the personal and professional development of researchers within higher education. Each workshop in the programme is based on one or more of the RDF domains, which describe a particular set of researcher attributes. Guest speakers are invited to a number of these workshops and participants are supported to develop career plans.

The course takes a blended learning approach that is underpinned by an emphasis on reflective practice, creative and interactive games and activities and peer to peer learning through the creation of a community of practice, drawing ion the work of Etienne Wenger and Margaret Wheatley[3].

Assignments for the programme include:

- A 2500-word reflective summary on their experiences, learning and development based on the RDF framework
- A 'poster' presentation of their 5-year career plan and accompanying 1500-word summary
    - The poster can be presented 'creatively' or using a more traditional academic format.

2.1.2. Application process

The ECRDP course is open to NMAHPs with varying degrees of experience in research from novice to completion of an MRes (with the exception of newly qualified health professionals), although prior research experience is encouraged (particularly in the priority areas of cardiovascular disease, dementia and ageing, mental health and infection).

[3] *Ibid.*

Applicants must already be employed by a CRN partner organisation in an "environment where your potential as a clinical researcher can be fostered and supported" with commitment from their line manager to:

- engage with the applicant to develop next steps (e.g., career developments, succession planning, project work)
- discuss research needs of the area, department and/ or organisation

In the application process, participants must demonstrate "a significant interest and commitment to health and social care research and an ambition to become a research leader". The application form requires each applicant to provide a statement articulating why they want to undertake the programme and how they think it will benefit them. Based on this information, a selection of applicants is then invited for interview.

2.2. Evaluation purpose and objectives

The primary purpose of this evaluation is to understand and evidence the impact of the 2021/22 ECRDP on the capability and capacity of NMAHPs to do and lead research. The findings will be used to assess outcomes against the NIHR CRN NWC objectives as well as to identify emerging outcomes and impact. The evaluation is also designed to explore how the different components of the intervention work (or not) to inform future adaptations and iterations of the programme.

2.2.1. Evaluation questions

A combination of formative, process-based questions and summative, outcome-focused questions are required to meet the objectives of the evaluation. The summative questions addressed in this report are:

- Did the ECRDP achieve the expected outcomes and to what extent?
- Has the intervention resulted in any emerging outcomes?

The process questions addressed are:

- Why and how does the programme work (or not)?
- What worked well, or less well, for whom and why?
    - This question will be explored in more depth in a longer-term impact evaluation.

3. Method

3.1. Evaluation approach

A theory-based summative and process evaluation approach drawing on realist evaluation principles is applied in this investigation. A theory-based evaluation design is a flexible and exploratory approach that responds to the complexity of the intervention. In particular, a theory-based approach is suited to the evaluation of interventions such as the ECRDP, which is likely to have "unclear or soft outcomes" and "complex causal pathways"[4].

A theory-based approach allows conclusions to be drawn about impact through testing of whether the causal chains thought to bring about change are supported by sufficiently strong evidence. It is concerned with the extent of the change and why change occur, seeking to explain why an intervention worked, or not. Rigour in theory-based methods comes from the coherence of the theories, evidence that is specific enough to test the theories and the triangulation of multiple data sources[5]. A realist evaluation approach also points to a more in-depth exploration of the psychological and/or social mechanisms underpinning any developmental changes.

3.2. Data collection methods

Documentation associated with the ECRDP and conversations with the NHS R&D NW programme lead and facilitators were used to develop an initial theory of change (TOC) that sets out how the programme is understood to work (see section 3.6 and Annex 3).

Data was then collected from multiple sources to test the coherence of the initial TOC, identify any emerging outcomes and evidence whether or not the stated objectives were achieved. Data collection methods included documentary analysis, participant observation of the residential weekend and interactions on social media (WhatsApp and Twitter) and a series of self-assessment questionnaires completed by the participants over the course of the programme.

Data collection at the residential weekend involved the production of field notes based on participant-observation of programme delivery and the responses and interactions of the assembled cohort. Informal interviews took place throughout the weekend to gather data on people's initial experiences of and reactions to the residential.

[4] HM Treasury (2020) Magenta Book
[5] *Ibid.*

The self-assessment questionnaires included:

- A questionnaire based on the Vitae RDF framework.
    - The Vitae RDF is divided into four domains (each containing three sub-domains) that encompass a total of 63 'descriptors' of researcher knowledge, skills and attributes (see Annex 1). Each of the descriptors includes between 3 to 5 phases "representing distinct stages of development or levels of performance".
    - Participants were asked during the first day of the residential to use the RDF to "reflect on each characteristic/skill in each section and score yourself 1-5 (1 low, 5-high) based on how well developed you believe your skills to be in each particular section". Participants completed this self-assessment exercise again at the end of the programme.
    - This questionnaire was administered as part of the programme and was not originally designed as an evaluative tool.
- Four evaluation questionnaires were circulated (1) prior to the programme, (2) after the residential, (3) mid-way through the course, (4) following completion of the programme.
    - Questionnaire constructs were developed in collaboration with the programme leads based on the initial TOC and the documented aims and objectives.
    - All participants were provided with a link to the questionnaires on Google Forms through email and WhatsApp.
    - Questionnaires were composed of a mix of qualitative and quantitative questions, the latter using a 7-point Likert-type scale for respondents to rate their level of agreement/disagreement with a series of statements (1= Strongly Disagree; 2=Disagree; 3=Somewhat Disagree; 4= Neither agree nor disagree; 5=Somewhat Agree; 6=Agree; 7=Strongly Agree).
    - Questions addressed participants' self-assessment of their knowledge, skills, characteristics, experience and/or understanding in relation to the following areas:
        - Research experience, understanding and confidence
        - Research processes and practices
        - Policy context and research networks
        - Individual attributes
        - Researcher development
    - Questions were also included to invite feedback on their experience of the programme.
    - The pre-programme questionnaire asked for information about participants' organisational support.

For more information on the content of the evaluation questionnaires see Annex 2.

3.3 Data Analysis

3.3.1. Quantitative data

The quantitative questionnaire data was analysed using descriptive statistics. Frequency distributions, modes and medians are presented due to the ordinal nature of the Likert-type data.

To help demonstrate the extent of change, percentage changes in total scores between 'pre/mid' and post-programme scores were calculated for each item from those participants completing both sets of questionnaires[6]. Percentage increases in overall scores provide evidence of progress against the programme objectives measured by the associated item. In this way, moving from 'somewhat disagree' (3) to 'neither agree nor disagree' (4) can be interpreted as an improvement against the related programme objective.

The percentage change in overall scores for those participants who completed the pre- and post-programme RDF-self assessment have also been calculated for each sub-domain and domain of the RDF.

3.3.2. Qualitative data

Participant-observation notes, programme documentation, social media comments and qualitative questionnaire data were all thematically analysed. The TOC was used as a partial theoretical framework for the analysis of this data, which was then used to test, corroborate and refine the TOC in order to generate "the most robust and plausible explanation of the observed pattern of outcomes"[7]. Qualitative data was analysed to assess whether and how the programme had been effective in enabling its target objectives as well as exploring intermediate and emerging outcomes

The RDF was also used as an analytical framework to structure some of the findings. Results from the questionnaire items were mapped to the most relevant domain and/or sub-domain of the RDF. Participants' descriptions of the knowledge, attributes and skills required to succeed as a research leader and researcher, as well as their development priorities, were also analysed through the lens of the RDF framework, with participants' descriptions assigned to an RDF domain, sub-domain and descriptor.

Analysis was not conducted on the pre-evaluation data for the 5 people who did not complete the programme, although feedback on the residential experience has been included from 3/5 who completed the post-residential evaluation.

3.4. Ethical approval

The evaluation conformed to standard ethical practices for evaluative data collection, analysis and reporting. All participants were provided with an information sheet detailing the aims and methods of the evaluation

[6] One set of data from the pre- and post- questionnaire data was excluded as the identifier did not match.
[7] https://www.betterevaluation.org/en/approach/realist_evaluation

and procedures for data handling and confidentiality. Participation in the evaluation study was entirely voluntary and participants were advised that they had the right to withdraw consent at any point. Consent forms were used to confirm participants' understanding of the study, permission to use non-attributable quotes in the dissemination of findings and to audio-record follow-up interviews. The benefits of the evaluation were also outlined, with the evaluation designed to be embedded in the overall structure of the programme as an opportunity for further reflective practice to support learning from experience and completion of assignments. All data collected during the evaluation was access-restricted and password protected, with identifiable data anonymised as soon as practicable and only the evaluator having access to the primary data[8].

3.5. Limitations

3.5.1. Questionnaire response rates

The response rates to the evaluation questionnaires varied. 27/30 (90%) participants completed the pre-programme evaluation (although 5/27 did not go onto complete the course) with 22/30 (73%) going onto complete the post-residential evaluation[9]. Only 12 participants completed the mid-way evaluation[10]. The post-programme evaluation was completed by 22/25 of the remaining participants (84%).

18 participants (18/25; 72%) provided both pre- and post-programme evaluation scores and post-residential and post-programme scores for comparison and the calculation of percentage change.

With regards to the RDF self-assessment, data was only provided for the 25 participants who completed the course. Of this group, only 17/25 (68%) of respondents provided a pre- and post-programme RDF self-assessment for comparison. It is important to note that some of the participants queried the applicability of this framework to their development as *clinical* researchers, with some describing difficulties with accurately reflecting their level of experience and/or knowledge (see section 4.2.1).

Although the response rates for all the questionnaires are over 50% (which is considered excellent for most circumstances[11] and is likely to reflect the personal relationships and high levels of motivation within this cohort), there is still likely to be a degree of sampling bias in the responses. For example, those who were most engaged in and getting the most benefit from the course are perhaps more likely to have completed the evaluations. In addition, despite assurances that the raw data would only be seen by the independent evaluator, some participants may have been reticent to share negative feedback, especially given the close, personal connections with programme leads formed during the course.

[8] With the exception of the RDF questionnaires which were administered by NHS R&D NW.
[9] 3/22 of the post-residential respondents did not complete the course. Qualitative data from these respondents is indicated with a *
[10] The data does not show whether any participants had left the course at this stage
[11] https://www.smartsurvey.co.uk/blog/what-is-a-good-survey-response-rate

It is also recognised that the number and length of the questionnaires used to address the multiple evaluation objectives may have negatively impacted on the response rate. Relatedly, the response rate may have been detrimentally affected by 'questionnaire fatigue', especially as the programme also required participants to complete a number of self-assessments. Given that the mid-way evaluation had a low response rate and did not provide significant additional value to the evaluation except to show gradual change over time, this could be removed from future iterations.

3.5.2. Likert-type data

Likert-type questions were employed as a quick, efficient and user-friendly method for capturing people's experience and learning to test out the TOC and evidence change within the time and resource parameters of the evaluation. However, these kinds of questions can result in forms of response bias such as social desirability bias (as described above), central tendency bias and acquiescence bias. Other challenges with using Likert-type scales include fatigue/inattention, subjective interpretation and restricted choices. Although mixing positive and negative statements could help address issues such as acquiescence bias, there are concerns over the accuracy of data using this method[12]. The removal of 'neither agree nor disagree' could also reduce central tendency bias, although there remains much debate as to whether this solution further risks data quality. 'Neither agree nor disagree' can also be difficult to interpret as participants can use this option to articulate that they 'don't know' or 'don't have an opinion' or to reflect a more neutral response between somewhat agree and somewhat disagree[13].

The pre- and post-programme design can also lead to response-shift bias by which a respondent recalibrates their understanding over the course of an intervention and can result in lower post-test scores compared to pre-test ratings, even when understanding may have increased. There is a suggestion in the literature that a 'retrospective' pre- and post-programme design, in which people provide scores before and after the programme at the same point in time, can help to reduce this bias because respondents are more likely to be using the same internal standard of measurement. This design is useful in situations in which "respondents do not have enough information to accurately assess their initial level of functioning"[14]. However, participants ability to recall over the extended period of time of the ECRDP is likely to reduce the accuracy of any pre-programme measures, which would still be subject to various biases[15].

To address some of the limitations associated with the quantitative scales, qualitative open questions were included in the questionnaires to contextualise the Likert ratings. Participant-observation and documentary

[12] Chyung, S.Y., Barkin J.R., & Shamsy, J.A. (2018). Evidence-Based Survey Design: The Use of Negatively Worded Items in Surveys. Performance Improvement, 57(3) https://core.ac.uk/download/pdf/199374863.pdf
[13] Evans, D. and Popova, A. (2014) Do you agree or disagree? How to ask the question (https://blogs.worldbank.org/)
[14] Young, J., "Retrospective Pre/Posttest Design and Response-Shift Bias in an Urban After-School Program for Teens: A Mixed Methods Study" (2016). Dissertations. 2156. https://ecommons.luc.edu/luc_diss/2156
[15] Using the Retrospective Post-then-Pre Questionnaire Design. University of Wisconsin-Madison.

data were also used to triangulate the evidence. These methods have the additional advantage of capturing emergent outcomes. Follow-up interviews/questions will also be used at a later date to gain further insight into people's experiences, learning and longer-term changes to behaviour/practice.

3.6. Developing an initial theory of change

An initial TOC for the intervention was formulated to articulate the intended outcomes and impact and to illustrate how the programme is expected to bring about change. A more detailed 'programme theory' in line with a realist evaluation methodology was also added to the TOC to provide more detail as to the context and underlying mechanisms that are understood to generate these outcomes (see Annex 3).

The initial TOC situates the residential experience as a catalyst within the overall mechanism of change for the programme. In particular, the residential weekend is understood to generate an opportunity for sharing experiences and knowledge with others, peer to peer learning, making friends and developing a sense of belonging to an emerging community of practice (CoP) in which everyone can participate. The residential environment is highlighted as an important part of helping participants feel that they are being 'cared for and nourished' as well as giving them a sense of freedom. The workshop sessions during the residential are primarily aimed at enhancing participants' knowledge of some of the key subject areas and to improve their understanding of the background, structure and expected outcomes of the programme. As a result of this experience, it is hoped that people will feel less isolated, braver and more excited about the rest of the course, with the 'positive realisation that things can be done differently' and with new ideas and skills to take back to the workplace.

The emerging CoP is positioned as a central part of the learning environment through which participants engage in the rest of the course, with the workshop days contributing to the development of knowledge, intellectual abilities and methodologies to do and lead research in line with the documented aims and outcomes of the programme outlined below:

- To ensure the development of the knowledge, intellectual abilities and methodologies to do and lead research.
- To understand the drivers, policy context and value of research in the NHS and across the NWC region.
- To understand the role of the NIHR CRN NWC and how to involve patients and organisations in research
- Develop the personal qualities and approach to be an effective researcher.
- To understand how to engage and influence others to ensure the wider impact of research
- To understand the factors/dimensions that create and enable leadership in research.
- Have increased skills and confidence in their abilities to lead*[16]
- Have knowledge of the standards, requirements and professionalism to do research

[16] * Specified outcomes

- Have both theoretical knowledge and some practical application of research methods*
- An understanding of information literacy and management, research income and funding generation *
- To develop reflective practice skills
- Have a completed reflective diary*
- Be more responsive and alert to opportunities for networking and developing reputation and esteem*
    - Have developed links with the R&D director and department in their employing Trust*
    - To engage with current Principal and Chief Investigators in the NWC region and understand their role and its impact.
    - Have a foundation network of key people and organisations to support and enable their career plan*
- To create a personal network that will progress and promote the research leadership journey.
- To identify and fulfil personal development needs/learning outcomes
- To develop aspirational goals and an initial 3-year career plan to achieve leadership potential.
- Have developed a personal career plan with set short-term goals (to be achieved in one year or less) and long-term goals (to be achieved in one to five years) *.

Longer-term individual outcomes for the course include:

- Increased participation in and/or promotion of research
- Fulfilment of personal development needs
- Entry onto CRN NWC Research Scholars Programme
- Taking up roles as PIs/CIs

Personal career development is then linked to longer-term organisational outcomes contributing towards the development and enhancement of a research culture through:

- Increased awareness and spread of research and innovation
- Increased opportunities to participate in research and increased research activity

These organisational outcomes are expected to contribute towards longer-term impact in terms of improving patient outcomes and population health.

The conditions that are understood to enable the success of this intervention include:

- Individual commitment and interest in research
- Some prior research experience.
- An employing organisation that conducts research relevant to service user and practice concerns and provides support to:
    - develop methods for disseminating research to maximise impact
    - build, maintain and extend skills experience and confidence in research

- A line manger to support career development and planning and identity research needs within organisation/field.

4. Results

4.1. Participants and organisational backgrounds

4.1.1. Participants

86 people applied for the EDCRP programme, with 40 people (47%) invited for interview (27 from the CRN NWC region and 13 from Greater Manchester). Many applicants were not accepted for interview due to being newly qualified in post. From the interviews, 30 people were offered a place on the programme and went onto join the residential (with two having to join remotely due to COVID restrictions). 5 people left the programme before completion due to personal circumstances related to ill health, family emergencies or changing to non-research jobs.

A breakdown of the different professional roles of the 30 people starting the course is shown below (see Fig. 1). The 8 nurses taking part in the course included a public health nurse, a community nurse, clinical research nurses, a matron and mental health nurses.

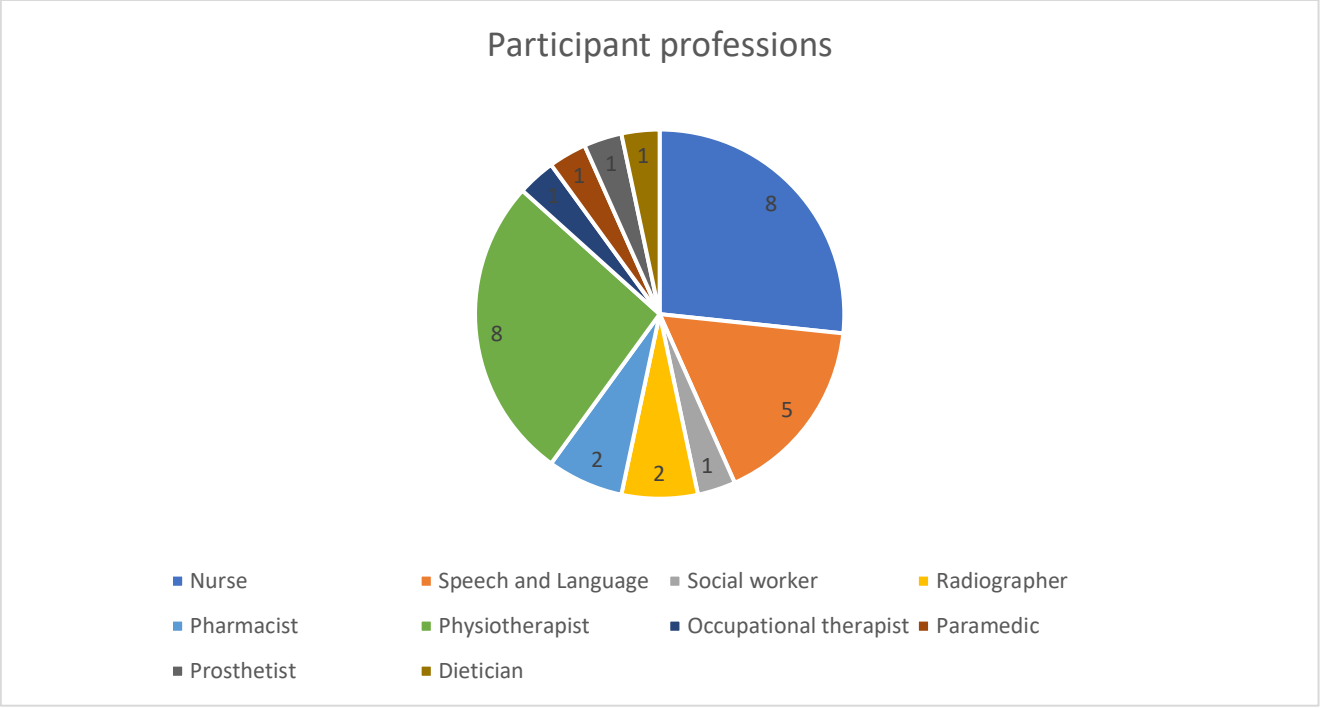


Figure 1

4.1.2. Organisational support

Based on the 27 responses to the pre-programme evaluation, there was wide variation in participants' assessment of the support available within their employing organisations to help in the development of their research careers. The most common response to whether their organisations supported staff to build skills and confidence in research was 'somewhat disagree' and 'somewhat agree', with a median of 'neither agree nor disagree' reflecting the distribution of responses (see Fig. 2).

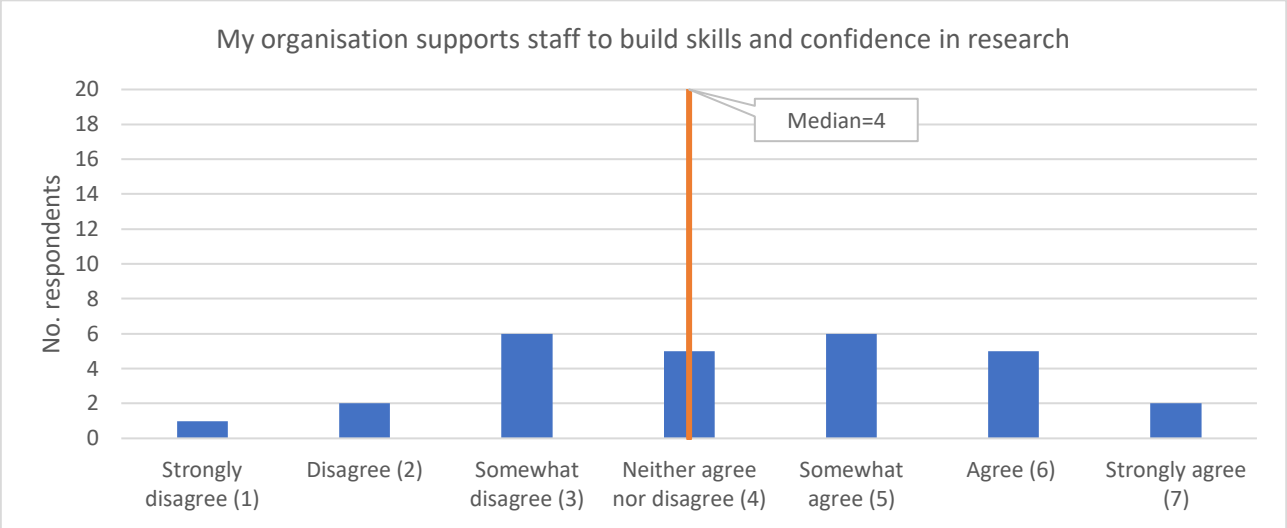


Figure 2

A similar pattern was reflected in participants' perceptions of organisational support for staff to maintain and extend newly acquired research skills and experience, as well as to develop appropriate methods for disseminating research to maximise impact, although 'somewhat agree' was the most common response to the latter questionnaire item (see Fig. 3 and 4).

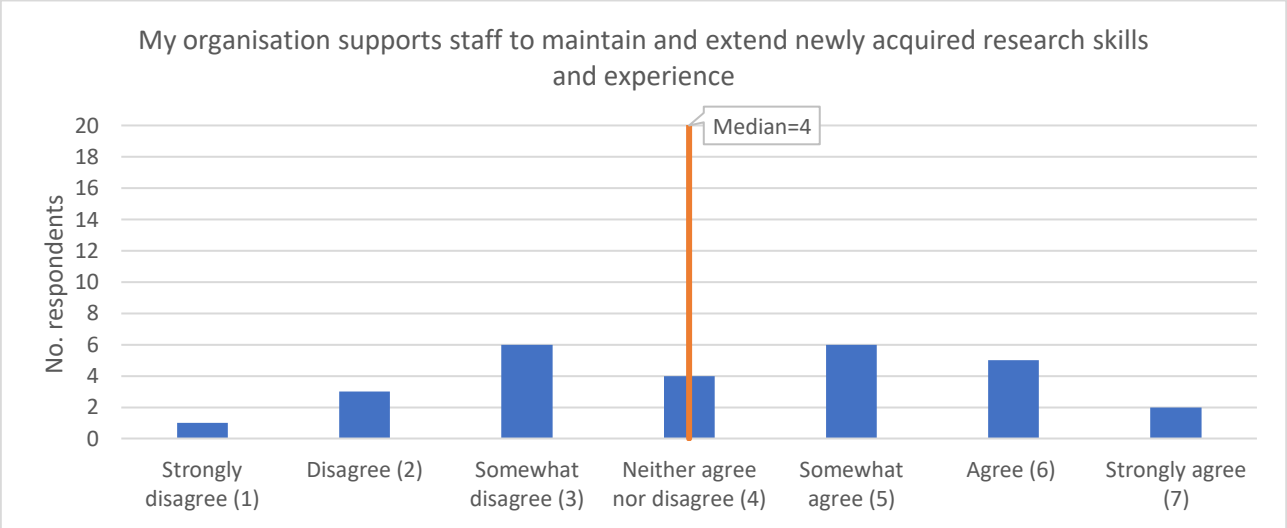


Figure 3

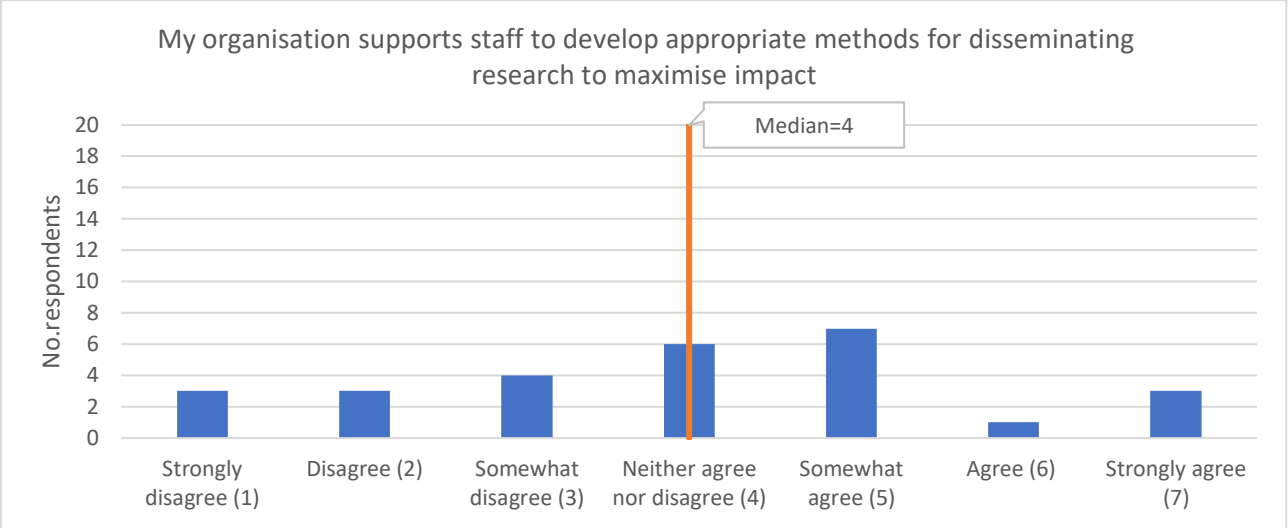


Figure 4

Participants' responses to whether their organisation supports staff to conduct research that is relevant to service user and practice concerns were skewed slightly more positively towards agreement, with the median at 'somewhat agree' (although the most frequent responses includes both 'somewhat agree' and 'neither agree nor disagree') (see Fig. 5). In comparison, although most participants also 'somewhat agreed' that their organisations had the necessary infrastructure to support research, a higher number of participants disagreed with this questionnaire item (Fig. 6).

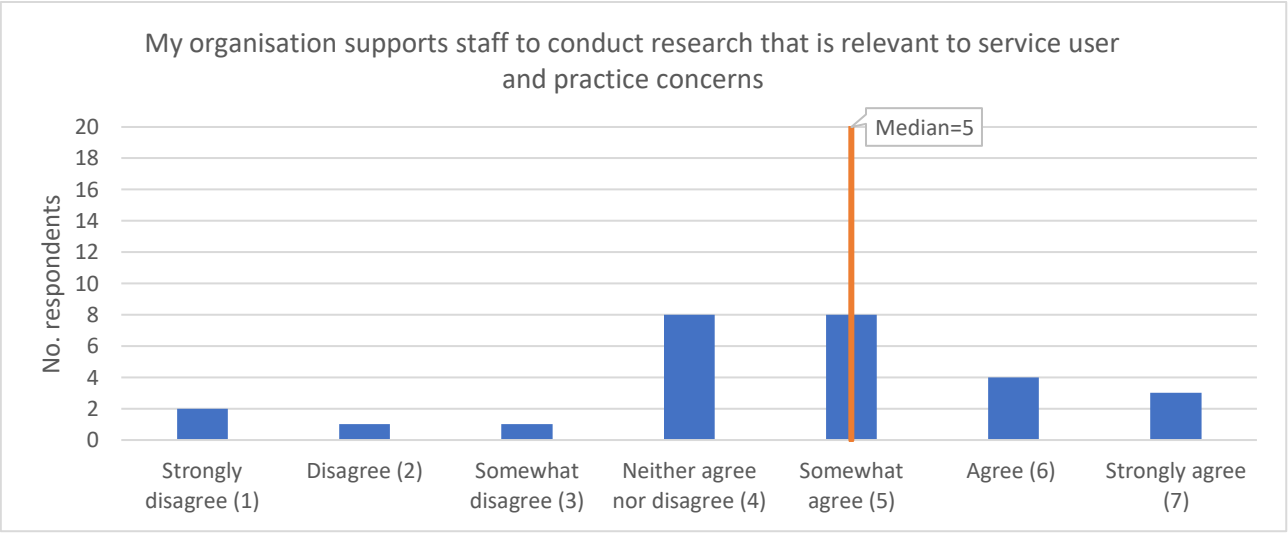


Figure 5

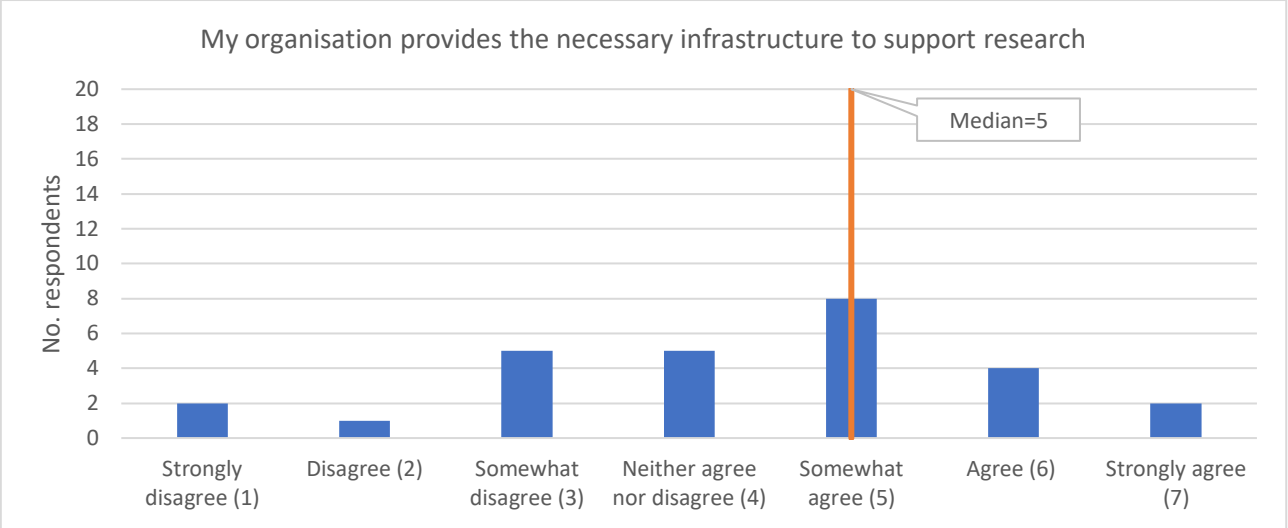


Figure 6

4.2. How does the programme work and what are the outcomes?

This section of the evaluation report presents feedback from participants on different elements of the course, with a focus on their experience of the residential. The findings are used to understand how the programme works (or not) to support NMAHPs to develop the knowledge, skills and behaviours to develop research careers, identify any unexpected outcomes and to evidence to what extent the ECRDP achieved the expected outcomes.

4.2.1. The residential experience

Based on the responses to the post-residential questionnaire, networking with others on the course was most frequently identified as one of the most valuable elements of the residential experience (n=14/19), followed by the 'introduction to the NIHR NWC CRN" session (n=12/19) and the 'residential environment' (n=11/19). Perhaps unsurprisingly, 'fun and games' was most commonly chosen as one of the most enjoyable aspects of the residential (n=17/19), with 'networking with others on the course' and the 'residential environment' emerging respectively as second (n=15/19) and third (n=14/19) in this regard. The overall ranking of each component of the residential in terms of being chosen as one of the most valuable or enjoyable elements is presented in Table 1.

Table 1. Residential programme components selected as the most valuable and enjoyable by participants.

Which aspects of the residential programme did you find most **valuable**?		Which aspects of the residential programme did you find most **enjoyable**?	
Programme component	**N** [17]	**Programme component**	**N** [18]
Networking with others on the course	14 (16)	Fun and Games	17 (20)
Introduction to NIHR NWC CRN	12 (14)	Networking with others on the course	15 (18)
Residential Environment	11	Residential Environment	14 (16)
Coaching group	10 (12)	Coaching group	10 (11)
Fun and Games	9 (10)	After dinner speakers	9 (10)
Social media and building your personal networks	9 (10)	WhatsApp	7
RDF self-assessment	9(10)	Social media and building your personal networks	7 (8)
WhatsApp	8(9)	Learning styles session	5 (6)
Leadership and management session	8	Leadership and management session	3
Regional research priorities and infrastructure	7(8)	Introduction to coaching and mentoring	2 (3)
After dinner speakers	6(8)	Regional research priorities and infrastructure	2
Introduction to coaching and mentoring	5(8)	Introduction to NIHR NWC CRN	1 (2)
Learning styles session	2(4)	RDF self-assessment	0

Networking with others on the course

As described above, 'networking with others on the course' ranked as the most valued aspect of the residential, as well as the second most enjoyable aspect overall.

For some participants, the value and enjoyment of networking with others related to the opportunity to meet new people from different backgrounds:

> *"It was good to get to know other health professionals, not just physios"*

[17] Figures in brackets include feedback from the three respondents who did not complete the course.
[18] As per previous footnote.

"I enjoyed speaking to new people and getting to know them and their job roles and experiences etc"

"The varying backgrounds and knowledge of other on the course and their different approaches and research ideas"

"I enjoyed meeting others from different specialities as I don't have chance to do this in my usual working environment"

"It's always good to meet new people and learn from their experience and perspectives".

"*Speaking to people from such a wide range of specialties*"

*"I feel the course has given me access to other clinicians and their own experiences"**

Another participant was surprised by their "*realisation that mental health is such a small part of the health care system*".

In the post-programme reflections, one respondent commented:

"This has been an amazing journey and I have gained so much out of the experience and had the privilege of meeting so many amazing people I ordinarily wouldn't of. The eclectic mix of professions helped show the differences in research aspirations and delivery"

The value and enjoyment of mixing with people from different professional backgrounds was also about meeting "**likeminded people**" who share similar interests in and enthusiasm for research:

"I liked that it was a wide and varied cohort with many different backgrounds, but these are all bound with the shared enthusiasm for research"

"Everyone on the course was so lovely and I really valued getting to know as many people as possible. We all have a shared interest, but are from different clinical backgrounds so it is great to hear others stories. Been surrounded by positive influences with shared interests is valuable to me"

"I loved hearing about the research interests of other professionals, especially around PPIE which is something I am interested in developing my skills in"

*"Being relatively new to research it was valuable to meet other individuals who were interested in aspiring towards similar goals. Feel inspired to be participating in a course with individuals who have similar aspirations and who get excited when they talk about research". **

One participant reported being surprised "*that there are so many likeminded people in the AHP/MW and N workforce*".

The opportunity to connect with people who share a similar motivation and commitment to research was highlighted as a particularly **'inspiring'** aspect of the residential experience:

"Linking in with others who have a desire to build a better future for others"

"Being around others in clinical practice with similar motivations to myself"

"The attitude of the group; keenness, positivity and dedication really inspired me"

"Being with like-minded, enthusiastic and inspiring people"

*"Meeting a room full of highly motivated peers and colleagues who aspire towards making a difference within the world of research" **

"Speaking with others who have gone through similar experiences, scoping possibilities with people who have similar interests"

"I felt inspired throughout all the residential for various reasons. Firstly, being surrounded by positive, enthusiastic individuals with a shared interest in clinical research, innovation and development was very refreshing. As many of us have experienced, there are lots of barriers to change within the NHS which can be deflating so being around enthusiastic individuals who want to make change or who are already working in this area was very inspiring"

The last two comments also point to the importance placed on meeting people with **shared experiences of embarking upon research careers**, particularly in terms of some of the challenges:

"It was reassuring to understand that we are all pretty much in a similar boat and all very much in the infancy of our research careers (and all not really a clue where to start!!)"

"Learning ways to network and speaking to people from different backgrounds on the course was very valuable as I found out other people's experiences and struggles about starting getting involved with research"

"I found it really valuable to speak to others working in research delivery roles, as I am very new to this post and sharing some of the challenges, I have experienced was helpful"

Two participants linked networking with others on the residential to a growing sense of confidence in terms of "*knowing where to go for any answers or questions*" and "*speaking to and building relationships with others*".

For a number of participants, making friends, sharing experiences and building relationships in the group through the remainder of the programme was an enticing prospect:

"Looking forward to continuing to build and develop working relationships and possibly friendships with my peers".

"Looking forward to the start of my new venture with amazing friends!".

Building a community of practice

Most participants 'somewhat agreed' that they felt part of a community of practice with other participants on the course following the residential (see Fig 7).

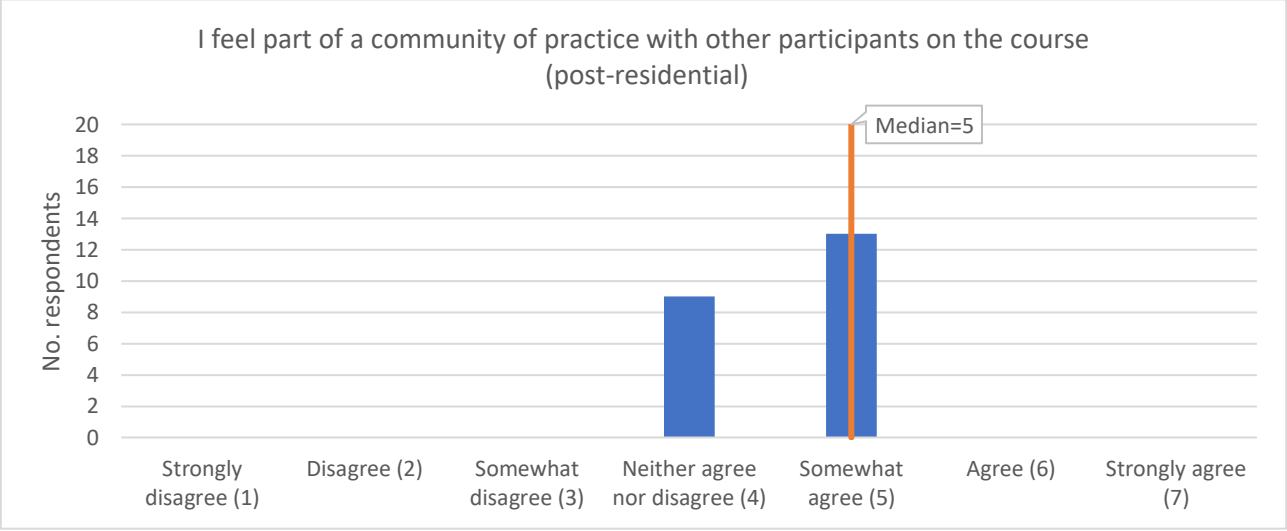


Figure 7

Some of the comments highlighted the importance of the residential experience in supporting the formation of an emerging CoP by enabling networking, bonding and peer support within the group:

"The residential was really helpful to do this [build a CoP] I don't think I would have felt the same without the opportunities for sharing and networking outside of the sessions"

"The residential was a brilliant way of bringing us all together, and I feel that I can approach anyone and be open about any struggles I may be having whilst on the course"

"Such a lovely group of people who are easy to talk to. I don't feel anxious about asking group questions etc"

"I am very grateful to have been able to be part of this residential. I feel that we arrived as strangers and left as friends"

"This is such a lovely feeling as there is a distinct lack of enthusiasm at times for research within the wider clinical setting. I also work in a very competitive clinical environment - so the course felt a bit like a giant hug for two days! I would love to take some of these principles back to my clinical team to improve our 'community'"

One participant commented that feeling part of a CoP was "*the most valuable part of the course which has surprised me*".

The importance participants placed on opportunities for building connections with others, shared learning and peer support was reflected in the negative impact that one individual's disengagement from the residential had on another participant's experience:

"The only aspect I didn't enjoy was that there was one individual who felt themselves to be superior to what this programme could offer […] I just found this individuals approach and mentality condescending and wrong for the experience of shared learning. That is the only negative from the whole thing"

3 participants also highlighted the importance of WhatsApp and/or Twitter in maintaining these connections (see below) and there was certainly a clear desire at the end of the residential for people to keep in contact and support each other between the sessions.

By mid-way through the programme, most respondents 'strongly agreed' that they felt part of a community of practice with accompanying comments reflecting how much people 'valued' this aspect of the programme (see Fig. 8). One participant, however, felt that they were only "*just starting to become part of a community of practice*" at the time of the mid-way evaluation.

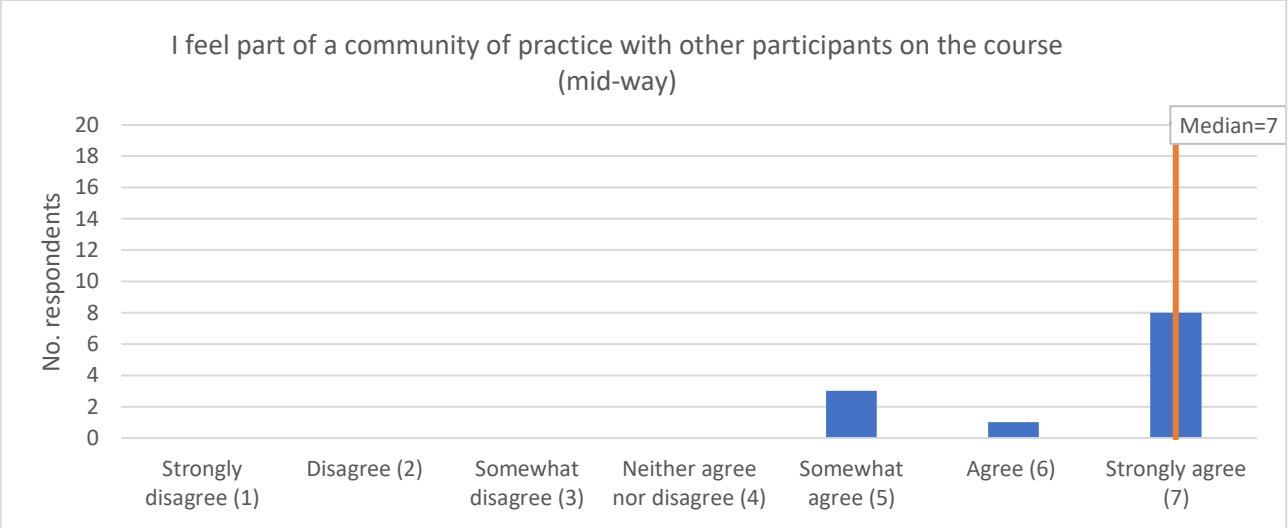


Figure 8

For a number of the respondents in the mid-way evaluation, the CoP was a valuable source of **reassurance, motivation and peer support** from people with similar and different experiences and/or perspectives:

> *"It is a great place to talk openly like you may not at work. It is supportive and it is also great to hear other people's opinions on certain things - people who may work in a different area to you but have the same struggles etc"*

> *"I have found it really valuable to share stories, thoughts, experience and feelings with others but also to listen to others too […]. I have found it very encouraging and motivating to be part of this community of practice […] and everyone I have met on the course has been so supportive"*

> *"It's a very supportive environment, everyone is open and honest"*

> *"I really cherish the community of practice with other participants and find the whole environment very motivating and supportive"*

> *"The support from my peers on the course has been hugely helpful. I have valued space and time to talk about my development and career aspirations with like-minded others. It has been so helpful to share the challenges of juggling clinical roles and research career ambitions. I have also enjoyed hearing how other NMAHPs engage with research"*

Some participants highlighted networking and discussions within the cohort as one of the most valuable aspects of the programme at this stage:

> *"The community of peers who have similar interests"*

"I also like contact with other AHPs who have the same interests and objectives as I do".

"Group sessions enabling open conversations around things that are going well and barriers etc"

For one participant, the interactions with the group were valued over a focus on theory during the workshop sessions:

"I really enjoy the more interactive type workshops - more time spent to discuss and share experiences across the group would be brilliant. I would be happy to follow up on the theory / self-assessments more independently in my own time"

By the end of the programme, all respondents either agreed or strongly agreed that they felt part of a community of practice, with the latter being the most common response (see Fig. 9).

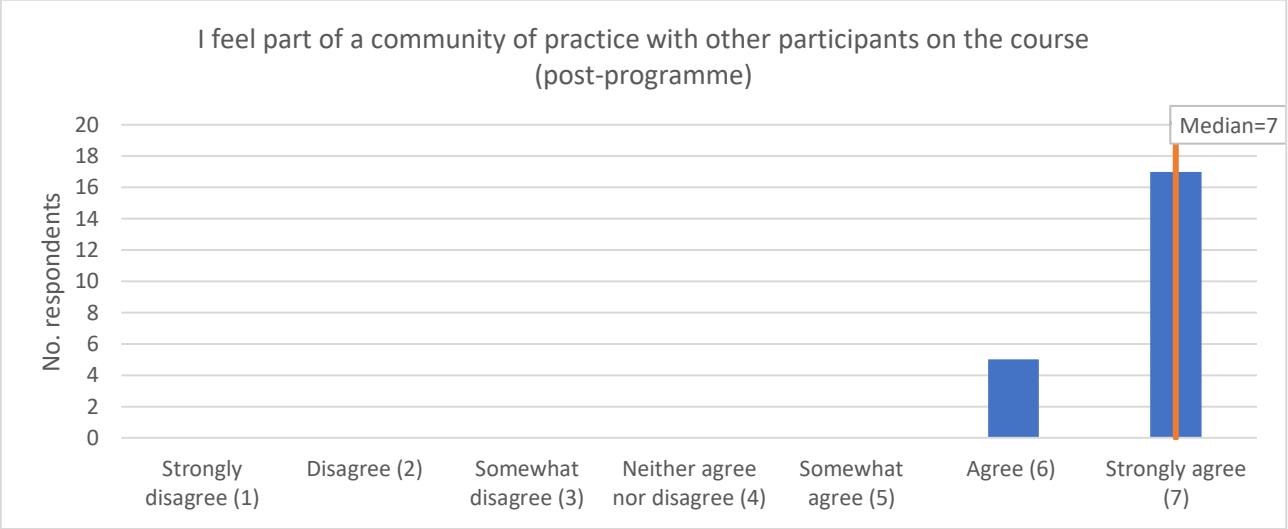


Figure 9

The CoP was highlighted as one of the most valuable elements of the programme overall in terms of "peer support" and "learning from others":

"The community aspect - really good to meet other healthcare workers who have the same interests and we really got along well as a group. Good to bounce ideas off each other and catch up with where everyone is up to in each session"

"Being part of a group where I've felt listened to and supported. It's given me permission to allow myself time to think about research and personal growth"

"I've really enjoyed the course and intend to stay in contact with all members of the group"

The residential environment

The residential environment was the third most popular element of the course in the post-residential evaluation in terms of its value (n=11/19) and enjoyment (n=14/19) for participants.

In particular, a number of participants pointed to the way in which extended time away in an informal environment supported **networking and enabled relationships** to form within the group:

> *"I enjoy meeting new people and the networking opportunities that was provided during the residential wouldn't be the same in a day-by-day structure as people naturally wouldn't engage to the same extent"*

> *"I liked the opportunity to meet others on the course in a setting which was very different to a work setting"*

> *"I valued the 'secret location' element and personally didn't look at the timetable as I really found that promoted the bonding and engagement with others"*

> *"It was welcoming and brought a hands-on approach to the course, building relationships as it's been very difficult to do this over the last years"*

> *"It was good to meet everyone else in a relaxed environment and understand their roles"*

> *"Getting to know others on the course over the 2 days. Connected with most of them over coffee breaks, dinner and in the jacuzzi. The general mood of the residential and friendly approach from the course facilitators has been crucial in this experience I think"*

> *"The residential environment [...] gave the opportunity to network with peers and colleagues both during the day and perhaps on a less formal basis in the evening**

As noted in the above comment, the evening of the residential was observed to be a particularly important time for participants to build on these new connections and form relationships with others in the group. There was a warm, relaxed atmosphere and sense of togetherness, with plenty of opportunities for people to talk to each other in more depth and enjoy the shared experience of the dinner. The importance of this aspect of the programme is reflected in one participant's suggestion for "*more time to check in so that we could socialise a bit more*!!" In the post-programme evaluation, one participant reflected:

> *"Absolutely do the residential again. The time removed from our environment and to bond was essential at the start for the cohesion of the group*"

Some respondents described how the **residential setting and the 'fun and games'** worked in tandem to help participants get to know each other by creating shared experiences and building a sense of community (see below for more on the role of 'fun and games'):

> *"I liked the setting and games as it gave a good opportunity to break the ice and get to know other people on the programme"*

> *"Lots of opportunities to speak to others on course 'informally' i.e., over / after dinner. This, together with 'fun & games' really helped to build a sense of community and that we are all in this together"*

> *"The residential environment, support and fun games have been great to get us all talking and laughing together!"*

The importance of these experiences in helping to build relationships was highlighted in the comments by participants who were only able to join the residential remotely due to Covid:

> *"I know I missed out greatly on not being present at the residential, the laughter and fun was apparent through the laptop. I could also see how quickly bonds were forming between group members that I did manage to interact with. I know I would have got a huge amount out of the fun and games and the residential environment [...] Not having a physical presence at the residential. I was so looking forward to really immersing myself in the programme, meeting and getting to know all the other attendees, having some time out of a busy life to focus on me and my development"*

As alluded to in the above comment, some participants also valued the residential environment for providing **time and space for reflection and focus** on their development away from work and the demands of everyday life:

> *"It was an enjoyable opportunity, I felt at ease and I was allowed space to reflect and plan ahead on my goals which I enjoyed"*

> *"The residential was fabulous - how could you not enjoy a night in a lovely hotel! Also kept me 'in the zone' that evening so I could get straight back into learning the next morning"*

> *"Being out of the day-to-day work environment helped me focus on the course"*

> *"It was nice to do something 'different'"*

"The power of having some time to think and reflect on my own personality, learning style, qualities, life journey and how it shapes how I feel now. I don't have that time in my clinical role and a busy life, I already feel I understand myself and others better"

"Removing an individual from their routine, for a short time, to allow them to solely focus on learning and development was refreshing"

*"The residential environment, in the fact that it was held away from a workplace, allowed 100% focus for the 2 [day] course**

Similarly, in the mid-way evaluation, the workshop days were highlighted by one participant as a particularly valuable element of the course in terms of giving people the opportunity to "recharge" and "regain focus".

Fun and games

The fun and games element of the residential was the most popular element of the course in terms of participants' enjoyment (n=17/19). This aspect of the course was also highlighted as one of the more valuable aspects of the residential by 9 respondents.

The fun and games began on the bus journey to the secret location and continued throughout the duration of the residential. Initially, there was a sense of trepidation, uncertainty, and, in some cases, a degree of irritability amongst some of the participants as the games began, but soon the nervous giggles gave way to increasing levels of good humour, laughter and more active participation, with people noticeably more at ease. Later on the first day of the residential, a short explanation of the 'fun and games', emphasising studies exploring how humour and fun can help to create connections between people, provided an evidence base behind the approach that was well-received and in line with the focus on research.

As noted in some of the comments in the previous section, 'fun and games' were highlighted as an important element in helping participants get to know each other in an informal environment, build shared experiences and start to **cohere as a group**:

"All the games were brilliant icebreakers which helped get to know others better"

"Games - helped everyone to bond with each other, reduce tension and develop cohesion"

"I don't think I would have taken as much away from the residential if the right environment hadn't been created to relax around people I didn't know through the fun and game [...] Without the 'fun and games' I don't feel that I would have felt as comfortable to contribute during group discussions, definitely worked as

*an ice breaker on many levels […] Also was surprised at how comfortable I felt to speak out in group discussions"**

*"Fun and games were a great way to break the ice and get us all connected, this carried through into the other activities"**

A number of participants described how the fun and games helped promote bonding within the cohort as well as helping them to **engage better with the material** covered during the workshop sessions, a number of whom highlighted that this was one of the more 'surprising' elements of the residential:

"Fun and games: kept me engaged and it felt like it helped the group bond as a whole"

"Fun and games: It's not very often you get to laugh throughout a course but I absolutely loved this aspect. It allowed us all to bond and engage in the topics"

"The fun and games were good team building and broke up the day enough so that when we were learning new information it didn't feel too full on and I was able to concentrate better"

"The role of Jana and how important it is to have to fun. I was surprised to discover how well I could concentrate after her engagement"

"How well it was broken up with the team games in between. It was a great two days for the start of the course"

"*The fun and games! I didn't know what to expect, but I certainly didn't expect to laugh so much"*

"How much I enjoyed the 'fun and games' - despite initial reservations"

"The fun games and active aspects were a welcome surprise as I'd envisaged a research course to be very much a sit in one place kinda thing".

Comments in the mid-way evaluation also highlighted the importance of Jana's 'fun and games' to "*break up the day and encourage team bonding*". Similarly, a response in the post-programme evaluation highlighted how this aspect of the programme "*stopped the mid-day slump and kept us all entertained!"*

In the post-residential evaluation, one participant reflected that the "learning approach" using fun and games had inspired them and *"made me reflect on how I can bring 'fun and games' into our clinical team training!"*

Another respondent described the "*creative games and links of creativity with research*" as a particular highlight. Similarly, one participant commented that they "*loved the format and creativity aspect, so engaging and really motivating.*"

Being outside your comfort zone

A number of comments in relation to the residential environment, networking on the course and the fun and games highlighted these aspects of the residential as particularly challenging in terms of pushing people outside their 'comfort zone'. Meeting and speaking to new people in a novel environment was a particular challenging aspect:

> *"I don't like speaking in front of groups I don't know so I found this challenging"*

> *"Networking with others/not knowing anybody on the residential initially as this is not something that I would usually do in clinical career and certainly not with such a big group of people"*

> *"Conscious at times (especially 'off duty' in the evening) of being unsure around the etiquette of being on a residential - so quite tiring being on my 'best behaviour' constantly"*

> *"I think it was daunting meeting so many new people having not been in that situation for months"**

Some participants explicitly recognised how much they ended up valuing and/or enjoying this element of the programme, providing them with renewed confidence in their abilities to meet new people and adapt to new situations:

> *"I thought it would be challenging to go to an unknown place with a group of people I don't know but it turned out to be really interesting and enjoyable"*

> *"Being around new people which I was very much grateful of by the end"*

> *"I surprised myself at how open I was and how I managed to engage with so many different people. I am usually quite reserved and a little socially awkward but the group, environment and the course leaders really helped with overcoming that"*

> *"I learned that despite believing I was introverted and quiet, I was able to engage and input into discussion"*

> *"That I can network with most people without too much difficulty!"*

"My confidence / communication skills continue to develop and are transferable to most environments!"

"That I'm actually quite comfortable in 'awkward' situations"

"I am flexible and adaptable!"

*"That I can be in a room of people I don't know and quickly feel comfortable in their company"**

Others particularly valued the experience of being pushed outside their comfort zone during the fun and games:

"…all of the social interaction with people I have never met before! Many of the 'fun' games really challenged me in that respect and pushed me out of my comfort zone but I actually found I quite enjoyed where I found myself!"

"The fun & games - definitely out of my comfort zone being the focus of the group at times but so well led that this feeling didn't last long"

"The fun and games were fab ice breakers and certainly took me out of my comfort zone (in a good way) which, on reflection, gave me the confidence in the coaching sessions and networking after the residential so this was very valuable"

A number of participants described the value of being out of their comfort zone as something they had learnt during the residential:

"The constant reminder we all need to embrace new experiences and not be afraid to challenge the status quo"

"I also learned that it is good to go outside of my comfort zone"

"That being out of comfort zone can be a positive thing"

Some participants described how the **shared experience of being outside their "comfort zone**" during the residential had **helped to build relationships** within the group:

"How it made it easy to connect with total strangers who were all in the same boat and out of their comfort zone"

"How effective the mild anxiety and shared experience of the 'mystery location' residential promoted teamwork"

"I felt out of my comfort zone but in a good way and have already kept in touch with some from the course which is lovely"

The importance of supportive facilitation

"Jana was amazing - I'm sure this comes back a lot but it can't be said enough. To have an individual who can elicit such positive emotions and responses from a cohort of individuals, moulding them towards being a cohesive group is a special skill set and she's a real valued asset. So all aspects of her part of the programme, although initially uncomfortable were really enjoyable in the end"

"Jana was FANTASTIC!! Her inspiration and confidence in bringing people together was amazing! Her skills to network with one another were fabulous!"

*"I'd like to give a shout out to Jana for her boundless enthusiasm and energy! "**

The above comments point to the importance of the facilitator's role in leading the fun and games to support people through the experience of being pushed out of their comfort zone and towards creating positive, shared experiences that enable connections to form within the group. This facilitator described her role as follows:

"To keep you safe and to take you just enough out of your comfort zone so that magic happens, but not so you hate it and don't engage!"

In addition, there was an emphasis on recognising that people were "outside their comfort zone" during the first day of the residential. Some time was dedicated to co-creating some 'rules' to help make the residential a "safe space" in which people could "feel more comfortable and open with each other", have fun and build relationships within a "friendly and supportive" learning environment:

"What can we do if we recognise that someone is outside their comfort zone? Empathise, talk, recognise that it will be uncomfortable for all of us, but it will enable innovation. Be supportive, please ask questions and listen, have fun, make friends. We might feel vulnerable especially if we are outside our comfort zone" (Programme facilitator)

Participants variously highlighted the 'relaxed' and 'friendly' nature of the residential, with an emphasis on the support provided by the "engaging and approachable" facilitators. Mid-way and post-programme evaluation comments also highlighted the supportive and encouraging role of the facilitators in supporting people to step outside their comfort zone and help the group to cohere:

> *"Being completely out of my comfort zone, but overcoming challenges and being positively engaged and motivated by the trainers and the course content"*

> *"The speakers and course organisers where absolutely amazing at motivating and supporting after every session I left feeling ready and encouraged to actively be part of something and not afraid to put my thoughts across. Miles out of my comfort zones YES but very much needed and I feel I am a better researcher for this course! AMAZING"*

> *"Cohesion between the group- facilitated by the leads on the programme"*

> "*Compassionate facilitation from a group of experts without condescension or a feeling of superiority"*

WhatsApp

Prior to the residential, participants were invited to use WhatsApp to share their name, job role, organisation and favourite food as well as a photo. This platform offered the first space in which people could start to get to know each other and build tentative connections prior to the start of the residential. The introductions set the tone for the informal, fun exchanges through which people began to get to know each other on a more personal level and in which some participants felt able to share their feelings about the upcoming residential. The feelings of nervousness, apprehension and excitement around the residential and the 'secret location' helped the group start to cohere around their shared experience. The platform also provided a place for the facilitators to provide reassurance, answer questions and provide any additional information.

> *"WhatsApp: relieved some anxiety about who would be on the residential and their roles. Allowed me to get a feel for the group I would be spending time with"*

> *"Also having WhatsApp enabled my new friends and colleagues to have a bit of banter and share pictures of each other which broke the ice before we actually met!*"

In the post-residential evaluation, 8/19 respondents selected WhatsApp as one of the most valuable aspects of the course and 7/19 included it as an enjoyable aspect of the programme. It was particularly valuable for the two participants who were unable to attend the residential in person, allowing them to still feel "involved", "supported" and *"not alone in my low level of starting knowledge"*.

Following the residential, many participants used WhatsApp to express their gratitude, reflect on how much they had enjoyed the residential and share excitement about their ongoing journey together.

Throughout the rest of the programme, WhatsApp was used by many of the participants to share snippets from their personal lives with conversation ranging from pets to babies, anniversaries to cake baking, as well as to organising social events. The platform also provided a forum in which participants celebrated each other's achievements such as applying for a new job, as well as asking for and receiving peer support and advice in relation to different aspects of the programme such as choosing a mentor, competing assignments and addressing technical difficulties with the University of Liverpool's virtual learning environment (Canvas). WhatsApp was also used by facilitators and participants to share resources directly and indirectly linked to the programme.

Social media and building your personal networks

9/19 respondents selected the session on 'social media and building your personal networks' as one of the most valuable elements of the residential, and 7/19 identified it as one of the most enjoyable aspects. This session was observed to generate animated discussions. The cohort were advised to join Twitter as soon as possible if they hadn't already done so, with some participants reflecting that social media and wider networking was new territory:

> *"New to Twitter so know I am going to find this daunting" **

> *"I have to make more of an effort to mix with people and find confidence to approach people"**

> *"[I learnt about myself] that I need to branch outside of comfort zone when it comes to social media and networking"*

As alluded to in the above comments, some participants highlighted how this session had helped them to recognise the "importance of networking", particularly with respect to their future careers. Some described how they had already applied their learning in practice:

> *"Being a little averse to social media I found the session on how useful this is for networking particular valuable. On returning from the course, I created a twitter account and soon realised how fantastic it is for networking. I have found myself a potential mentor and placement through this so thank you"*

> *"I am more likely to engage with local networks via social platforms and it has given me the confidence and permission to contact the research team at my hospital"*

"I have now spoken to my research department and governance department to seek out new opportunities"

Following the residential, some participants used WhatsApp to share their Twitter handles and experiences of starting to network on Twitter.

"Tagged the chief nurse in my tweet, now been made Trust Research Champion" (WhatsApp comment)

There was a strong sense of excitement, confidence, motivation and determination in relation to maximising the opportunities available through networking (see also section 4.2.2).

"I feel more confident to build strategic networking and be active/ responsive on Twitter etc"

Later on in the programme, the continuing emphasis on building personal networks was highlighted as being especially valuable in terms of providing the necessary encouragement and confidence to build relationships and network more widely, with some pointing to how this has helped shape their research career trajectory:

"There are so many aspects that have been valuable but I would say the encouragement to network has been vital. I would never have done that without this course and now so many opportunities have arisen from it so thank you"

"Giving me the confidence to network with different people throughout the course"

"My clinical academic career plans have come on leaps and bounds, driven by the supportive network developed on the programme with mentors, CRN and other NIHR organisation links and individual speakers who have experienced NIHR support. This support has given me the confidence to take the next steps - thank you!"

"I have been able to network with some very helpful people who have been instrumental in helping me figure out what the next stage of my career will be"

One respondent described *"a need to further broaden this set of contacts going on from the programme"*.

In the post-programme evaluation, many participants described how networking had been one of the most valuable aspects of the course overall, particularly with respect to opening up opportunities for developing their future research careers:

"Networking as it has opened my eyes to the plenty of opportunities available and what is needed to plan my research career"

"Networking, making new friends in different specialties to maximise potential of future projects"

"I have been able to network with some key people from the university of Liverpool who share similar research interests as I do. They have been very encouraging of me developing my research career and very supportive".

A blog post written by one of the participants about their experience of the programme described how:

"…another of the highlights has been networking which has opened up a world of opportunities and discussions – I've found everyone so supportive and welcoming"

Coaching groups

The coaching groups were the 4th most popular element of the residential in terms of enjoyment and value (n=10/19).

Observation of a coaching group during the residential demonstrated how this activity helped people to open up and share personal experiences, leading to the development of more intimate bonds.

Comments in the post-residential evaluation showed that participants valued the coaching groups as an opportunity to get to know people on a more personal level, share experiences, build "trust and understanding", develop relationships and reflect on their development:

"I found the coaching group particularly valuable, as a reflector, it was a good opportunity to have completed the life line, reflect on events so far and share this with the group and also hearing others stories was important. I felt there was an instant bond with the coaching group and am looking forward to future sessions"

"The addition of the coaching session was fabulous! This brought a small group of people together in a more emotional and personal way which I believe will make it more productive and helpful throughout the course"

"I felt excited and nervous about sharing my life story on the second day and whilst sharing it I became emotional. I then felt a sense of relief and a bond with the coaching group"

"Mentoring and coaching were also very new experiences for me [...] it [coaching] has been a good way to connect with others on the course to share ideas, thoughts and concerns"

For one participant, the coaching was valued in terms of "*find(ing) out more about myself as an individual*" *, whilst another reflected that they had learnt that "*being open and honest helps me build relationships"*

As alluded to in the one of the above comments, a number of participants reflected that their experience of the coaching group had been an especially challenging aspect of the residential, particularly with regards to the vulnerability and emotions associated with 'opening up' about their personal 'life lines':

"I have never done this [group coaching] and I didn't know what to expect, I wasn't used to sharing in a coaching group setting"

"The coaching group - challenged me to be open and a bit vulnerable around people I did not know well"

"Sharing my life line, but afterwards I felt a relief for sharing it. I found it challenging because it brought out a lot of emotion that has been bottled up and sharing your story with strangers is a little scary!"

"Talking about myself to others in the coaching session was quite emotional. Personal goals and achievements were hard to explain without sounding big-headed!"

"The timeline. I found it hard to look back on all my life as it brought back memories of failure and life choices that were not always the best"

*"I also found the coaching session challenging from an emotional perspective"**

Two people also described hearing about others' experiences within the coaching sessions as a particularly 'inspiring' element of the residential:

"I felt inspired by others in my coaching group in particular, the resilience they have shown throughout their personal and work life was very inspirational"

"The coaching group I feel had the most profound effect, listening to and sharing our live journeys and how that is influenced our career paths, confidence and aspirations really made me feel quite humble, yet excited and optimistic of how we can move forward together"

It appeared that very few people had experience of having a mentor or coach prior to the programme, with 5 participants highlighting the 'introduction to coaching and mentoring' session as an especially valuable part of the residential. One participant described how this session had helped them to understand the *"differences between coaching and mentoring and how to go about finding a mentor"* and a number of respondents to the post-residential evaluation noted that they were looking forward to the coaching and mentoring elements of the programme (see below for more on mentoring):

> *"I also knew nothing about coaching or mentoring prior to this programme. I am open to fully engaging in the coaching and mentoring process in order to get as much out of it as I can".*

For one participant, they were especially looking forward to "learning about me" in the coaching sessions and "*how I can improve my confidence, to not put limits on my capabilities*".

By mid-way through the programme, most people 'agreed' that coaching had helped with their development (n=5/12) (see Fig. 10), with the majority of respondents (n=14/22) 'strongly agreeing' to this statement by the end of the programme (see Fig. 11).

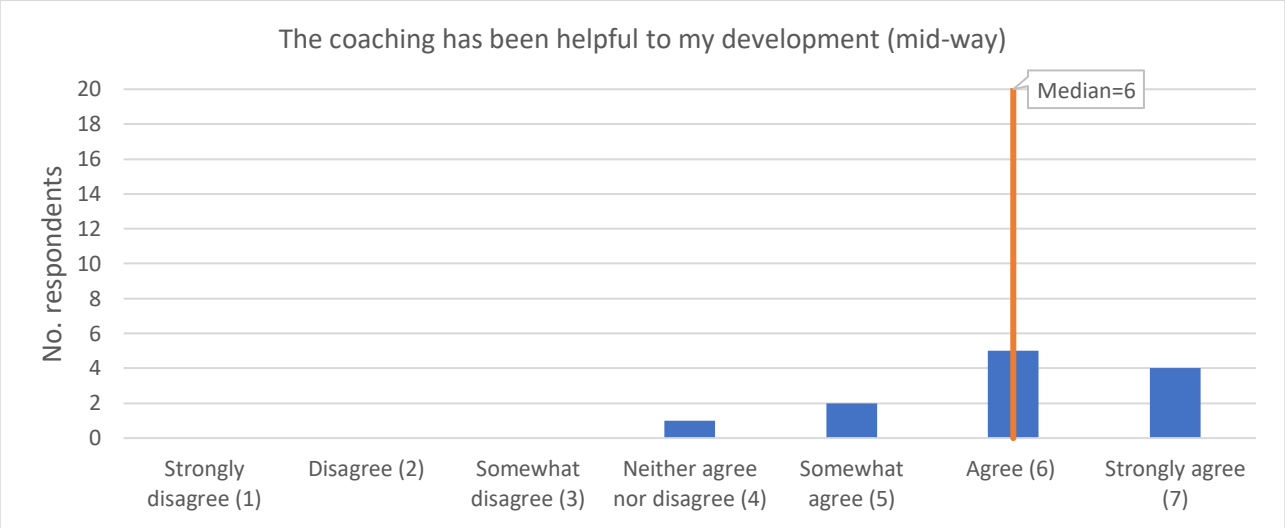


Figure 10

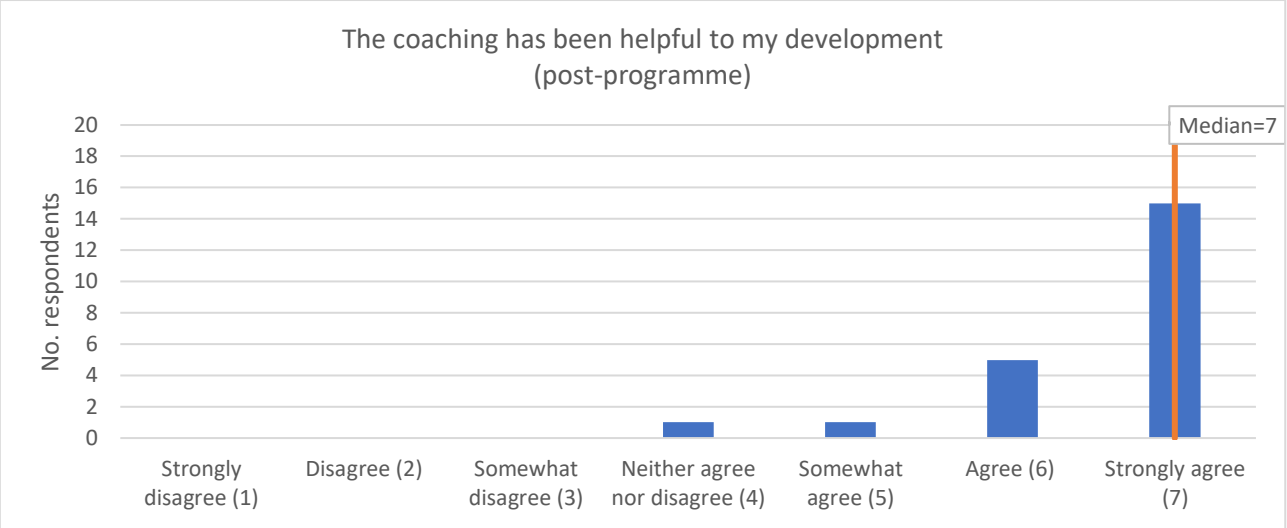


Figure 11

In the post-programme evaluation, coaching was identified by two participants as one of the most valuable elements of the course. Two people also noted that coaching had improved their confidence and wellbeing, with one going on to state that:

> *"The coaching has been life changing both personally and professionally. I have confidence I never had, I can prioritise life better, I have more resilience and deal with conflict with much less emotion"*

Relatedly, some respondents highlighted that the coaching sessions had helped them to develop their coaching skills in terms of "active listening", conflict resolution and the use of open and closed questions. One participant also described how they would apply some of these skills to their upcoming research:

> *"Helped me become a better listener and allowed me to practice interviewing others and the importance of open-ended questions. I will certainly use a lot of the skills developed from the life coaching sessions in my research study in which I hope to carry out a qualitative study interviewing patients and also PPI""*

At the end of the programme, many of the comments related to coaching highlighted the ongoing value of peer support within these sessions and the opportunity to talk through and share stories/problems, particularly within a smaller group. One participant described how the smaller group helped them to feel "confident voicing my issues" and others described how this helped to create a "safe space". For some, the coaching interactions facilitated tighter connections between members of the cohort and supported the formation of more intimate 'communities of practice' with the facilitators and peers:

> *"Sue helped to pull us together to form a supportive and positive group"*

"The community of practice approach (to coaching)-support from other colleagues on the course who I have come to know much better"

"Helped us to consider ourselves as people and not just clinical robots"

"Kev and my coaching group have been such a wonderful support and the bond we have created has been invaluable. I've really valued the coaching sessions and will miss them"

"REALLY HELPFUL! Best thing about the course. Helped me to connect with other members as well and form a support group. Great for learning about myself"

These smaller communities of practice with "like-minded people" sharing similar experiences, motivations and "struggles" were an important source of reassurance and 'togetherness' that reduced feelings of isolation for some people.

Other participants also explicitly highlighted the value of the coaching facilitator in supporting self-reflection:

"Stuart was extremely helpful and provided a space to reflect on personal and professional achievements and challenges"

"A space to be listened to by an impartial and external person with experience in research has been invaluable"

"*The use of the coach to facilitate our reflection and hold the sessions together"*

A key theme in some of these comments was how the coaching groups had helped with "problem solving", particularly in terms of "*think[ing] about problems in different ways*" and "*changing the way I think or deal with a situation*":

"The coaching has allowed me to reframe my thinking, to listen to others and to have open conversations with (initially) strangers"

"I have found the coaching has reshaped my thinking and how to approach a challenge, it isn't something that comes naturally to me"

> *"Awesome coaching group coached me through yesterday. They really helped me and I've managed to tackle it today and done with time to spare!" (WhatsApp comment)*

Others variously described the benefit of "getting perspective", "exploring assumptions/biases" which helped them to "take action" and keep "motivated". Some respondents also pointed to the coaching sessions as helping them to "identify their priorities" and find "the direction of travel".

There were only two negative comments in relation to coaching, with one participant noting that the sessions had "not been productive for my needs" and another describing the sessions as "very pressurised" and "difficult to organise".

Mentoring

As described above, mentoring was introduced to the participants during the residential as part of the 'introduction to coaching and mentoring session'. Participants were advised that ECRDP alumni were available as mentors and that they should have a mentor able to commit to a monthly conversation in place by September.

One participant noted in their post-residential evaluation that they had "*already been in contact with my mentor who has given me ideas on what I can be doing now"*, however, there was a sense of uncertainty and anxiousness overall around choosing a mentor following the residential. This uncertainty was expressed on WhatsApp, where a couple of people commented that they were struggling to find a suitable mentor. One participant noted that *"it doesn't help that I'm also questioning which direction to take if any"* and another responded:

> *"I don't feel like I have a direction or have much idea where this will take me. I am hoping this process (mentoring) will help shape that."*

In response to these comments, some additional advice on choosing a mentor was provided on WhatsApp by the programme leads.

By the time of the mid-way evaluation, half of the respondents 'strongly agreed' (n=6/12) that the mentoring had helped them in their development, with the remainder either 'agreeing' or 'somewhat agreeing' to this questionnaire item (see Fig. 12). At the end of the programme, most participants (n=13/22) 'strongly agreed' that mentoring had been helpful, although two participants provided an uncertain response ("neither agree nor disagree") and one person "somewhat disagreed" with the statement (see Fig. 13).

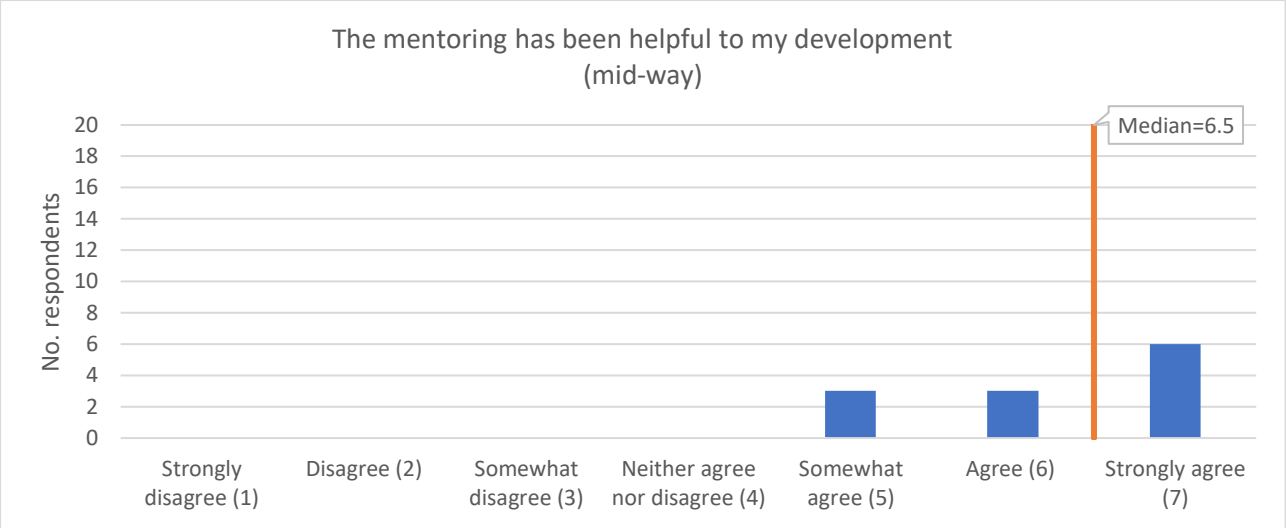


Figure 12

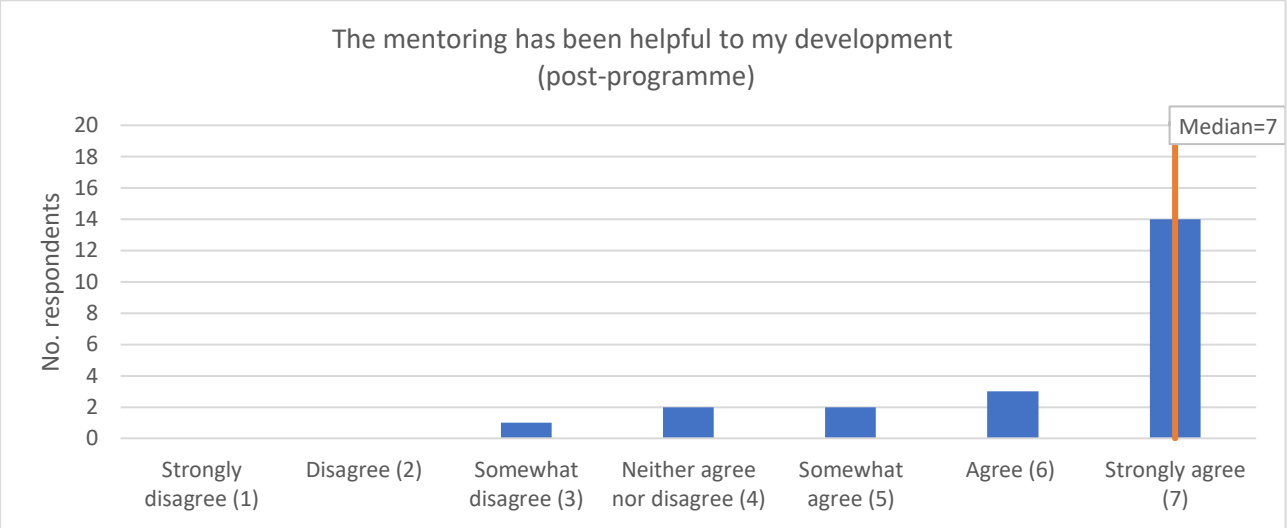


Figure 13

Two participants identified mentoring as being one of the most valuable elements of the course overall.

A number of respondents particularly valued that their mentor had previously completed the ECRDP or had followed a similar pathway and could offer "*examples from (their) own recent experience*" of the programme as well as ongoing career development, such as applying to the NIHR ICA scheme. Similarly, another participant valued "*hear(ing) about people's research journeys*" and one participant benefited from "*learning from an experienced clinician*".

Some of the respondents highlighted the benefits of having a mentor in terms of helping them to widen their contacts, open up opportunities and/or supporting them to take the "next step" in their research careers:

> *"My mentor has been a huge support, offering great advice and guiding me on the next steps. She has put me in contact with relevant people where doors and opportunities have opened […] It has been so helpful*

to have someone to speak to about my research ideas and career journey with someone in that field because they get it. My mentor has given me some great bits of advice and supported me along the way".

"My mentor has been influential and has helped guide me to people/organisations that would help with my research proposal"

"Practical tools for progressing forwards with my research […] "put me in touch with others who are going through their journey".

"Gave me the opportunity to exchange views with somebody who has "been there" and could practically help me navigate next steps"

"My mentor speaks as if we are a team working together to develop my research career, so I feel like he will support me going forward [..] feel like we are working as a mini team and will continue after the course"

One participant highlighted the value of having both the coaching and mentoring in this regard:

"Mentoring and coaching!!! Invaluable to learn how having them both together can help you progress with research".

Some participants also described how their mentors had "pushed" them to take the next step in developing their research careers:

"My mentor has been amazing and has pushed me out of my comfort zone in just the right way, encouraging me to take the next step and speak to academic supervisors as well as providing introductions".

"Pushed me to 'being bold' and taking the next step (applying for fellowship)"

"A voice of experience to challenge me and push me further than I perhaps otherwise would reach"

"Keeping up momentum and encouraging me to "go for it"

Respondents also variously highlighted the support, motivation, guidance and advice offered by their mentor, one participant describing them as a "helping hand":

"The mentoring kept me on track, kept me motivated and gave me confidence throughout the course".

For one participant, this guidance and support was “reassuring” and made them feel they could “approach someone should I have any issues”. Some respondents also highlighted the importance of the mentoring relationship as a space for talking through their ideas, learning and challenges.

In the post-programme evaluation, 4/22 respondents noted a more negative experience with their mentor in terms of access and availability. One participant also suggested that it “*may be helpful to have details of what the mentor’s role is and maybe some potential mentors from each specialty [at the residential] to talk to”*.

Introduction to NIHR NWC CRN and regional research priorities and infrastructure

The introduction to the NIHR NWC CRN ranked as the second most valuable element of the residential (n=12/19), with 7/19 participants also highlighting the sessions on “regional research priorities and infrastructure” as particularly valuable.

The ‘introduction to NIHR NWC CRN’ session started by describing some of the difficulties that novice researchers experience in building their careers and “joining up work across silos” without an understanding of the “bigger landscape of health and social care”. This session highlighted the importance of “knowing what opportunities are out there” and the relevance of these opportunities to the assembled cohort, concluding with a focus on how “anyone” can help create a research culture not only by doing research, but by becoming more research-aware and promoting research in their respective organisations. The facilitator of this session also remarked that many staff were unaware of the NIHR and the different roles of the organisation.

Indeed, only a few of the participants claimed to have heard of the NIHR academy, ‘research design service’ and/or the ‘patient safety centre’ during the residential, with one participant reflecting that they “*had only the vaguest idea of the NIHR as an organisation*” prior to the programme. These sessions were variously described as “important” and “helpful/useful” in terms of learning about the wider research network and to “*understand where everything fits and who does what*”. These sessions helped some participants get a better sense of the support available for progressing their careers:

> *“Understanding the CRN, NIHR and research priorities helped set the scene and meaning to the programme, it opened my eyes to an infrastructure that is there to support our journey in research that isn't part of the conversation in my clinical role”*
>
> *“Gave me an understanding where I fit the bigger picture and gave me some ideas on how to progress”*
>
> *“It was really helpful to see how the CRN is organised and supports everything we were introduced to - there are others out there 'on our side!'”*

"The induction gave us the opportunity to find out about the current research landscape"

One participant also commented that "*hearing about support/structures (NIHR and CRN) out there to access and be part of*" was an especially inspirational part of the residential.

In the mid-way evaluation, another participant pointed to "learning about the NIHR" as being a particularly valuable part of the course, and another reflected that these sessions had helped them "*to better understand the awards and funding available to me to continue my research career"*.

Following the residential, however, a couple of participants remarked on complexity of the structure and function of the NIHR and CRNs and the volume of associated information, with one participant suggesting that "practical learning/visual aids" would help to introduce this topic. Some participants also recommended having the NIHR introductory session earlier in the residential schedule "for context" and to "help our understanding of the infrastructure and research environment". One participant specifically requested more information about the CRN and how it "links with local trusts and ground staff doing research".

After-dinner and other external speakers

The after-dinner speakers shared their research career journeys with the assembled cohort, both highlighting a wider resistance to research within clinical practice and making the case for the importance of promoting research through social media and networking.

6/19 respondents selected the 'after dinner speakers' as one of the most valuable aspects of the residential, with 9/19 identifying this as a particularly enjoyable element of the course and 8/19 highlighting the external speakers as especially 'inspiring'. Participants variously articulated the motivation, enthusiasm and inspiration of hearing how others had "got involved" and were "actively carrying out research":

"After dinner speakers – very good hearing real life examples of people who have changed their career course to include research"

"Listening to other professionals describing their journey and how they have got to where they are now"

"Learning from other experienced researchers about how they began their journey and gain insight on the pitfalls"

For one participant, the speakers "*showed what could be done when you take opportunities presented to you*", another describing "*their journey towards research making it seem more possible to achieve*"*. Similarly, one

respondent valued "*seeing what is possible with a research career with illustrated examples*" * and another described how the speakers helped them to "*see that I will be part of a wider network*".

For some, the consequences of these sessions were almost immediate, with one person asking an after-dinner speaker on the spot whether they would be their mentor, and another describing how:

> *"I have already taken some of the ideas around research engagement discussed during the after-dinner speeches and on day two back to my research team"*.

Some participants also highlighted how the after-dinner speakers had helped them to understand the attributes required in a successful researcher, with one person pointing to how the speakers had shone light on the importance of 'personal values' in this regard (see section 4.2.3).

In the mid-way evaluation, all respondents agreed (somewhat agree- strongly agree) that the external speakers had been useful to their development, with 'agree' being the most common response (see Fig. 14). Two participants highlighted the speakers as a particularly valuable aspect of the course.

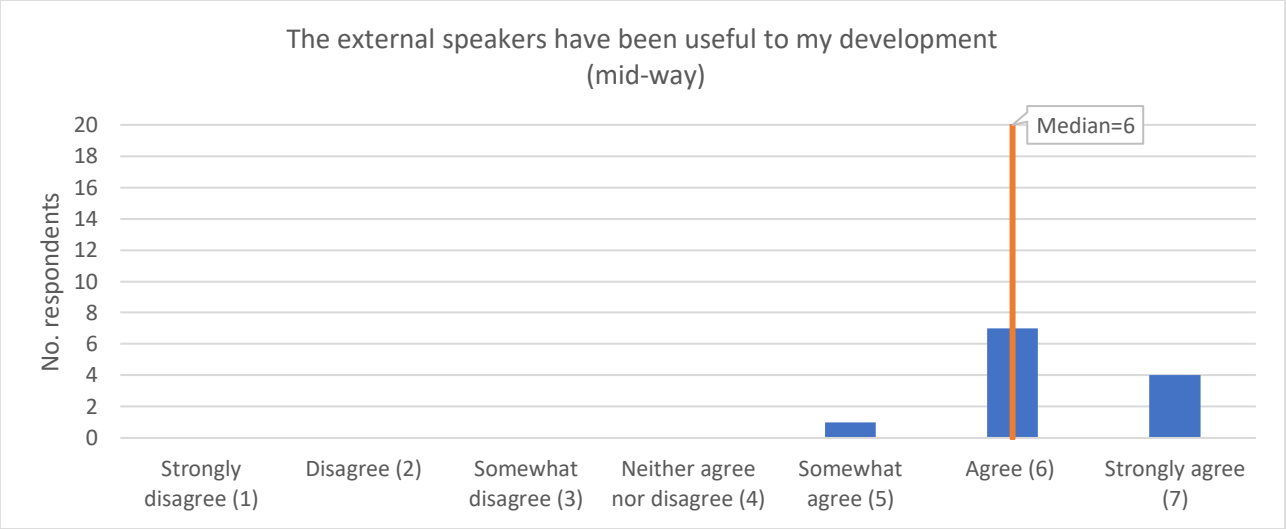


Figure 14

In particular, one respondent described how the external speakers had helped them to broaden their knowledge of the research infrastructure and improve their understanding of the role of a clinical academic:

> *"There have been very inspirational speakers on the programme who helped better understand the role of a clinical academic and how they prioritise research whilst still providing a high standard of clinical care. I have learnt so much about different departments like R and D and the library services which I probably would have not known if I didn't attend this programme"*

By the end of the programme, most participants 'strongly agreed' that the external speakers had been useful to their development (n=14/22) (see Fig. 15), 4 of whom reflected that the external speakers had been the most valuable aspect of the course overall and one participant describing how the speakers had "*increased confidence that I can have my own research journey*"

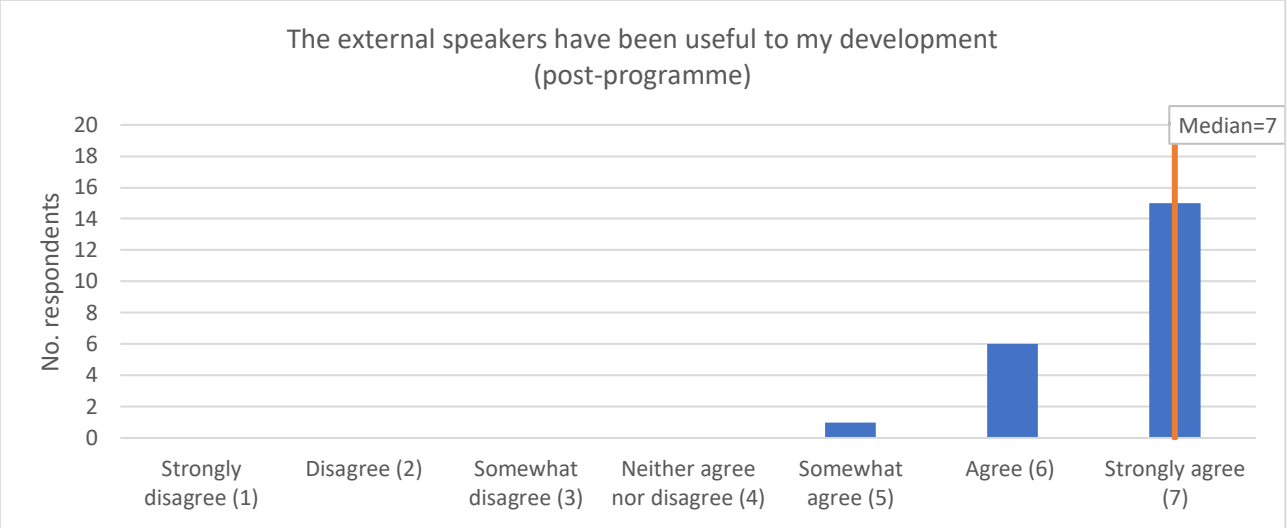


Figure 15

In terms of improvements to this element of the course, two participants noted that it would have been useful to have the speakers before dinner during the residential and another commented that it would be helpful to have more "*speakers that were Research AHPs rather than Nurses as a lot of people on the course are AHPs*". One participant also requested "*more individual time with the course leaders and after dinner speakers*" *

Leadership and Management Session

There was a strong focus on leadership on the first day of the residential with a dedicated session on distinguishing between leadership and management. Participants were advised that there "are limited pathways for AHPs so it is key that you become an influential leader in your field". When asked, approximately 8 people in the cohort self-identified as managers and a slightly higher number identified themselves as leaders, with a distinct overlap between the two. When the definition of a leader was broadened to describe "anyone who influences others", a lot more people stood up to identify themselves as a leader. The session went onto distinguish between leaders and managers, and emphasised the importance of three essential qualities in a leader: competence, caring and reliability. Some of the discussions on the tables during this session focused on the difficulties of balancing these key leadership qualities in the pressures of the working environment.

8/19 participants included this session as one of the most valuable aspects of the course. One person commented on how "reflection on this has been valuable for me" and another described it as a "relatable and engaging topic" highlighting that they were:

> *"Inspired by the leadership talk as it was a topic I could relate to. It made me want to be a better leader"*

Two people highlighted their leadership development needs as something that they learnt about themselves on the residential:

> *"I learned how to balance the aspects of being a good leader and could reflect on my areas for improvement"*

> *"I currently do not have management/leadership responsibilities at work and it is an area of the programme that I was feeling quite nervous about. It was reassuring to look at elements of what makes a good leader and to recognise those elements (e.g., trust, competence, reliability) in myself at work. This made the idea of working on leadership skills seem more achievable".*

In the post-programme evaluation, one participant highlighted leadership development as one of the most valuable aspects of the course.

Learning styles

In this session, it was observed that there were a high number of reflectors/theorists in the cohort. Some of the conversations reflected on whether some professions e.g., physiotherapy might suit particular learning styles and explored whether a learning style preference can be context-dependent. There was, however, a general sense of apathy around this session and a number of people seemed to feel this was a repetition of work they had done before;

This observation is perhaps reflected in the evaluation responses, in which the learning styles session was only selected by two respondents as one of the more valuable elements of the residential, although 5 people selected it as one of the more enjoyable aspects. One participant commented that **"r***evisiting learning styles is always useful as a baseline".*

Some people highlighted understanding more about their learning style as something that they learnt during the residential:

> *"I was surprised to reflect on my learning style as by reading the definitions I thought I'd be a theorist but I resulted pragmatist/activist on the test"*

*"Also was really surprised by my learning styles questionnaire outcome, so it's seems I'm more of a reflector and theorist!" **

"I learnt that I'm a reflector and activist".

"That I am theorist and pragmatist in my learning style(s) The latter isn't too much of a surprise!"

"The learning questionnaire really made me realise I can be a bit of black and white person and that maybe I need to relax that a little."

RDF self-assessment

None of the participants claimed to have heard of the RDF prior to the ECRDP during the residential. 9/19 of the post-residential evaluation respondents identified the RDF self-assessment as one of the more valuable aspects of the residential, with comments reflecting its value as a benchmarking tool for their ongoing professional development:

"The self-assessment is something I can refer back to and see if I have developed over time and it showed my strengths and weaknesses"

"RDF self-assessment has helped me to identify some goals already and is valuable as a benchmark for where I am heading. This is particularly good to see at the moment as I have recently discussed with colleagues the feeling of being 'left behind' - my role doesn't really fit into any of the new AHP advanced practice frameworks"

"The RDF, really made me reflect on all aspects of research, and benchmarking helped give me focus and I can already see how this will start to shape my development"

"The Vitae RDF has been really enlightening to help me structure my approach for my development in research".

"I didn't have a bench mark of where I currently am in terms of research knowledge/experience and I certainly didn't have an appreciation of what the development opportunities/pathways could be. Benchmarking against the framework has really helped identify where I currently am"

*"It also helped me understand the stage of research I am at"**

The RDF was described as helping people get a better grasp of the skills and attributes of a successful researcher more generally, with one describing it as enabling a "more structured view". For one participant, this was found to be a particularly valuable, but challenging aspect of the residential describing "*the expectations within the RDF and how far I am from reaching these*". *

This session was observed to be quite an intense part of the first day of the residential and felt very rushed given people's unfamiliarity with the framework and its detail and complexity. Some participants questioned the applicability of this framework to clinical research given its grounding in higher education, particularly in relation to roles collecting data rather than conducting their own research. A couple of people also highlighted difficulties scoring in relation to the descriptions in the framework, for example, how to score themselves when they might have extensive knowledge about an area, but very little practical experience. One person also asked "how do we know what we don't know?". None of these issues, however, were reflected in any of the evaluation comments.

The results of the RDF self-assessment are explored in more detail in section 4.2.3.

4.2.2. Emerging outcomes: Looking forward and moving forward

Participants' descriptions of how their feelings changed over the duration of the residential reflected a common trajectory from **anxiousness, uncertainty and discomfort** to increasing enjoyment and relaxation. A number of participants also tied this emotional trajectory to an increasing **excitement and motivation** about the journey ahead:

> *"Anxious, confused as to what was expected from me and worried about my own self confidence. During the end of the last day after I had rotated around the varying tables and talked with a lot of the others, I felt my anxieties lifting and felt motivated and open to new challenges"*

> *"I felt nervous on the first half of the first day which then turned into being relaxed and enjoyable once I got talking to people more at the residential […] I then felt tired! But buzzing from the 2 days"*

> *"Once back home afterward on the Friday despite feeling tired, I was buzzing - I felt more positive and happier than I have for several months! And so enthusiastic and motivated, like I could take on anything! - I was reflecting on why I felt this way and how I could replicate this feeling for others within my working environment".*

> *"I felt quite anxious to start with but this changed to a feeling of being comfortable. I felt like a different person after the course, truly inspired and excited about the course and my journey".*

"I came back from the residential feeling very enthused and positive. This was very different from the 'not sure' mindset I had before the residential".

"I was excited to start and did not know what to expect and at the end I felt determined to get going and take things back to my clinical role"

*"Anxious on train on way to course. Initially on playing some of the games, I did think 'what have I come to!', it was good to just to go with the flow and have fun and laugh as we were all in the same boat. Towards the end of the first day, I felt as a sense of achievement, had definitely grown and confidence and was excited about potentially what day 2 would bring"**

Most participants 'somewhat agreed' that they were looking forward to the rest of the programme in the post-residential evaluation, (with the remainder responding 'neither agree nor disagree'), suggesting that there was some ongoing trepidation concerning how the programme would progress (see Fig. 16). However, a number of respondents described feeling more "enthusiastic" and "excited" about the course following the residential:

"The sense that this could be an interesting, positive stage in my career"

"It feels as if something good will come out of this - I can't quite quantify it yet"

"Really enjoyed it _ I have a good feeling about doing this program"

"Really excited to see what the future holds"

"I'm looking forward to seeing where this takes me"

"Feeling so grateful and so, so inspired. Actual real-life magic might have happened the last two days. Can't wait to see what's next" (WhatsApp comment)

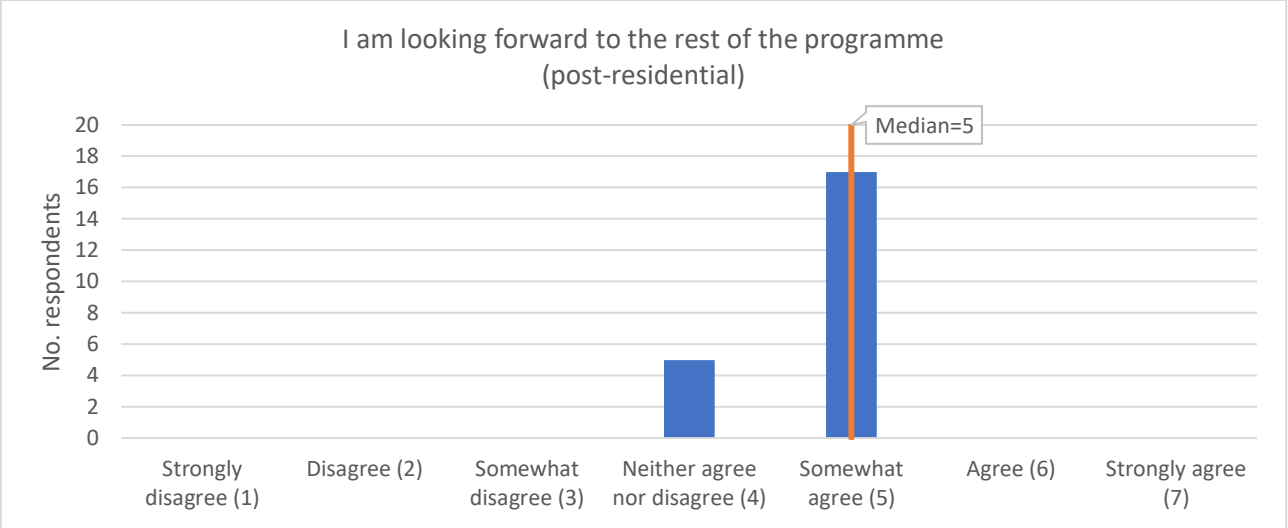


Figure 16

Within the wider post-residential comments, there was certainly a sense of **enthusiasm and motivation** to learn new skills, develop career plans, take up opportunities and grapple with the "challenges ahead".

"Looking forward to learning the skills and building the confidence to drive this plan forward"

"[The most valuable element of the programme was] the opportunity […] to work out what skills we will have the opportunity to develop during the programme to enable us to carry out research as part of our roles"

"I am excited to learn and develop my understanding of research and hopefully take this back to my clinical job"

"I'm looking forward to learning more about research and how it can help me achieve my goal within my own organisation"

"I feel really excited and hopeful, looking forward to focusing my career plan"

"Building a structured career plan - I have never done this before, my career path has been fairly formulaic and a well beaten path, looking forward to really exploring where I want to take my career with research and clinically.

"I feel very fortunate to be on this programme and that it has the potential to open a lot of doors for me. I feel like it will be important to set myself some specific goals, as there has been a huge breadth of content covered already!"

For example, some participants specifically described looking forward to building their networking skills and maximising opportunities for broadening their networks during the course (see also section 4.2.3):

> *"I am hoping the course will help me become more confident in approaching people. I am hoping it will help me get the best out of people I ask for help"*
>
> *"I feel really excited and hopeful, looking forward to […] working with people outside of my profession and immediate team to help me achieve this. I think this will really help me broaden my options and hopefully open doors to opportunities".*

One participant articulated their determination to "make the most of it" and reflected on an increased sense of confidence in their ongoing development:

> *"I'm very excited to see where this takes me. I'm keen to make the most of it and give it my best to take it on. My confidence around this has never been like this before the course"*

Another participant reflected on how the degree of investment in the course had cemented their commitment to maximising the available opportunities:

> *"It is the first time I have been on a course whilst working in the NHS and really felt invested in. I feel like there is a lot of support for clinicians to become researchers. This has surprised me in a good way! The fact that we went to a very nice hotel, the course felt well run and organised, we were assigned to a coaching group and encouraged to find a mentor. I feel like this is a unique opportunity and I want to make as full use as possible of all the support that we have (i.e., the course tutors, the other clinicians on the course, the coaching group, and the mentor) […] expectations increased as I realised that in terms of time and resources we are being invested in heavily and it has made me more determined to make the most of it"*

A different perspective on becoming a researcher

Although 8/22 'neither agreed nor disagreed' that the residential had opened them up to new ideas and perspectives, and a further 5/2 'somewhat disagreed' with this statement, most participants (9/22) 'somewhat agreed' with this questionnaire item (see Fig, 17). One participant commented that the residential experience had led them to start thinking "outside the box", whilst another described the residential as "eye opening".

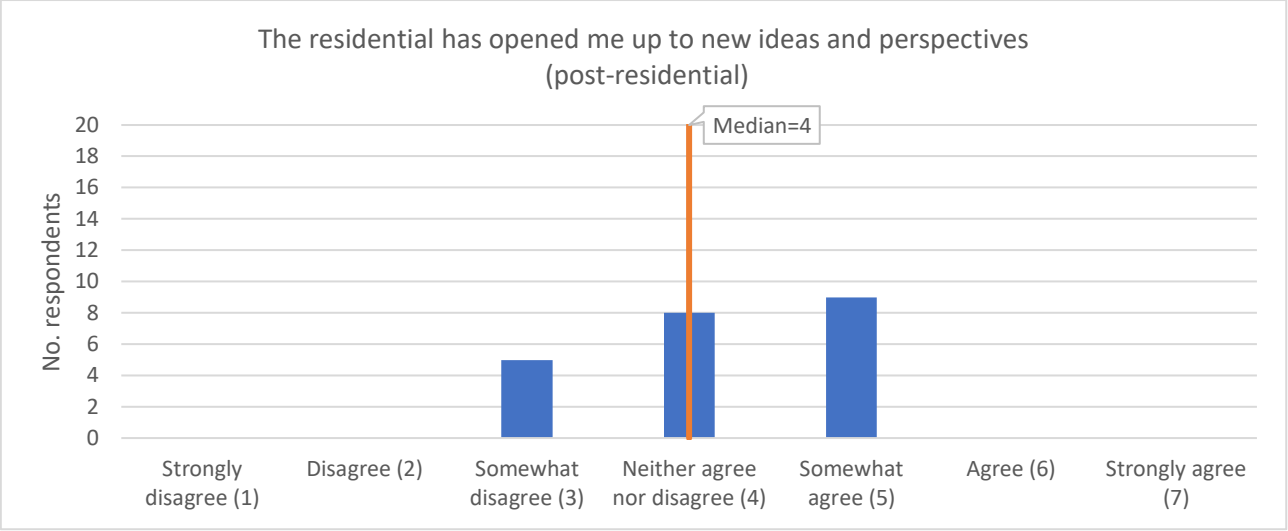


Figure 17

Furthermore, delving into the wider comments left in the post-residential evaluation, a number of participants reflect on how the residential had motivated and inspired them to think more positively about the possibilities and potential for developing a research career.

> *"Very quickly I started to feel really optimistic about my future career opportunities".*
>
> *"The course made me warm towards the idea of research and what I would need to do to help me achieve my goal [...] made me look forward to the rest of the course and learning more about research pathways available"*
>
> *"[I was surprised that] I would be so inspired and enthusiastic about research [...]* I *didn't think I'd be that excited about taking up a research career".*

For some, this was about having a clearer sense of the different approaches, pathways and/or opportunities available for developing their research career. For example, one participant described "*seeing career opportunities that I didn't think were possible*", and another noted "*I feel I know a lot more about potential opportunities for getting involved in research*". Some comments reflected a broadening of perspective to see themselves as "*part of a bigger picture rather than thinking just in my pigeon hole*" and "*more aware that boundaries I thought I had in actual fact didn't*".

Some participants reflected on how the residential had already supported them in beginning to shape a more coherent career plan, with one participant describing their intention to start "*small and building up gradually*" and another describing how the residential helped them to think about "*how practically I could shape my career around research and what I need to do to get where I want to be*".

Another respondent reflected on how the residential had helped them gain clarity on "where to start":

"I felt a little out of my depth on day one and was honestly wondering whether I had done the right thing enrolling onto the course, I think as I felt my knowledge of research and the research environment was so poor, I just didn't get where everything fitted or where to actually start! But by day 2, I felt things were a lot clearer, I had more of an idea as to who, where, why, what. and I had formulated a little initial plan of what I needed to do to get started and so felt much better about things!"

One participant also reported feeling "*clearer on potentially what path I want to take, which helped me identify a mentor*" and another described feeling "*a bit more confident in where I want to be!"*

For some participants, the residential reframed their perspective on what a research career might look like in practice:

*"Potentially engaging in a research career which involves completing and presenting someone else's research, naively I had only really thought of embarking upon a research career that was something that I wanted to do […] In the sense that a career in research may well take you down the avenue of completing and presenting other people's research**

"Also had my beliefs around what a career in research looks like challenged - came to the sessions thinking that clinical academic / PhD is the way forward - now feeling inspired about collaboration, leadership and have realised the value of delivering other people's research"

Similarly, another reflected on how they had changed from seeing their development priorities as "mainly academic" and another highlighted the importance of 'networking' in building their career (see also section 4.2.3)

Other comments reflected a shift towards thinking of themselves as researchers:

"I now know a lot about what is needed to be a researcher and this makes me more confident to move forward in research"

"I have a better understanding of the type of researcher I am becoming".

One participant described seeing research as "more achievable" following the residential and another described how their experience "*boosted my confidence to think about research as a definite career path*":

> *"I think the program is aimed at people from different areas of health care, to help them explore research within their own areas and that it can be possible for someone like myself to make a positive change within my own organisation"**

Another reflected on how the course had changed their perspective on:

> *"What is achievable and the different avenues available to reach my goal. Also it has allowed me to gain more clarity of a possible future within research"**

Similarly, one respondent reflected that they have *"more awareness of what these [development priorities] are now and the avenues to progress them"*

For one participant, a renewed confidence in pursuing a research career was linked to the idea that this would involve creating the organisational culture needed to support research.

> *"I now have the perspective 'I can do this, I can become a research clinician' rather than ' research is for people with knowledge in academic settings, I don't have the right support at work', I have to cultivate an environment at work that will support future research activity and I am as good as anybody to achieve that"*

Similarly, conversations with participants during the residential reflected the realisation that pursuing a research career was partially about "*creating the job that you want*" by contributing to the development of an organisational research culture.

Moving forward

As the programme progressed, some of the comments reflected how the initial enthusiasm, inspiration, motivation and confidence ignited in the residential had taken root and laid the foundations for career plans to crystallise: (see also section 4.2.3):

> *"The course has opened my eyes and cemented my thoughts on where I want to progress within research."*

> *"(I) have confirmed my passion for research* [...] *I now want to develop my skills by undertaking research through another award such as the internship".*

> *"I can appreciate the importance of my career development past PhD level study and have a clearer vision of myself as a research leader / clinical academic".*

"I'd highly recommend the programme to anyone looking to take the first steps towards a research career. Personally, I've gone from being unsure of where to start to having a five-year development plan and the knowledge, skills and support network to execute it"[19]

"This programme has given me more both professionally and personally than I could have ever envisaged and I am excited to take all I have learnt, with a network of support now around me to make my five-year clinical/research career plan and beyond a reality."[20]

"What an excellent first step to develop into a researcher! It opened my mind to opportunities I never thought of. So, when the HEE/NIHR Integrated Clinical Academic Internship was advertised, I felt inspired and confident to apply, and again, was extremely lucky to be chosen. The remit of the internship offers me the environment and support with protected time (one day a week) to progress my research leadership journey, whilst simultaneously benefitting my team and service. It is the first step for me in accessing a clinical academic career and will hopefully shine a light on the 'art of the possible' for my colleagues" [21]

"This course really has been brilliant for me, it has given me the confidence and encouragement to start my clinical academic journey […] I have a direction and plan. I felt lost and uninspired before this programme now I feel I know where I'm going and definitely feel very inspired"

This latter comment was later expanded on in an article written by the participant reflecting on the impact of the programme for their Trust's Research and Innovation Department[22]:

"It's been a great introduction to research [..] before the programme, I was feeling a bit lost about my career direction but now I've developed my personal career plan and my job satisfaction has improved […] I would encourage others to apply for the programme. It has changed my outlook and has opened my eyes to the opportunities available. I've also now been successful with an application for an HEE/NIHR internship which will give me one day a week to get started on my project and continue on my journey as a clinical academic"

In another piece written for the NIHR, this participant goes onto reflect:

"The programme has helped me to develop my five-year career plan. I now have improved self-awareness and feel more focused, confident and positive in my role to be research-active and promote a research culture within my team/Trust[23]*"*

[19] https://local.nihr.ac.uk/news/greater-manchester-health-professionals-reflect-on-invaluable-crn-funded-development-programme/30283
[20] *Ibid.*
[21] https://ihv.org.uk/news-and-views/voices/engaging-in-research-no-longer-optional-for-health-visitors/
[22] https://www.ncaresearch.org.uk/news/research-programme-career-boost-physio/
[23] https://local.nihr.ac.uk/news/greater-manchester-health-professionals-reflect-on-invaluable-crn-funded-development-programme/30283

Similarly, another participant described an increased confidence to pursue the dual ambition of developing as a researcher and nurturing a research culture within their respective organisation:

> *"I am more confident that via the NIHR, connections with others and through learning research skills that I can develop as a clinical researcher and that I can have a positive influence on my department in terms of supporting others to get involved"*

In terms of progressing onto the next stage of their research career development, a total of three participants reported successfully applying for the HEE/NIHR Integrated Clinical Academic Internship, another described making a PCAF application and one participant had worked on a grant application (see also section 4.2.3).

WhatsApp also provided evidence of some of the cohort starting to become more involved in actively promoting and encouraging others to get involved with research. Examples included becoming involved in setting up and/or facilitating programmes to increase research engagement and awareness amongst nursing staff; sharing their experience of the ECRDP as part of a band 5 research fellowship programme; producing a video for their organisation's research forum; and arranging a MACP regional event to inspire MSK physiotherapists to engage with research.

Overall, most participants 'agreed' that the content of the programme had been useful to their development by mid-way through the programme (n=6/12), with the remainder either 'somewhat' or 'strongly' agreeing to this questionnaire item (see Fig. 18). By the time of the post-programme evaluation, most participants 'strongly agreed' (n=17/22) with this statement (see Fig. 19).

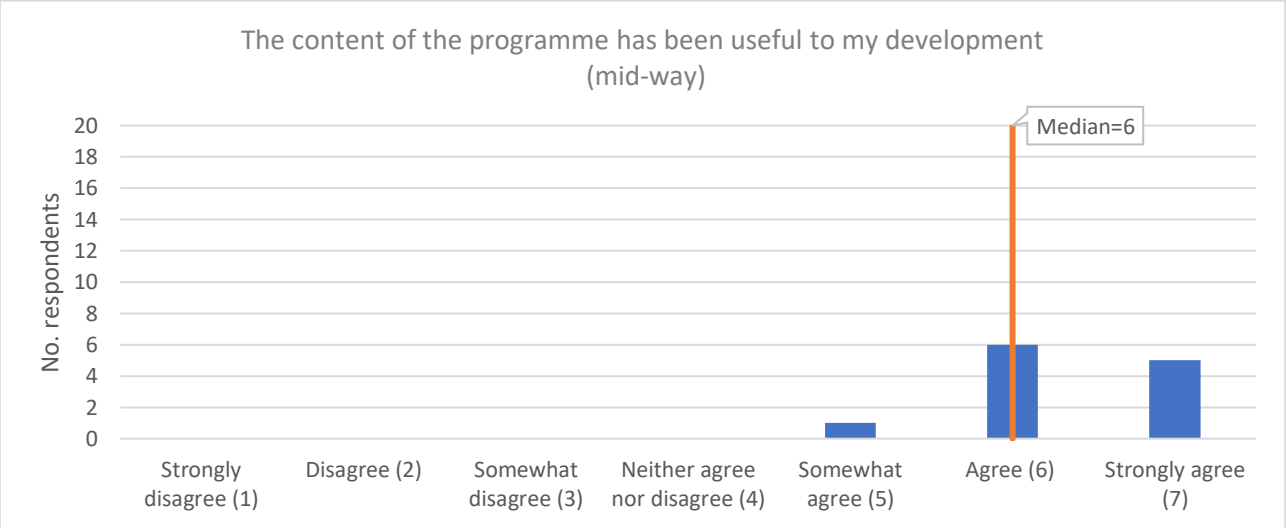


Figure 18

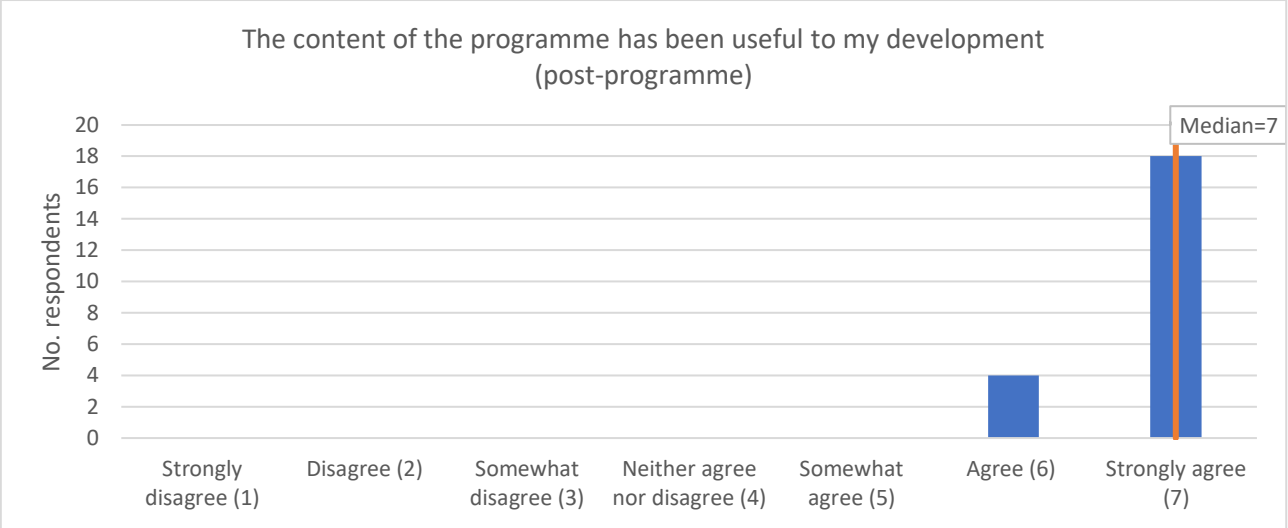


Figure 19

One participant commented in the post-programme evaluation that they had *"gained so much from it"*, with another describing the programme as 'transformational':

> *"Thank you for a transformational 9 months and to the team for putting such a fantastic course together. I've loved seeing where we have all come from, where we are now and hearing all the exciting plans for everyone's future!"*

> *"When an opportunity and group of people come into your life and make more of an impact that they will ever know"*

General comments in the post-programme evaluation and on social media not only highlighted how much people enjoyed and valued the course, with comments such as "just amazing" and a "brilliant experience", but also reflected on the pivotal role that the programme played in *inspiring* the participants:

> *"One of the most inspiring development opportunities of my life".*

> *"Motivated and inspired throughout my participation on the EDR pathway"*

> *"Have had a brilliant time completing this programme and meeting some amazing people. It has given me so much confidence and inspiration"*

> *"Best course I've been on by far and so much inspiration…bring on whatever comes next!"*

"The course has been amazing. The people I have met and the support given to start me on a research journey has been truly inspirational. I wholly recommend this course to everyone regardless of their speciality as the course is so diverse and inclusivity is pivotal."

Some comments also reflected how important the facilitators had been in terms of motivating and inspirating participants to forge a research career:

"It was also inspiring to see the leaders on the programme acting as beacons to guide us through our development. Gillian's guidance and passion for supporting others was really inspirational"

"Jana, Leanne, Bill, Gillian, Stuart and Taravandana have role modelled the change they want us to grow into"

"Thank you everyone for being so inspiring, motivating and encouraging"

*"The course leaders. Just the enthusiasm was inspiring, and made me realise what can be achieved"**

Reflecting on their success in applying for a HEE/NIHR Integrated Clinical Academic Internship, one participant also added:

"Thanks to @Jana @Taravandana @Gilliand R&D @Gregory Leanne and everybody on the course as I couldn't have done it without all the inspiration of the last 6 months (WhatsApp comment)"

4.2.3. Evidence of professional development measured against the Vitae RDF.

This section of the report presents the results from the RDF self-assessment, based on the difference between the pre- and post-programme scores for the 17 participants who completed both self-assessments. Each RDF domain and the associated sub-domains are explored in the order of which showed the highest percentage change overall. The results from the analysis of additional evaluation questionnaire items associated with a particular descriptor and/or sub-domain are also included. The difference in scores for the 18 participants who completed *both* pre- and post-programme evaluations are presented alongside the total distribution of responses for the item in each of the questionnaires.

RDF domains and sub-domains

The four key domains and sub-domains of the RDF are characterised as follows:

- Domain A: Knowledge and Intellectual Abilities: The knowledge, intellectual abilities and techniques to do research.

    - A1: Knowledge Base
    - A2: Cognitive Abilities
    - A3: Creativity
- Domain B: Personal Effectiveness: The personal qualities and approach to be an effective researcher
    - B1: Personal Qualities
    - B2: Self-Management
    - B3: Professional and Career Development
- Domain C: Research Governance and Organisation: The knowledge of the standards, requirements and professionalism to do research.
    - C1: Professional Conduct
    - C2: Research Management
    - C3: Finance, funding and resources
- Domain D: Engagement, Influence and Impact: The knowledge and skills to work with others and ensure the wider impact of research.
    - D1: Working with others
    - D2: Communication and Dissemination
    - D3: Engagement and Impact

The total score for the cohort who completed both pre- and post-programme self-assessments (n= 17) showed a percentage increase of 91%, with overall scores increasing for all the key domains and sub-domains.

Domain C (Research Governance and Organisation) demonstrated the largest percentage increase (103%), followed by Domain A (Knowledge and Intellectual Abilities) (92%), Domain D (Engagement, Influence and Impact) (83%) and Domain B (Personal Effectiveness) (80%) (see Fig. 20).

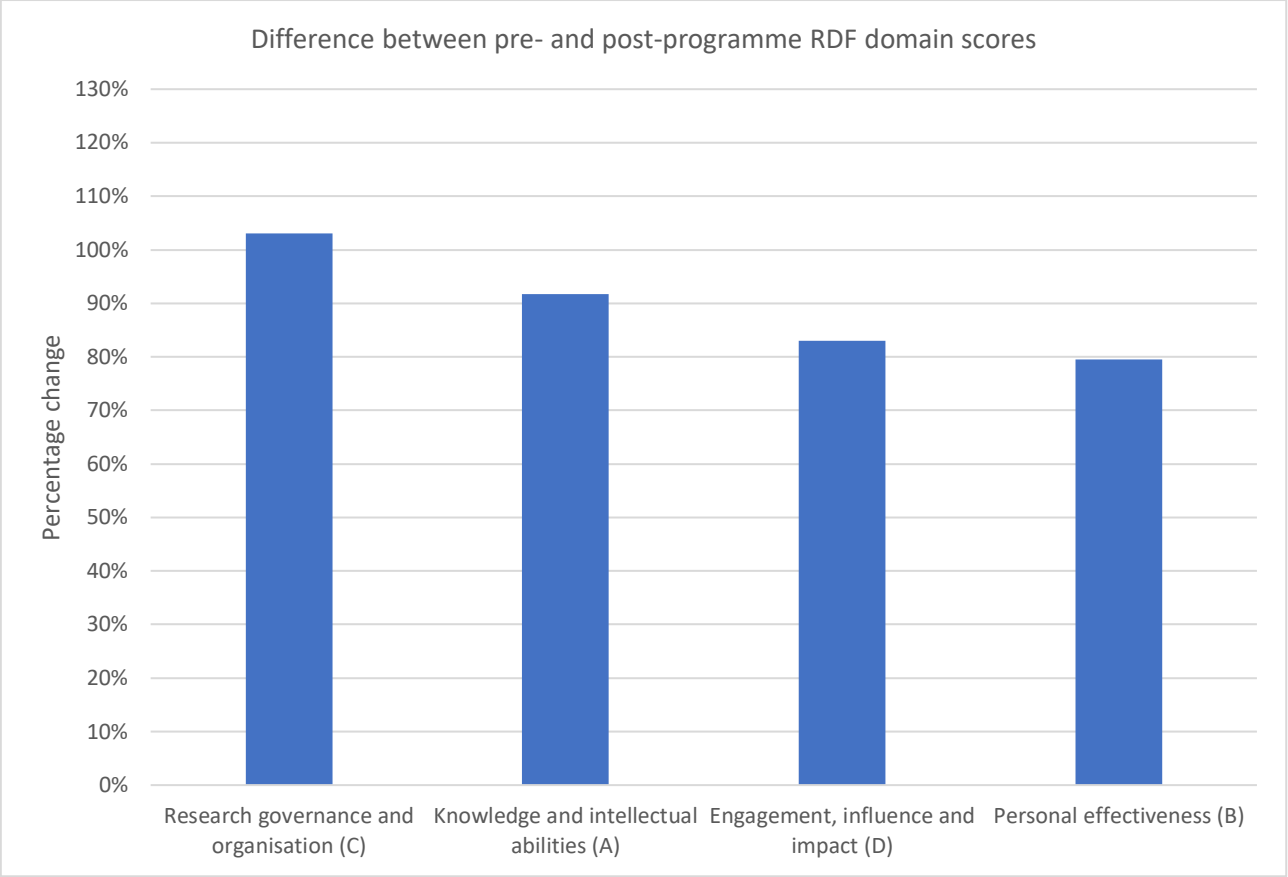


Figure 20

The three sub-domains showing the largest percentage increases were spread across Domains D, B and C; 'Communication and Dissemination' (D2) (127%), followed by 'Professional and Career Development' (B3) (117%) and Research Management (C2) (114%). Personal Qualities (B1) showed the smallest percentage increase at 73% followed by 'Engagement and Impact' (D3) at 83% and Self-Management (B2) and 'Working with Others' (D1) both at 84% (see Fig.21 for the percentage change across all RDF sub-domains).

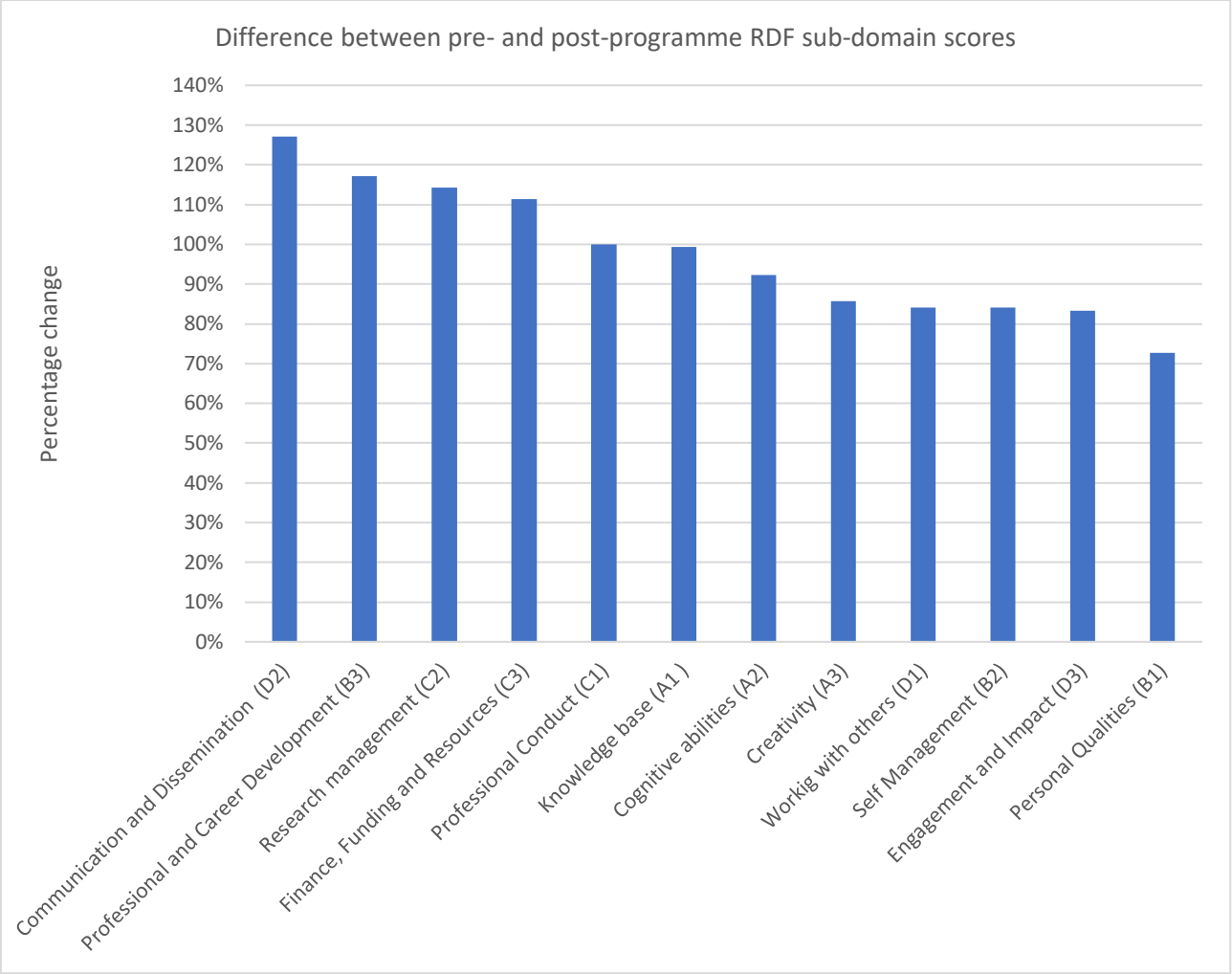


Figure 21

RESEARCH GOVERNANCE AND ORGANISATION (C)

As shown above, domain C (Research governance and organisation) showed the largest overall percentage increase (103%) compared to the other domains in the RDF self-assessment questionnaires, with all three sub-domains showing a percentage increase of 100% or higher.

'Research management' (C2) and 'finance, funding and resources' (C3) showed the second and fourth largest percentage change over all the RDF sub-domains at 114% and 111% respectively. Participants RDF scores against 'professional conduct' (C1) also increased by 100%.

Research income generation and funding processes

In line with the 'finance, funding and resources' sub-domain (C3), participants' assessment of their understanding of research income generation and funding processes showed the largest percentage increase over all the additional questionnaire items at 139%. This change reflects a shift from 'strongly disagree' being the most common response to this item prior to the start of the programme (with a median of 'disagree') to 'somewhat agree' following completion of the course (see Fig. 22).

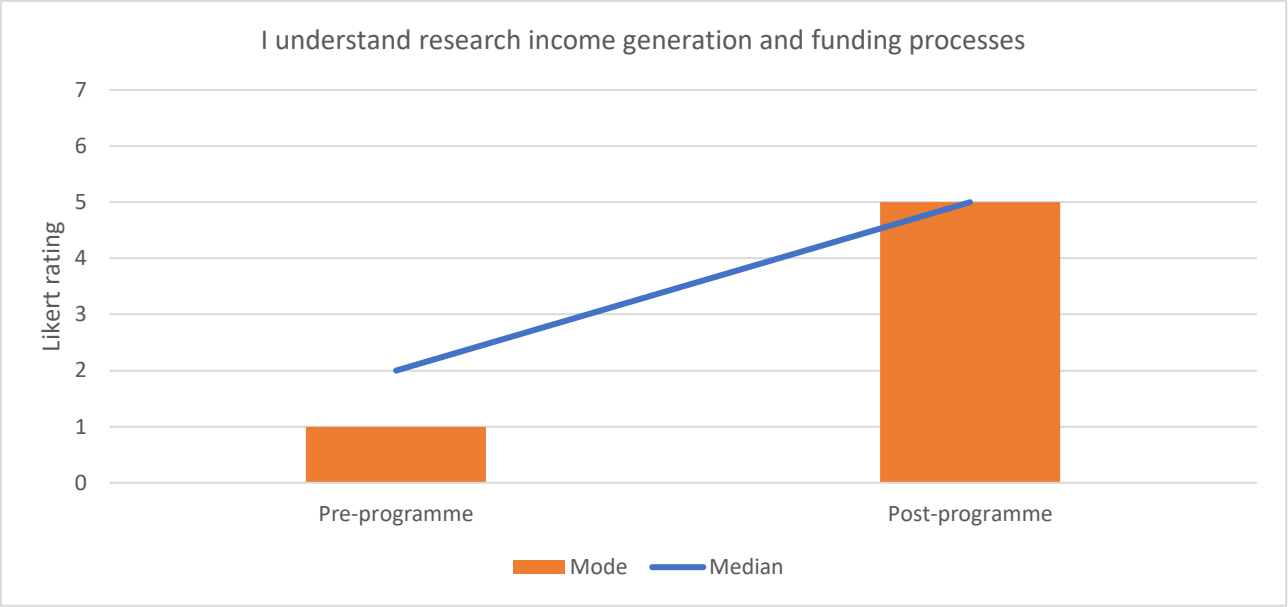


Figure 22

The distribution of responses in relation to this questionnaire item for all respondents can be seen in Fig. 23 for the pre-programme evaluation and Fig.24 for the post-programme evaluation.

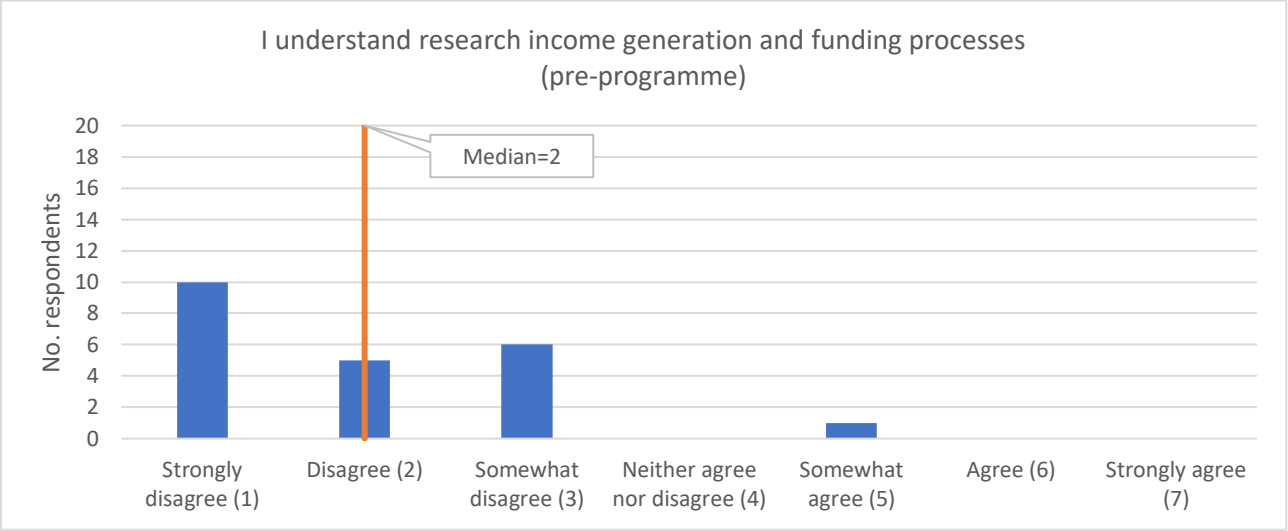


Figure 23

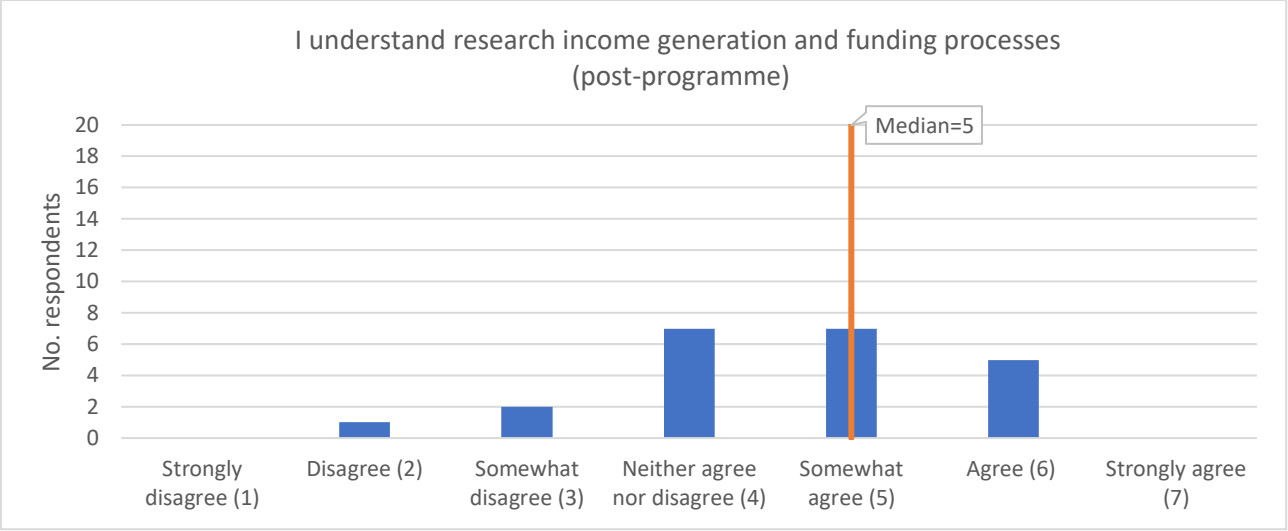


Figure 24

Despite showing the highest percentage increase in scores across all the evaluation questionnaire items, the majority of respondents 'neither agreed nor disagreed' or 'somewhat agreed' that they understood research income generation and funding processes following completion of the programme, suggesting that many participants still require further development in this area.

Understanding of the professional standards and requirements for the effective management of research

There was a percentage increase of 80% in participants' assessment of their understanding of the professional standards and requirements for the effective management of research, reflecting a change in median and mode from somewhat disagree to agree (see Fig.25).

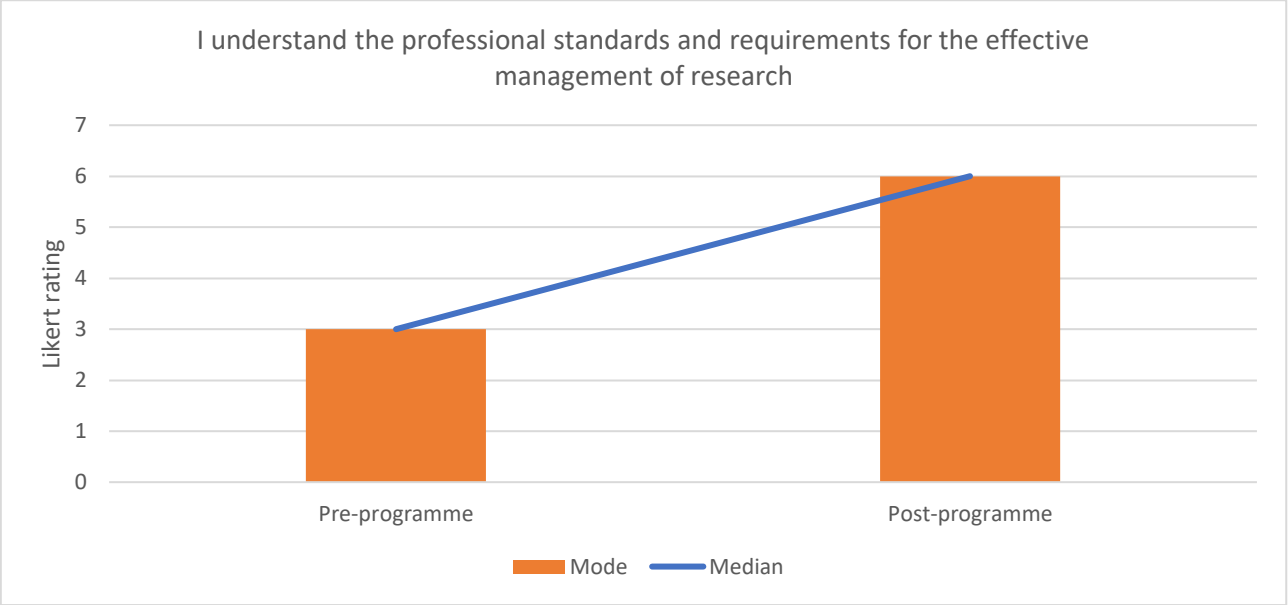


Figure 25

The distribution of all the responses for the pre-programme evaluation and the post-programme evaluation can be seen in Fig. 26 and Fig. 27.

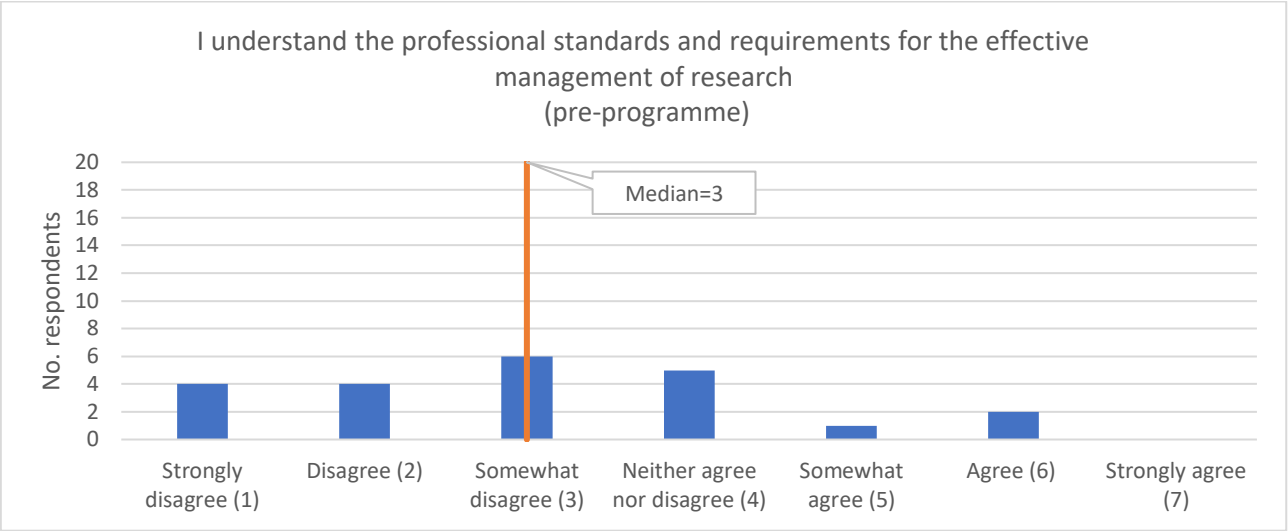


Figure 26

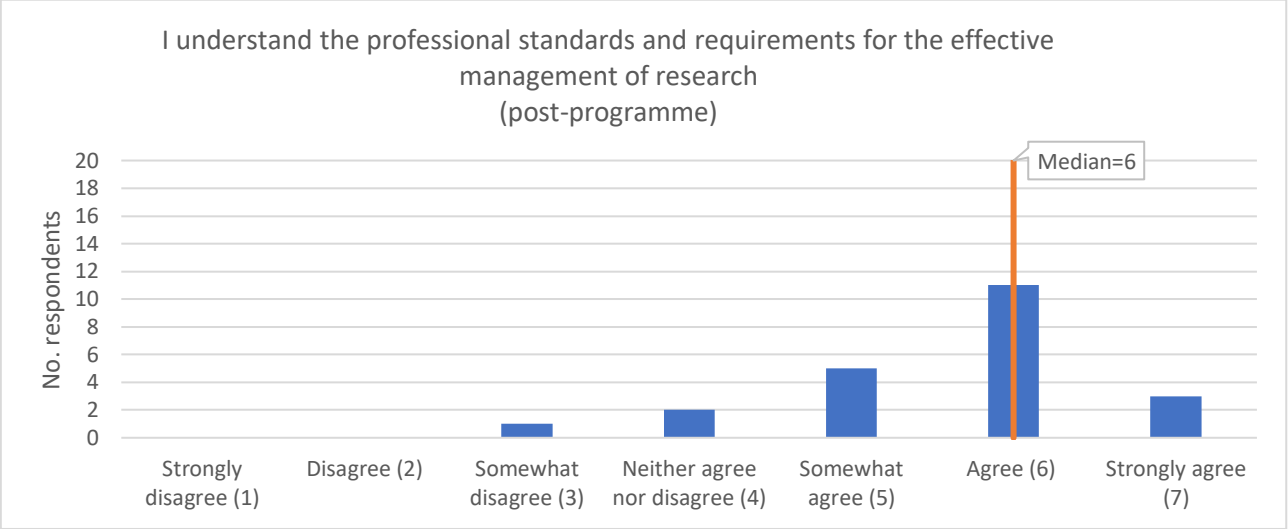


Figure 27

KNOWLEDGE AND INTELLECTUAL ABILITIES (A)

Domain A (Knowledge and intellectual abilities) showed the second largest overall percentage increase (92%) compared to the other domains in the RDF self-assessment questionnaires.

The sub-domain 'knowledge base' (A1) showed the highest percentage change within this domain (99%) and demonstrated the 6th largest percentage change over all the RDF sub-domains. The RDF self-assessment scores demonstrated a percentage increase in cognitive abilities (A2) and creativity (A3) of 92% and 86% respectively.

Understanding of research information management processes (Knowledge Base A1: Information literacy and management)

Understanding of research information management processes showed a percentage increase in scores of 40%, with a change in the median and mode from 'somewhat disagree' to 'somewhat agree' (see Fig, 28) Frequency distributions for all participants responding to the pre- and post-programme evaluations are shown in Fig. 29 and Fig. 30 respectively. The post-programme responses suggest that a number of participants would benefit from further development in this area.

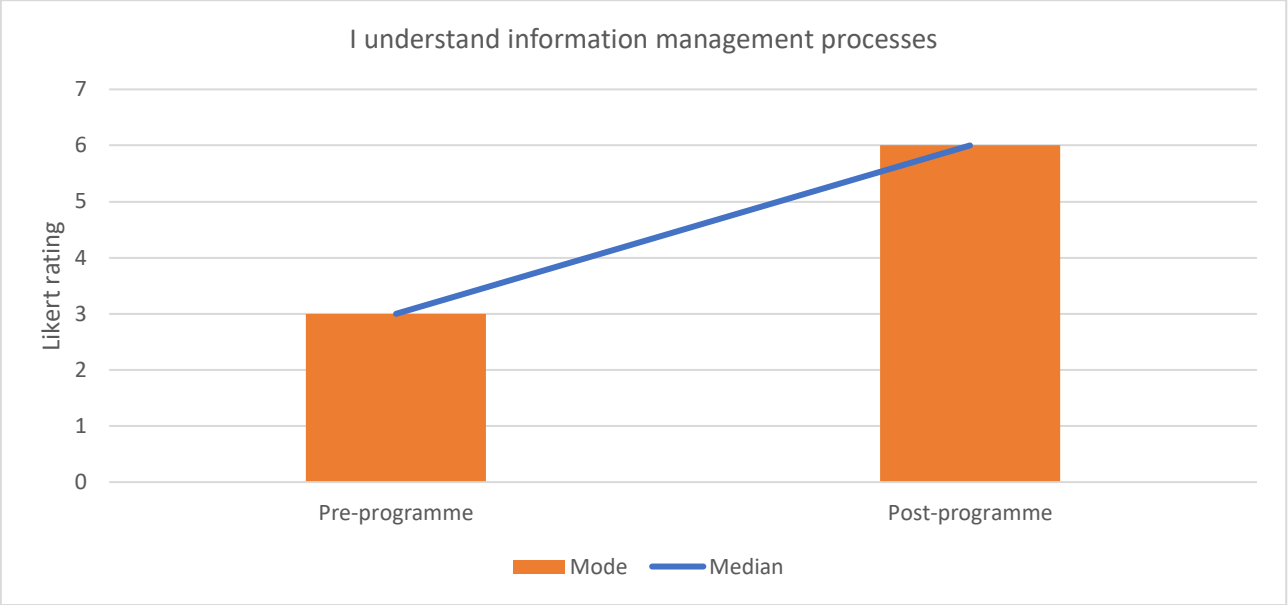


Figure 28

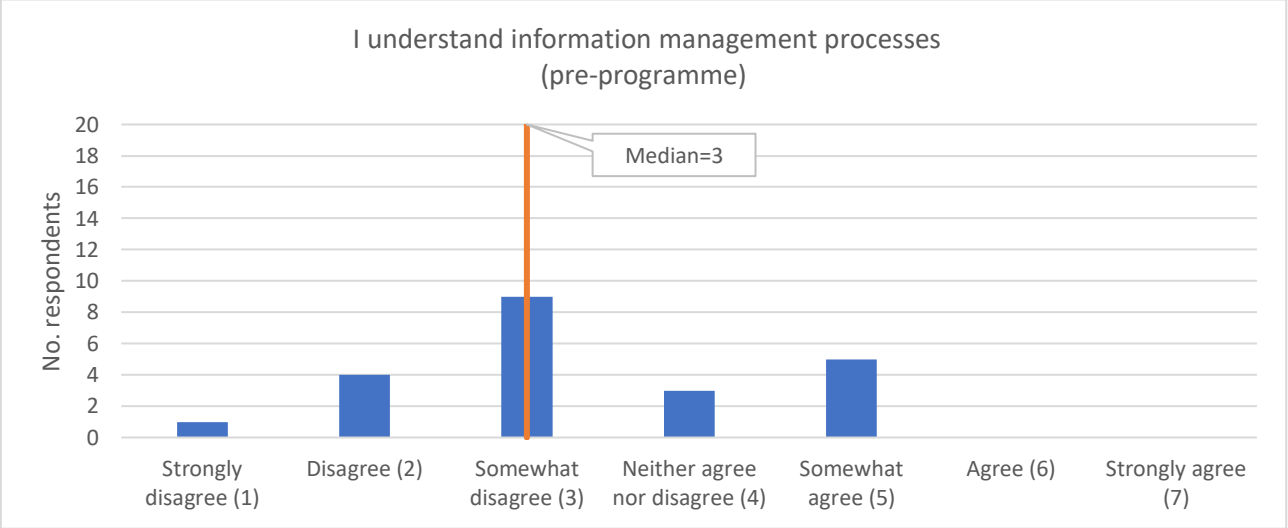


Figure 29

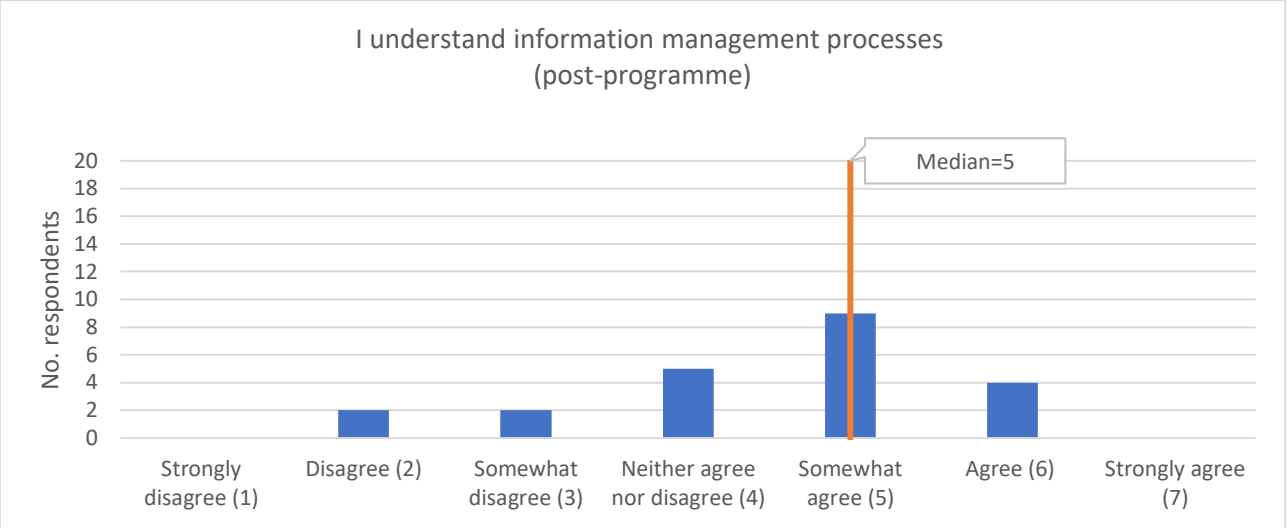


Figure 30

Engagement, Influence and Impact (D)

Domain D (Engagement, Influence and Impact) showed the third largest overall percentage increase (92%) compared to the other domains in the RDF self-assessments, with the sub-domain 'communication and dissemination' (D2) showing the highest percentage increase in scores across all the RDF sub-domains at 127%. The other sub-domains of 'working with others' (D1) and 'engagement and impact' (D3) showed increases of 84% and 83% respectively.

Knowledge, understanding and skills to maximise the impact of research through engaging and influencing others (Engagement and Impact, D3)

Participants' scores showed a percentage increase of 64% in relation to their knowledge, understanding and skills to maximise the impact of research through engaging and influencing others, reflecting a change in the most common response from 'disagree' to 'agree' (see Fig. 31).

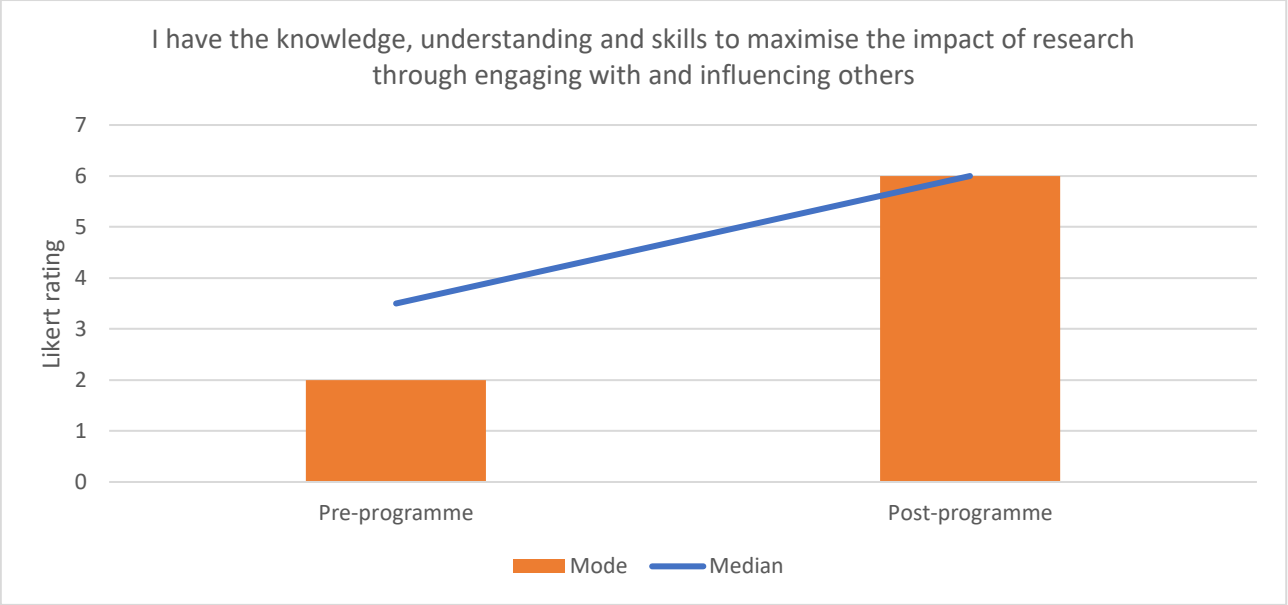


Figure 31

The fairly even distribution of responses for all the pre-programme evaluation respondents against this questionnaire is shown in Fig. 32, and reflected in the median of 'somewhat disagree-neither agree not disagree'. The distribution of post-programme responses demonstrates that all respondents agreed (somewhat agree-strongly agree) that they had the requisite knowledge, understanding and skills in this area following completion of the programme (see Fig. 33).

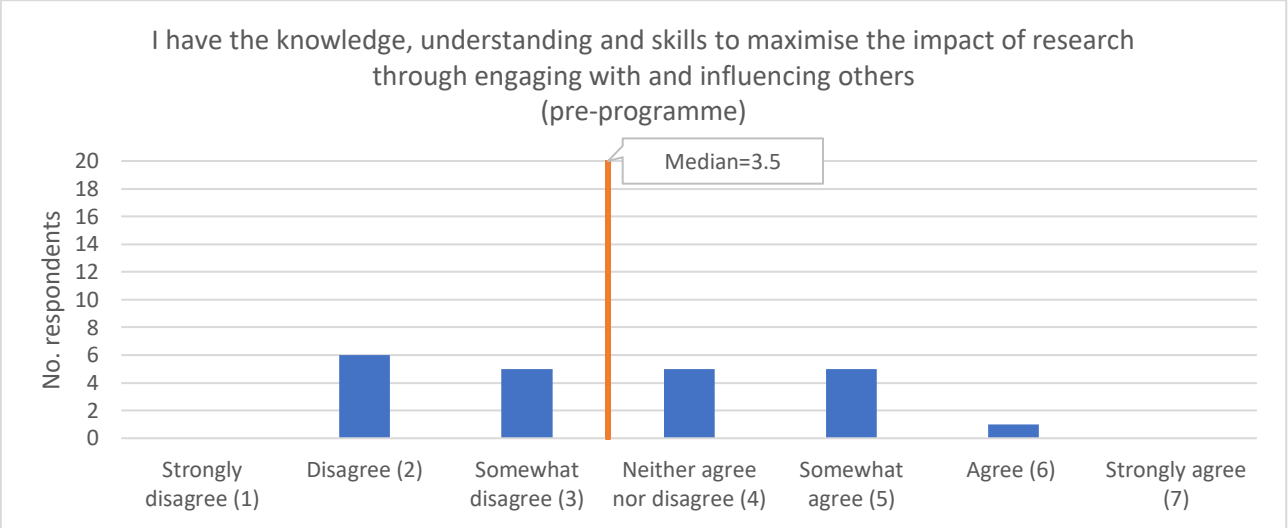


Figure 32

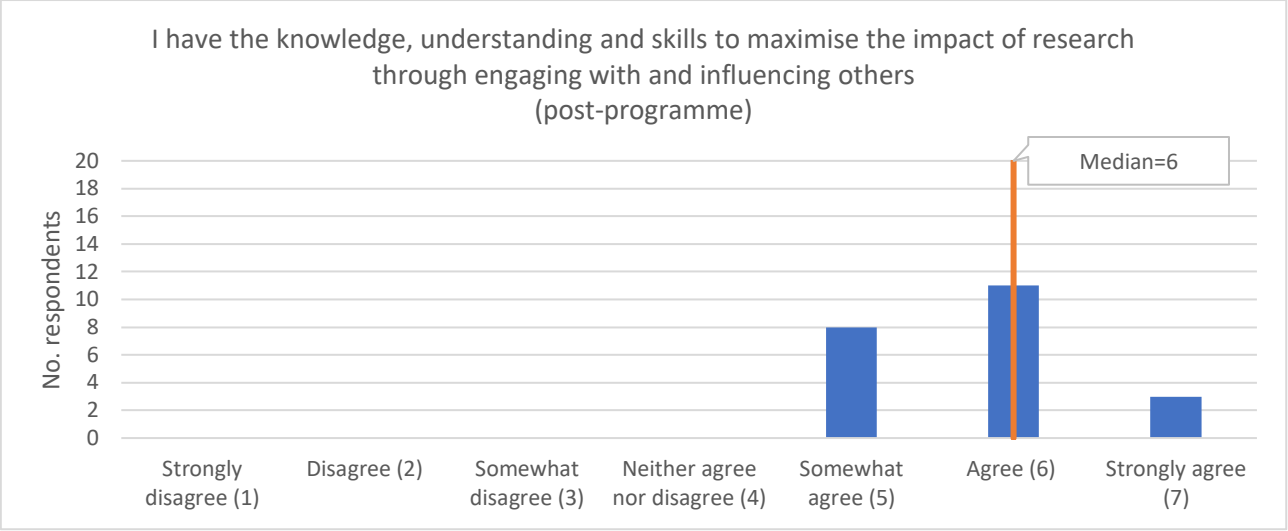


Figure 33

Understanding of the policy context and drivers of research within the NHS and the NWC (Engagement and Impact, D3: Policy)

Policy context and drivers in the NWC

Participants' understanding of the policy context and drivers of research within the NWC region showed a percentage increase of 98%, with the most common response changing from 'somewhat disagree' to 'agree' (see Fig. 34).

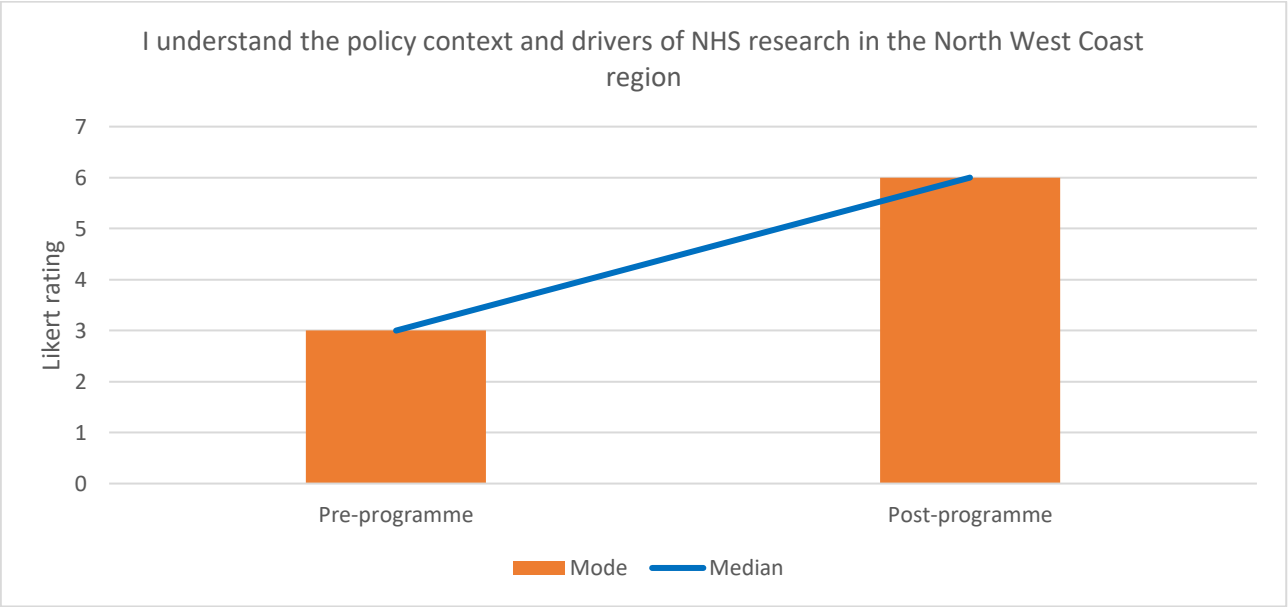


Figure 34

Frequency distributions for all participants responding to the pre-, mid- and post-programme evaluations are shown in Fig.35, Fig.36 and Fig. 37 respectively. These graphs reflect a gradual improvement in understanding of this area over the duration of the programme, with 'somewhat agree' and 'agree' as the most common response in the mid-way and post-programme evaluations respectively. With the exception

of one participant, all respondents agreed ('somewhat agree-strongly agree') thar they understood the policy context and drivers of research within the NWC region following completion of the programme.

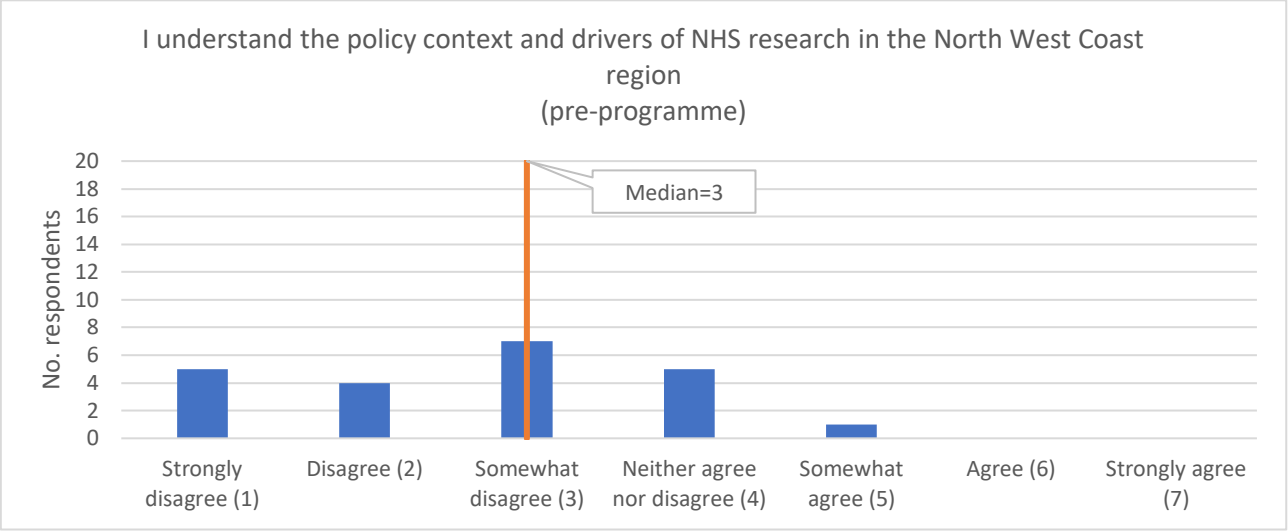


Figure 35

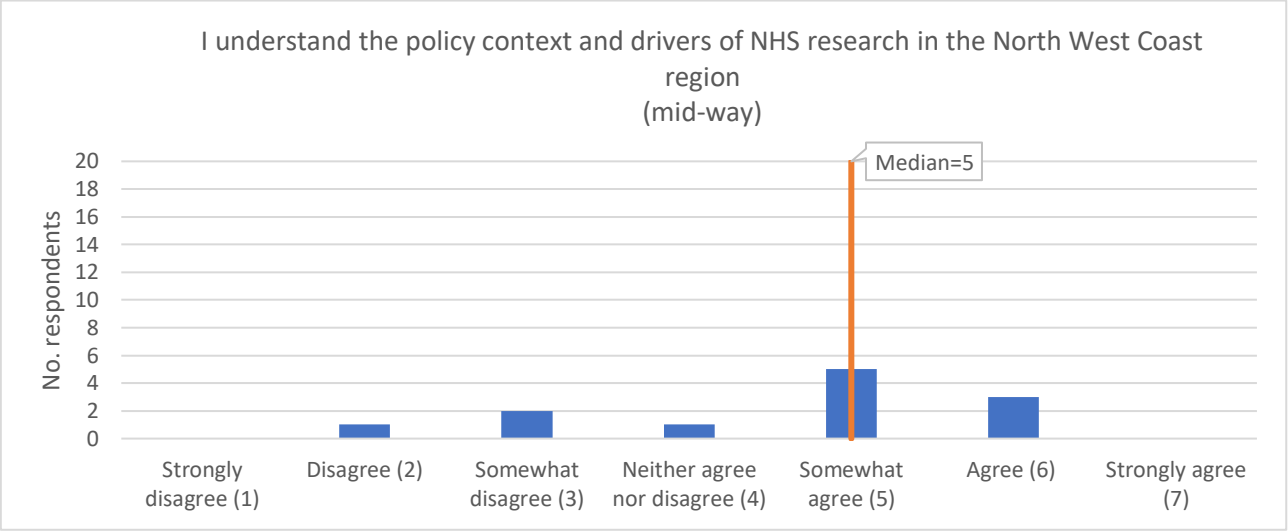


Figure 36

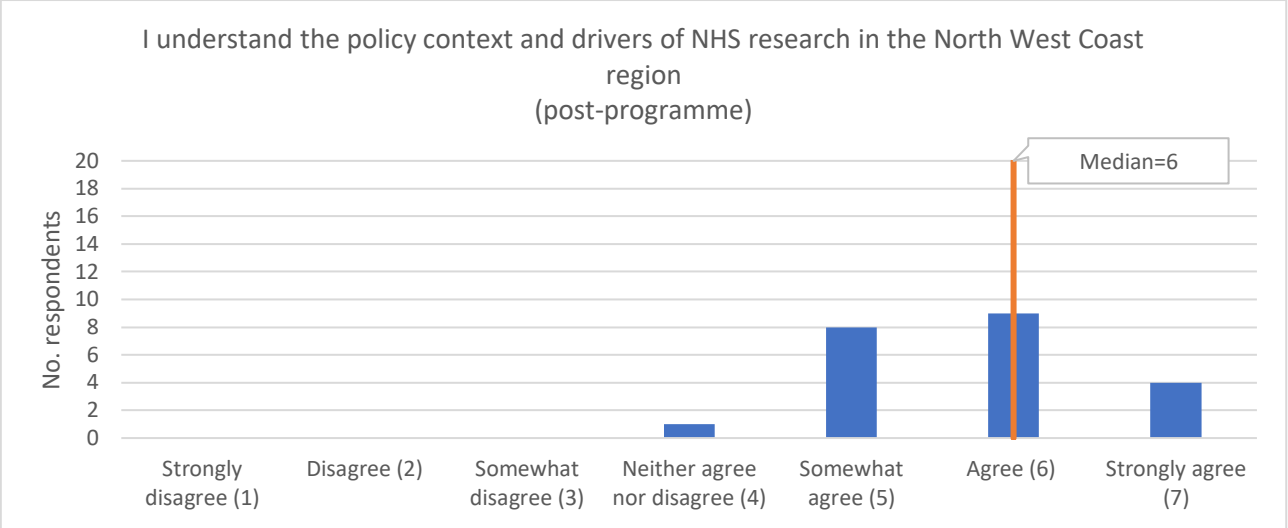


Figure 37

Policy context and drivers in the NHS

The shift in participants understanding of policy in the NWC region was substantially higher than the 48% increase in participants' self-assessment of their understanding of the policy context and drivers of research in the NHS more broadly. The most common response in relation to this latter questionnaire item shifted from 'neither agree nor disagree' to 'somewhat agree' (see Fig. 38).

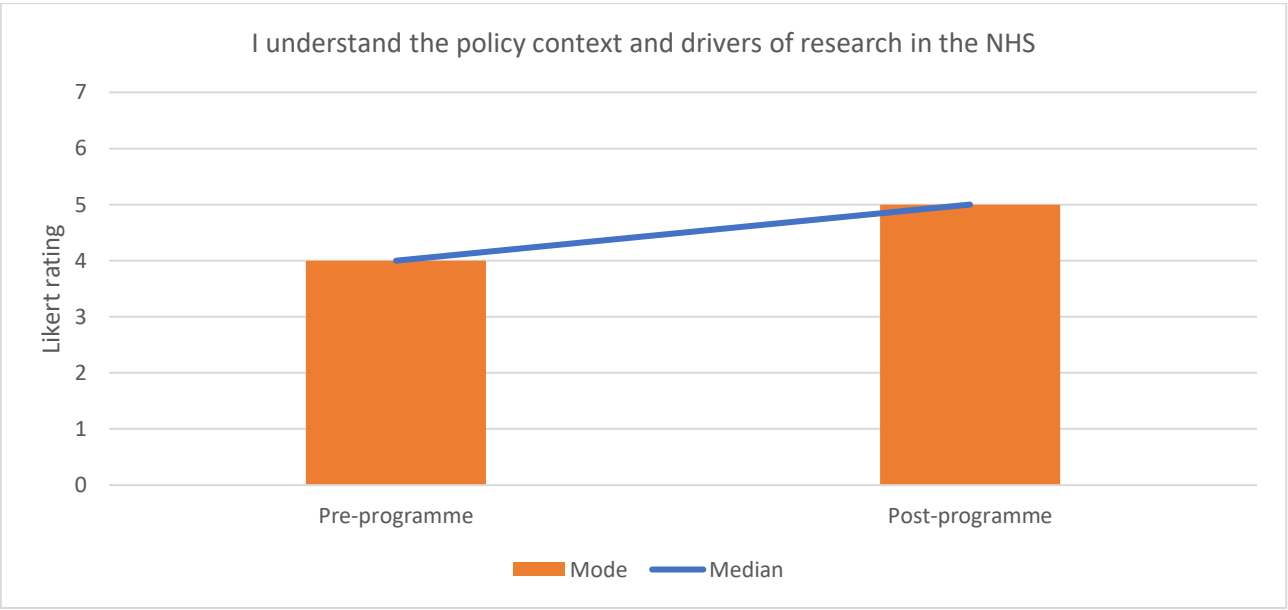


Figure 38

Frequency distributions for all participants responding to the pre-, mid- and post-programme evaluations for this item are shown in Fig. 39, Fig. 40 and Fig. 41 respectively. There is a very gradual shift in understanding of this area over the duration of the programme, with a change in median from 'neither agree nor disagree-somewhat agree' in the mid-way evaluation to 'somewhat agree' in the post-programme evaluations. With the exception of one participant, all respondents agreed ('somewhat agree-strongly agree') that they understood the policy context and drivers of research within the NHS following completion of the

programme. However, given that the majority of respondents only 'somewhat agreed' with this questionnaire item in the post-programme evaluation, further development in this area may be beneficial for some participants.

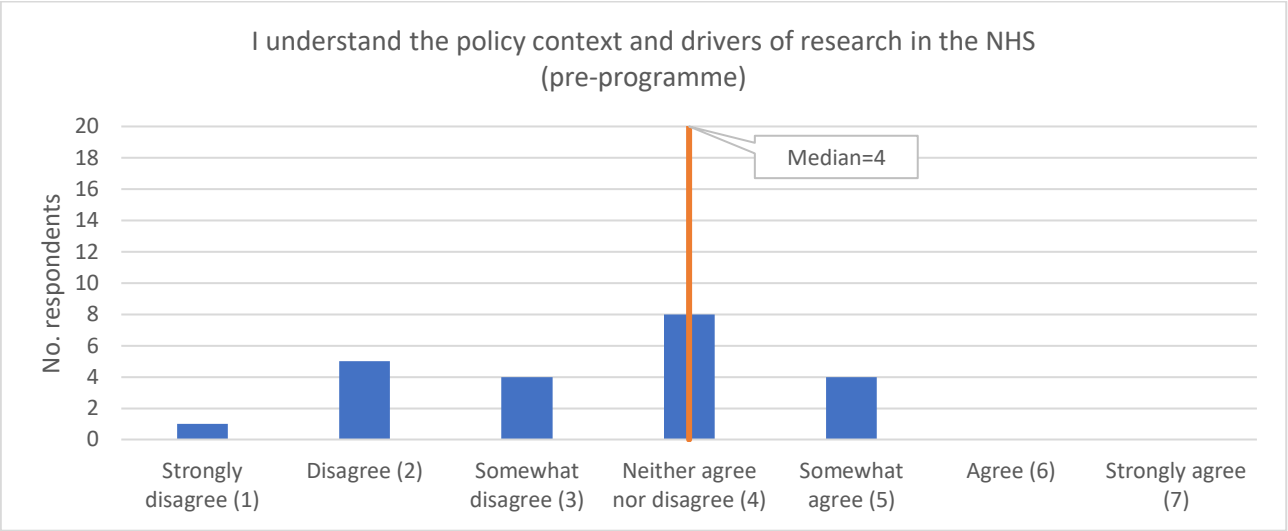


Figure 39

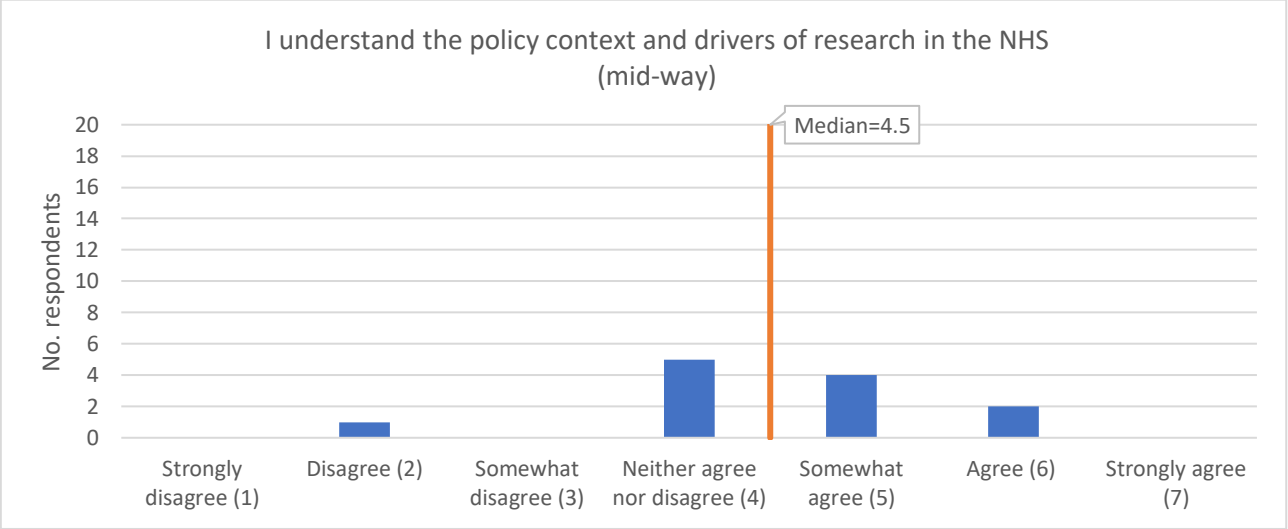


Figure 40

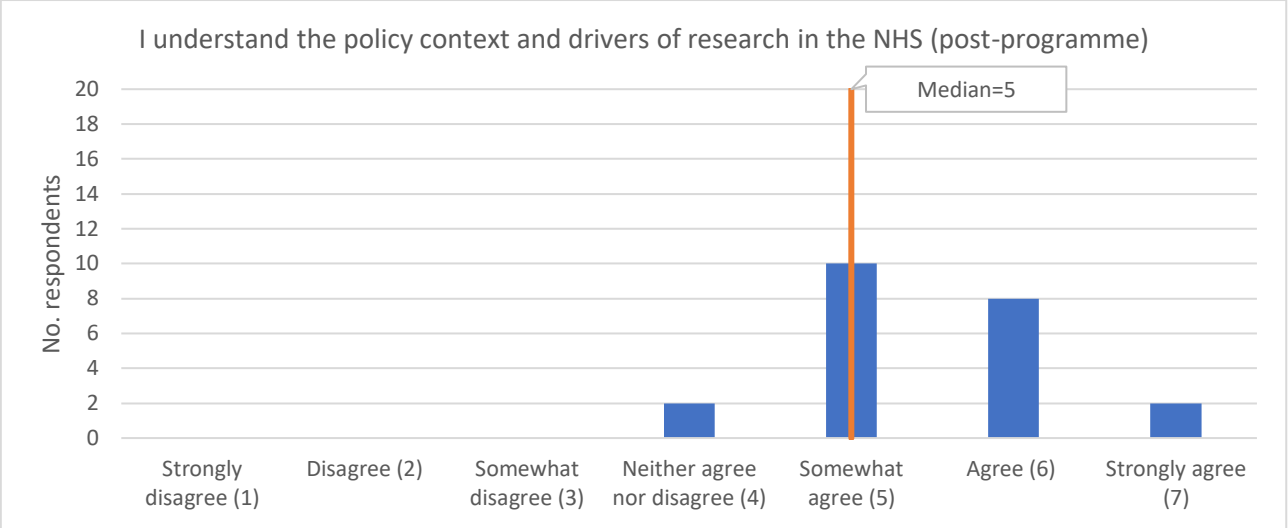


Figure 41

This latter result suggests that, overall, participants who completed both evaluations are currently more unsure of the policy context and drivers of research in the NHS compared to those within the specific NWC region.

Understanding of the role of the NIHR CRN in the NW (Engagement and Impact, D3: Policy)

There was a 74% increase in participants' self-reported understanding of the role of the NIHR CRN in the NWC, with a change in the most common response from 'neither agree nor disagree' to 'agree' (see Fig. 42).

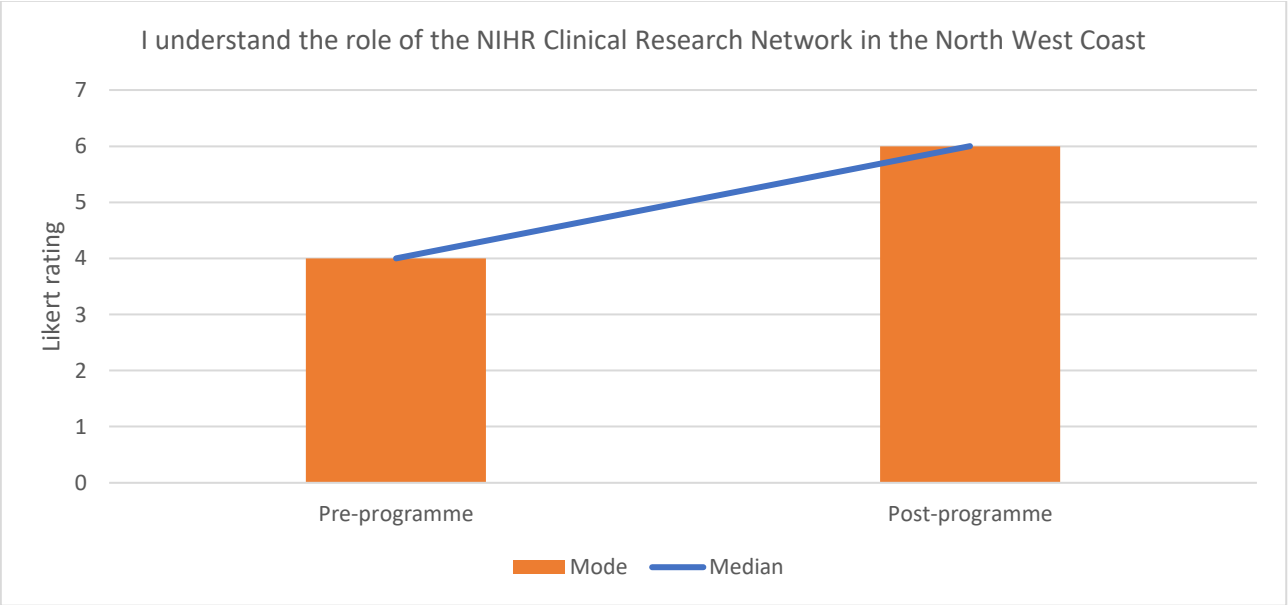


Figure 42

Frequency distributions for all participants responding to the pre-, mid- and post-programme evaluations for this item are shown in Fig. 43, Fig. 44 and Fig. 45 respectively. The pre-programme distribution of responses reflects a fairly wide spread of responses skewed towards disagreement/'neither agree nor disagree', with a

median of 'neither agree nor disagree'. There is a gradual overall improvement in understanding reflected in the median of 'somewhat agree' and 'agree' in the mid-way and post-programme evaluations respectively. Following completion of the programme, all respondents agreed ('somewhat agree-strongly agree') that they understood the role of the NIHR CRN NWC, with the exception of one respondent.

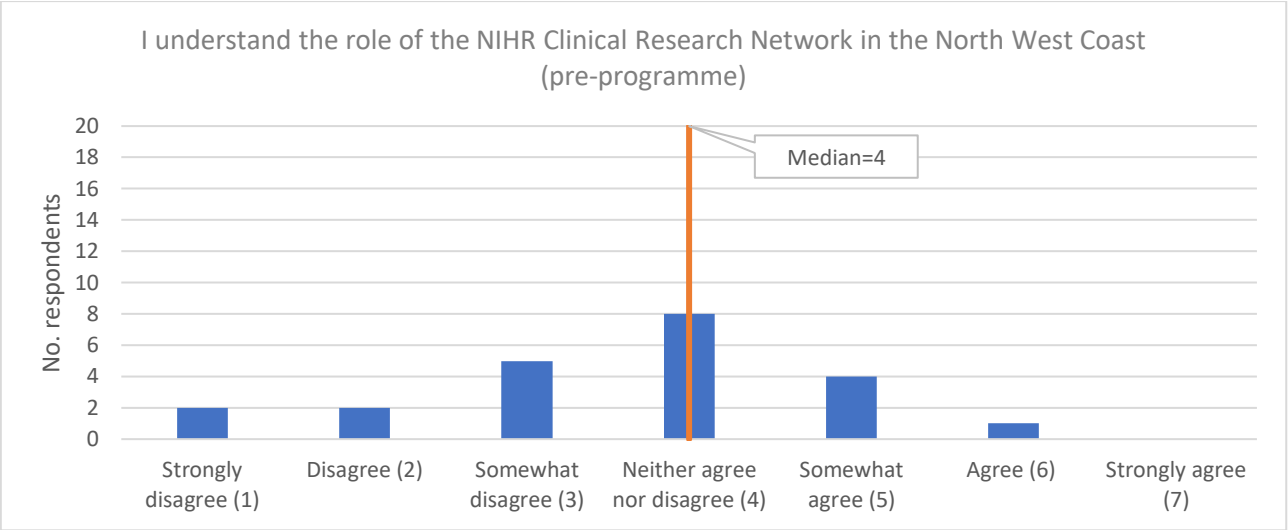


Figure 43

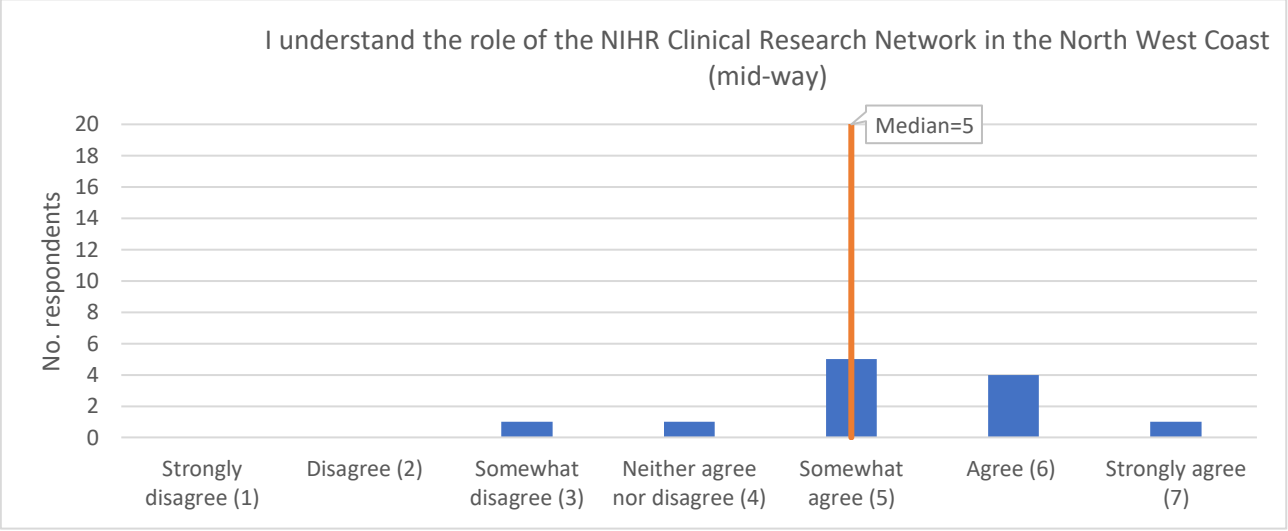


Figure 44

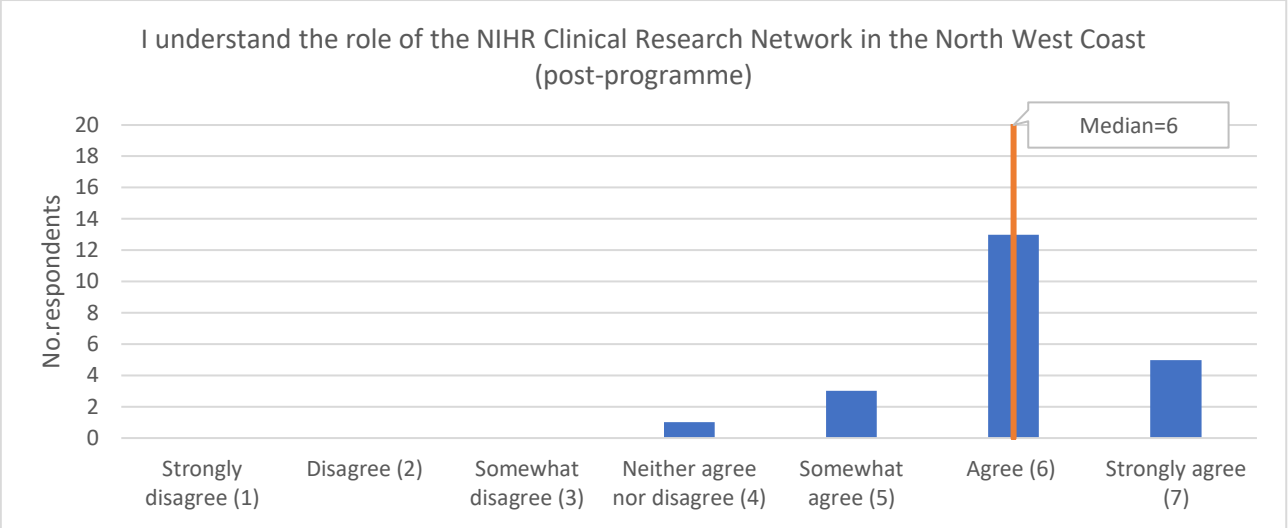


Figure 45

Understanding conflict styles (Working with others, D1: Team working)

Of relevance to the 'working with others' (D1) sub-domain and the 'team working' descriptor in the RDF, the evaluation questionnaires took a snapshot of participants' understanding of 'conflict styles' in the mid-way evaluation. Most participants agreed ('somewhat agree'-'strongly agree') that they understood their own conflict style, to which the most common response was 'somewhat agree' (see Fig. 46). The majority of participants also agreed ('somewhat agree'-'agree') that they understood different conflict styles, with most participants reporting that they 'somewhat agreed' with this questionnaire item (see Fig. 47). There is perhaps an opportunity for further development in this area based on these findings.

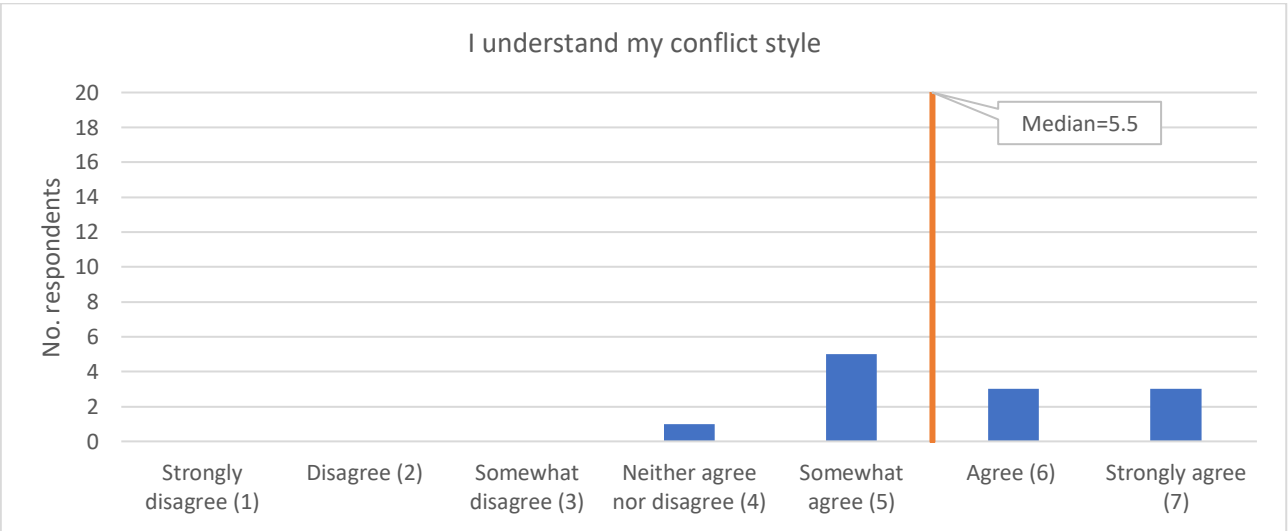


Figure 46

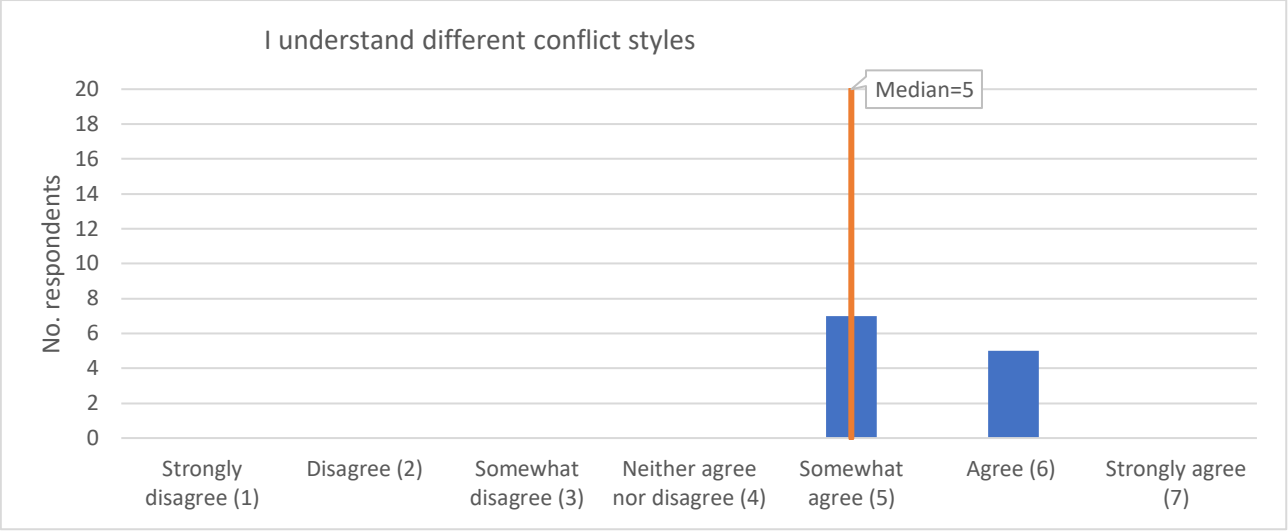


Figure 47

PERSONAL EFFECTIVNESS (B)

Although the domain of 'personal effectiveness' (B) showed the lowest overall percentage increase in scores (80%) compared to other domains in the RDF, the degree of change was not markedly different to domain D. Furthermore, the sub-domain 'professional and career development' (B3) showed the second largest percentage increase (117%) of all the RDF sub-domains. 'Self-management' (B2) and 'Personal Qualities' (B1) showed a percentage increase of 84% and 73% respectively.

Professional and career development was a key focus of the programme and a number of pre- and post-evaluation questions were used to explore this area in more depth, many of which showed some of the highest percentage change across all the pre-and post- evaluation measures.

Engagement with and understanding of principal and/or chief investigators and NHS R&D departments (Professional and career development, B3; Networking)

Principal and/or chief investigators

The evaluation measure which showed the largest percentage change (133%) in relation to the 'professional and career development' sub-domain was participants' engagement with principal and/or chief investigators in their region. This change was the second highest percentage increase across all the pre- and post-evaluation measures related to the RDF. The most common response changed from 'strongly disagree' to 'strongly agree', with a change in median from 'strongly disagree' to 'somewhat agree' reflecting the distribution of responses in the post-programme measures (see Fig. 48).

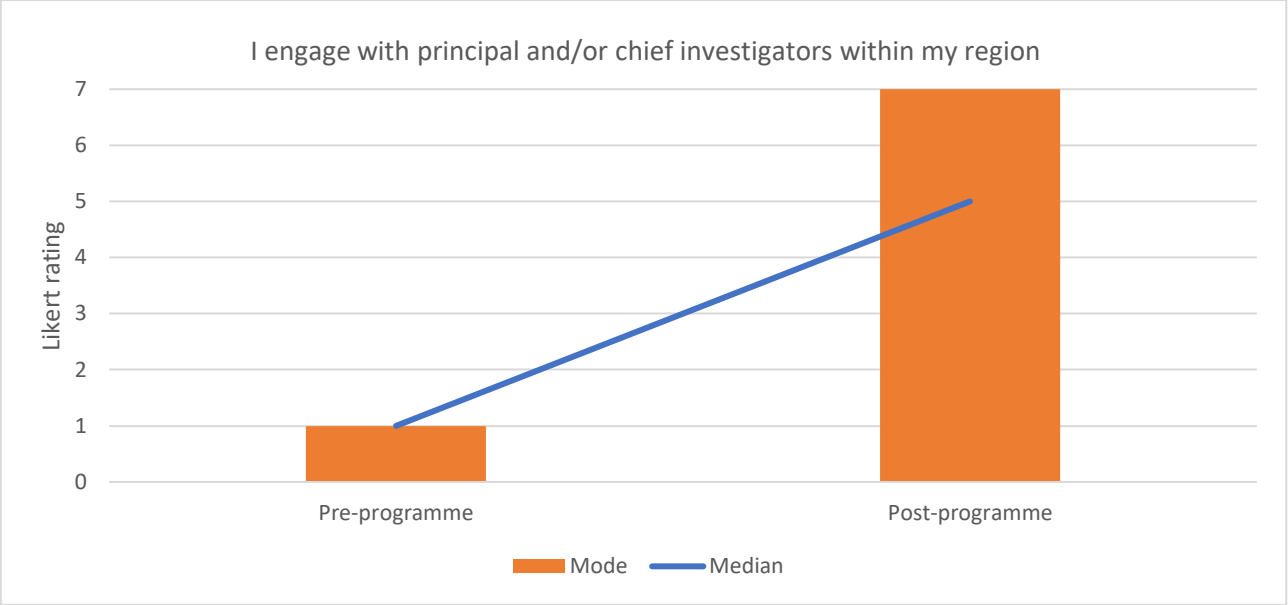


Figure 48

Frequency distributions for all participants responding to the pre-, mid- and post-programme evaluations for this item are shown in Fig. 49, Fig. 50 and Fig. 51 respectively. There is a shift in the median to 'neither agree nor disagree'-'somewhat agree' in the mid-way evaluation and to 'somewhat agree' in the post-programme evaluation. Although most participants 'strongly agreed' that they engage with PI and/or CIs within their region following completion of the programme, the median of 'somewhat agree' reflects the wide distribution of responses, with a number of respondents disagreeing (strongly disagree-somewhat disagree) or providing a neutral response to this statement.

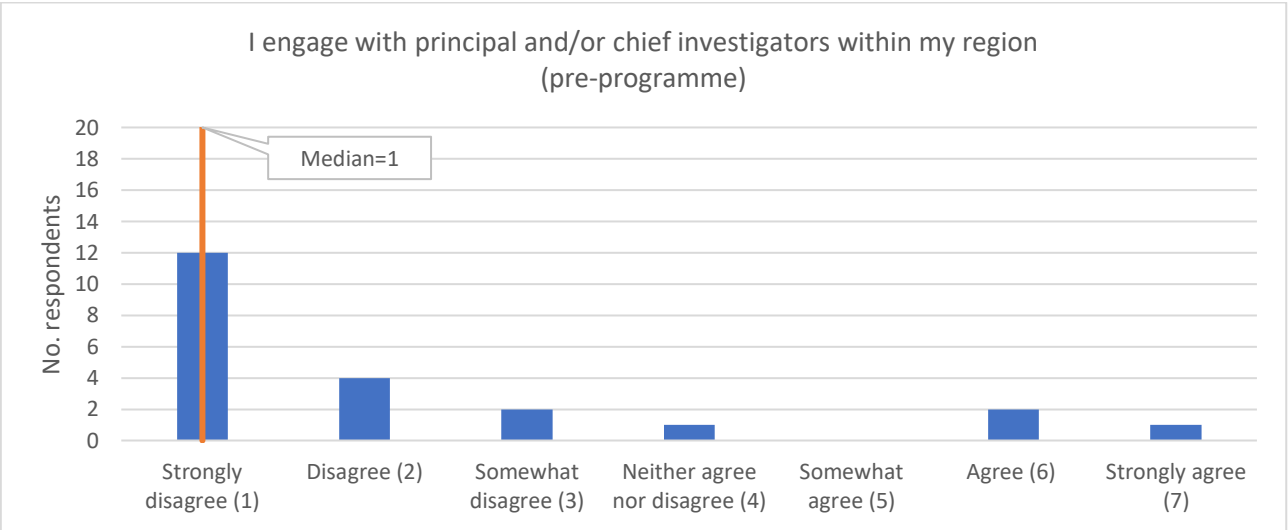


Figure 49

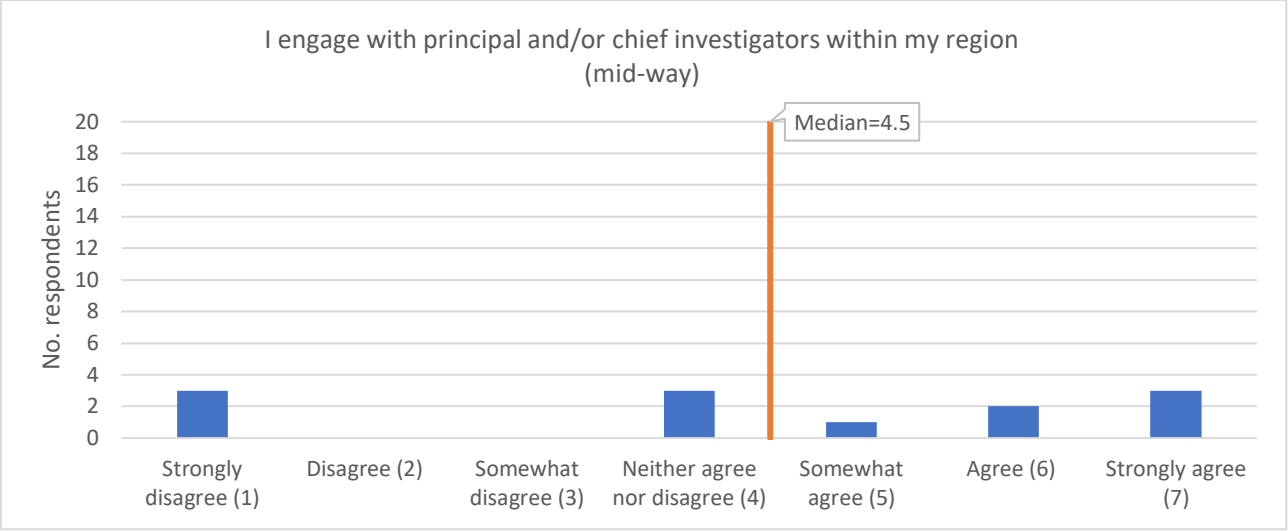


Figure 50

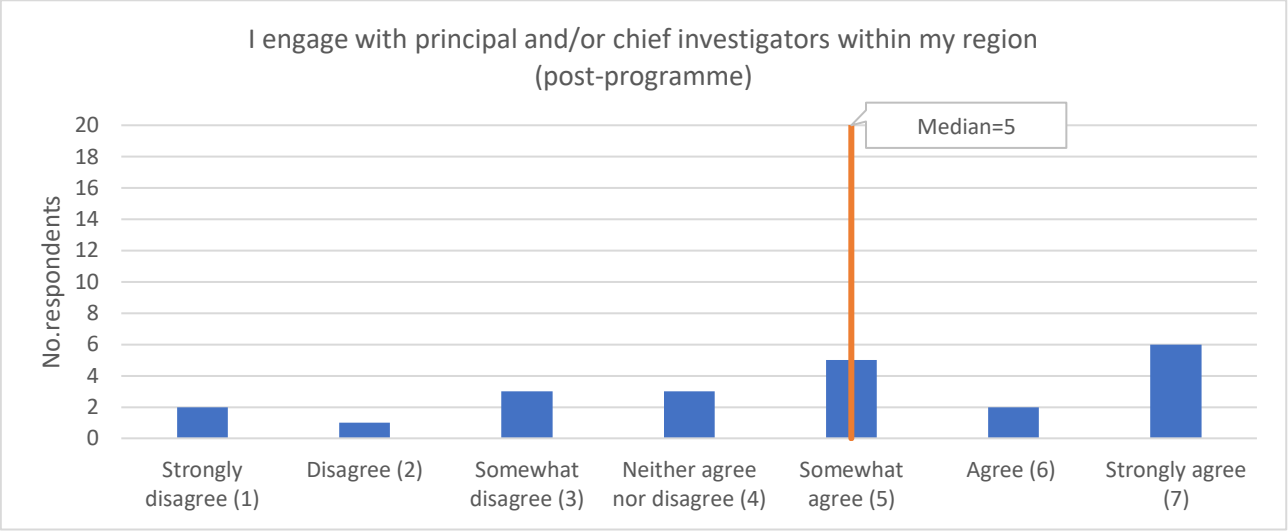


Figure 51

In comparison, participants' understanding of the role and responsibilities of PI and CIs did not show such a pronounced degree of change, with a percentage increase of 53%, although the most common response shifted from 'somewhat disagree' to 'agree' (Fig. 52).

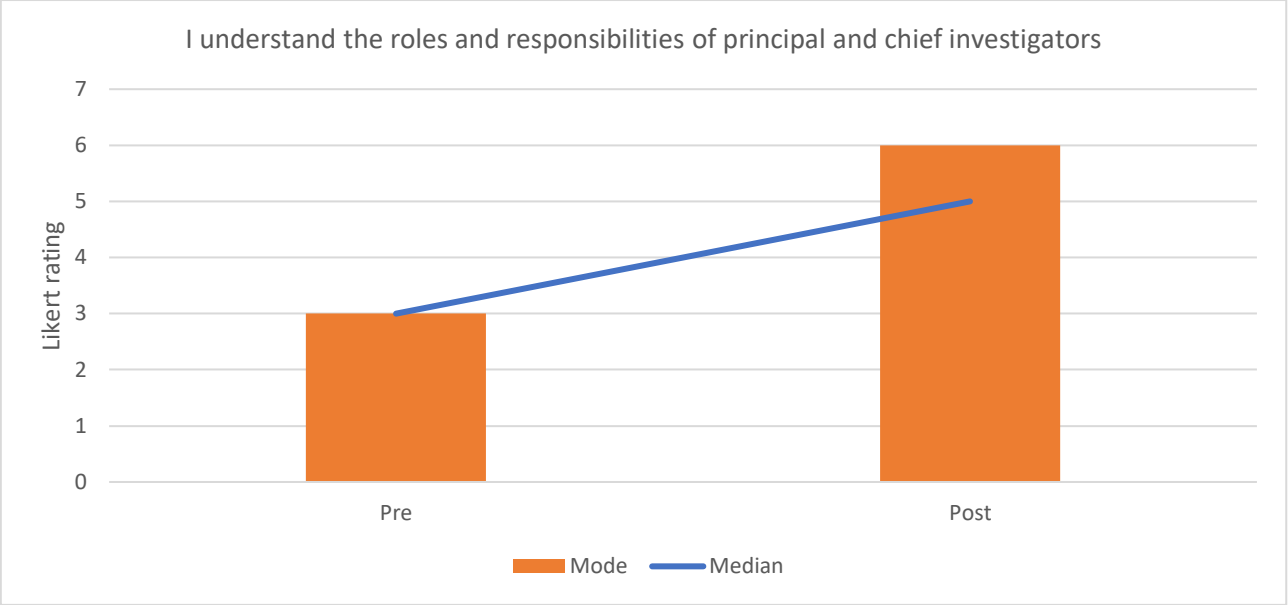


Figure 52

The frequency distributions for all participants responding to the pre-programme evaluations shows a wide distribution of responses, as reflected in the median of 'somewhat disagree-neither agree nor disagree' (see Fig. 53).

There is a shift in the median to 'somewhat agree' in the mid-way evaluation (see Fig, 54) and to 'somewhat agree-agree' in the post-programme evaluation. Following completion of the programme, all respondents agreed (somewhat agree-strongly agree) that they now understood the roles and responsibilities of PIs and CIs, with the exception of one participant (see Fig. 55).

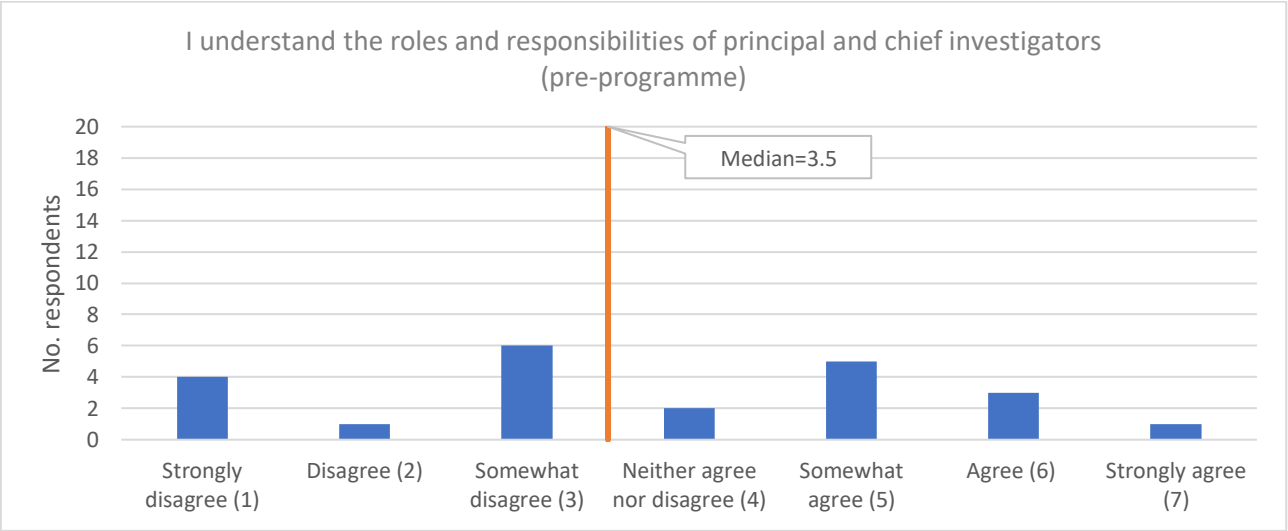


Figure 53

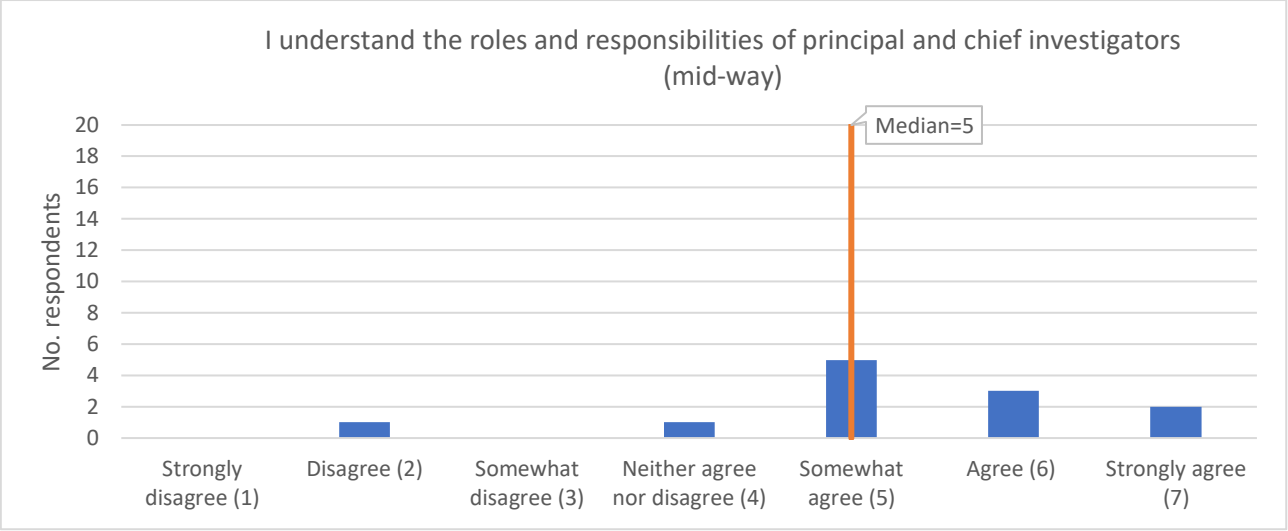


Figure 54

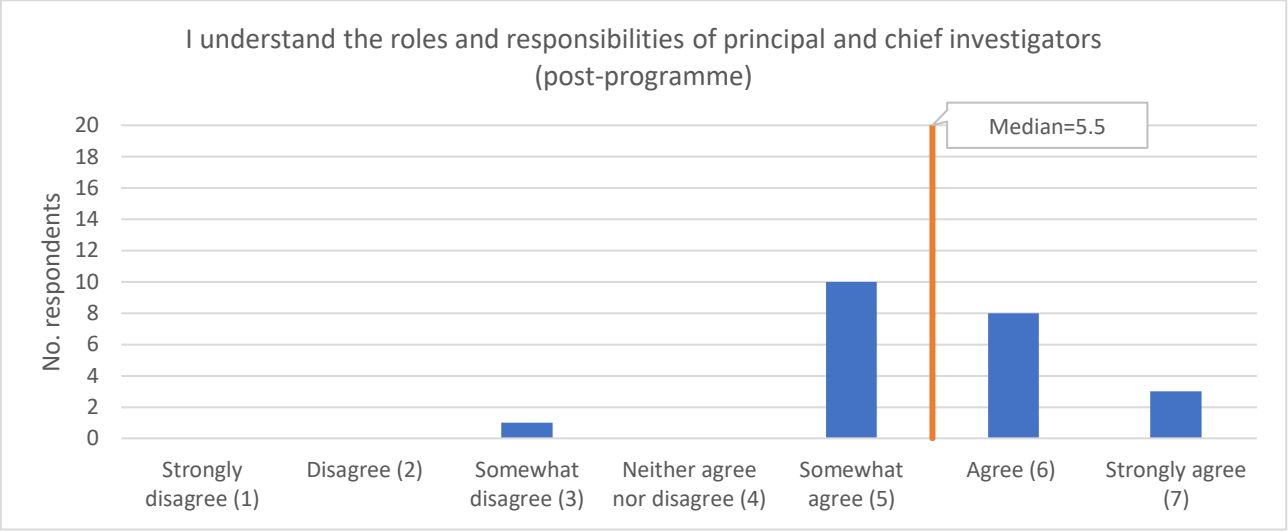


Figure 55

NHS R&D departments

In comparison to participants understanding of the roles and responsibilities of PIs and CIs, respondents' understanding of the roles and responsibilities of NHS R&D departments showed a higher increase, with a percentage change of 82% and a change in median from 'somewhat disagree' to 'agree' (see Fig. 56).

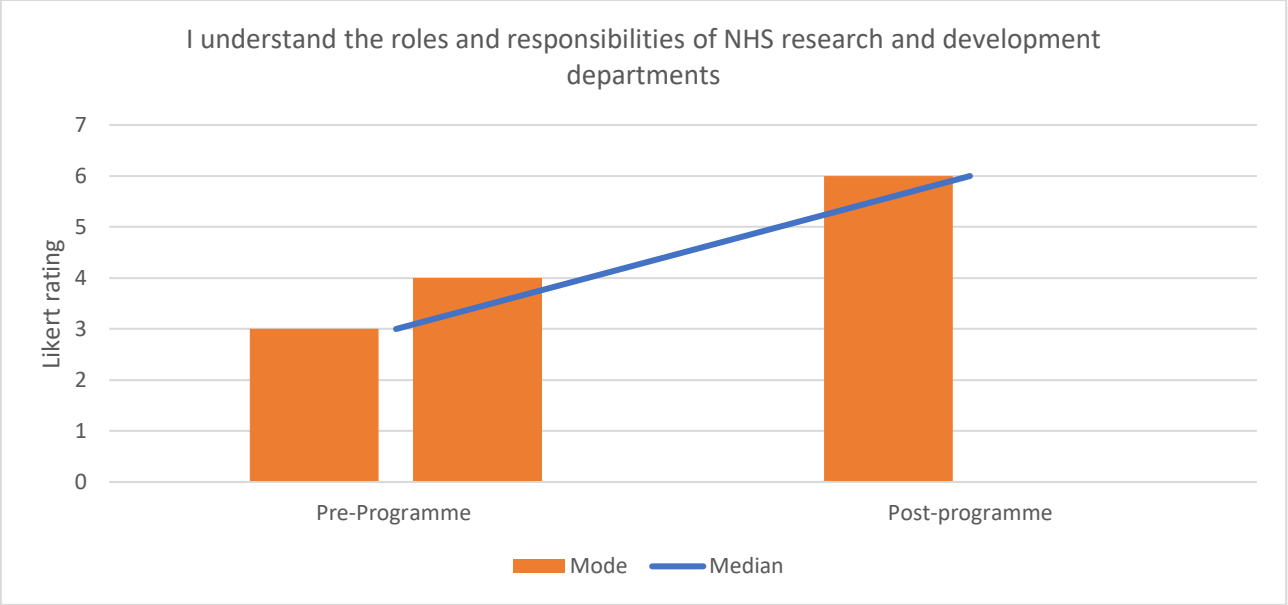


Figure 56

As seen in Fig. 57, there was a wide distribution in responses to this questionnaire item in the pre-programme evaluation, skewed towards 'neither agree nor disagree' and disagree (strongly disagree-somewhat disagree) Mid-way through the ECRDP, the median shifted to 'somewhat agree-agree' (see Fig. 58). By the end of the programme, all participants agreed (somewhat agree-strongly agree) that they understood the roles and responsibilities of NHS R&D departments, with the exception of one respondent. The majority of participants now 'agreed' or 'strongly agreed' with this statement (see Fig. 59).

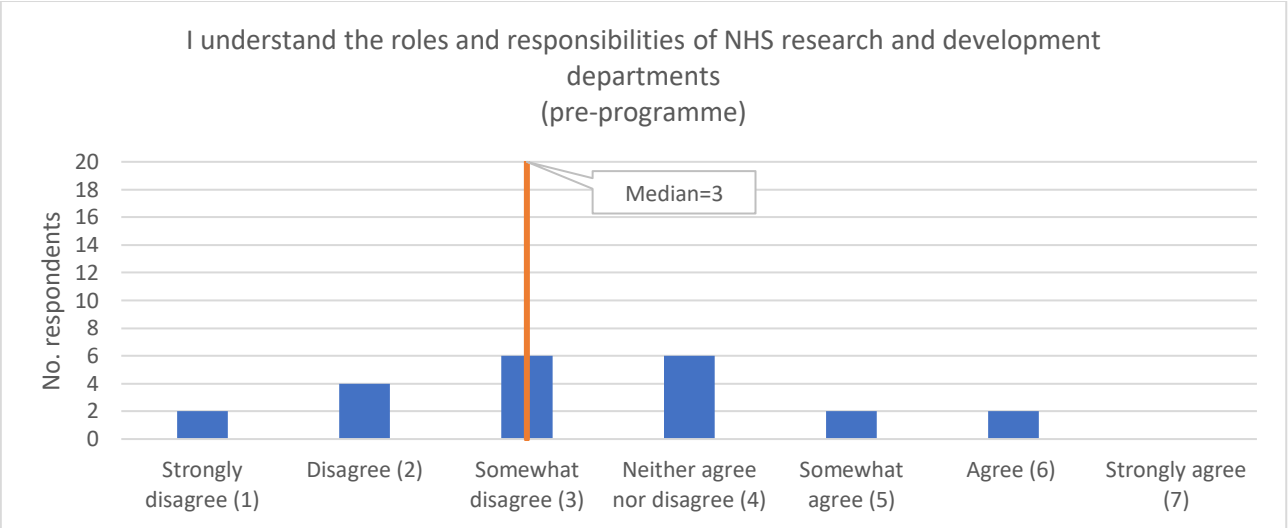


Figure 57

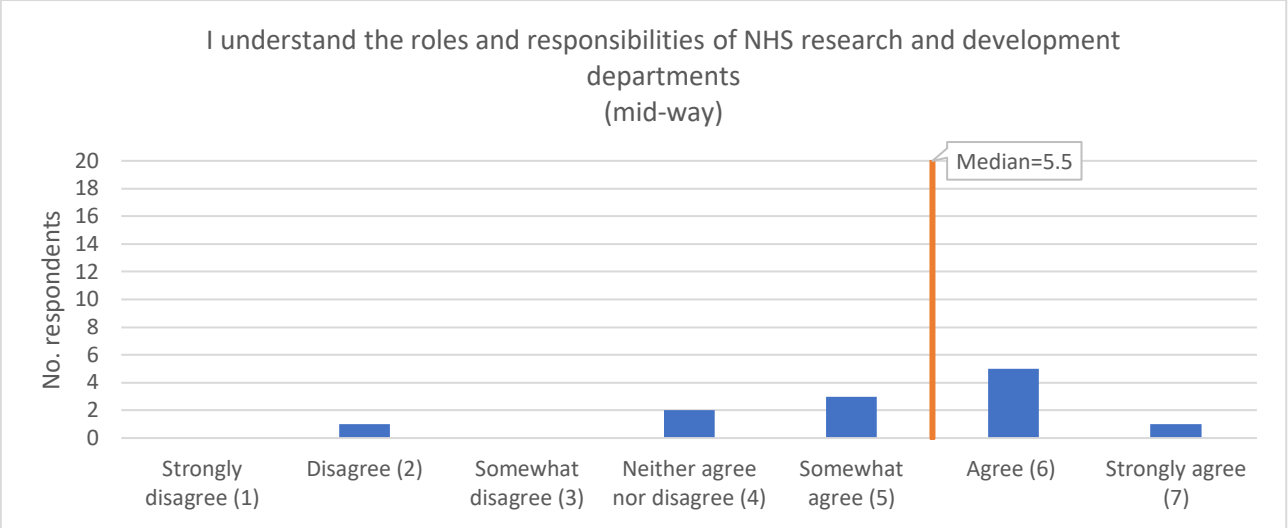


Figure 58

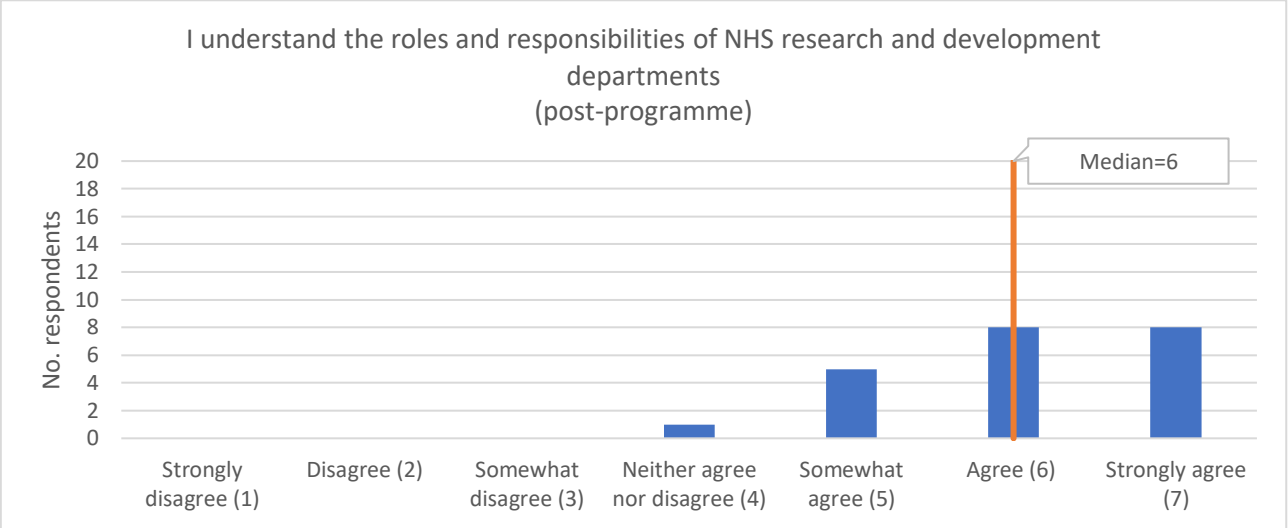


Figure 59

Participants' agreement with the statement "I engage with the research and development department and/or director within my trust" showed a percentage increase of 60%, with a change in mode from 'strongly disagree' to 'strongly agree' (see Fig. 60).

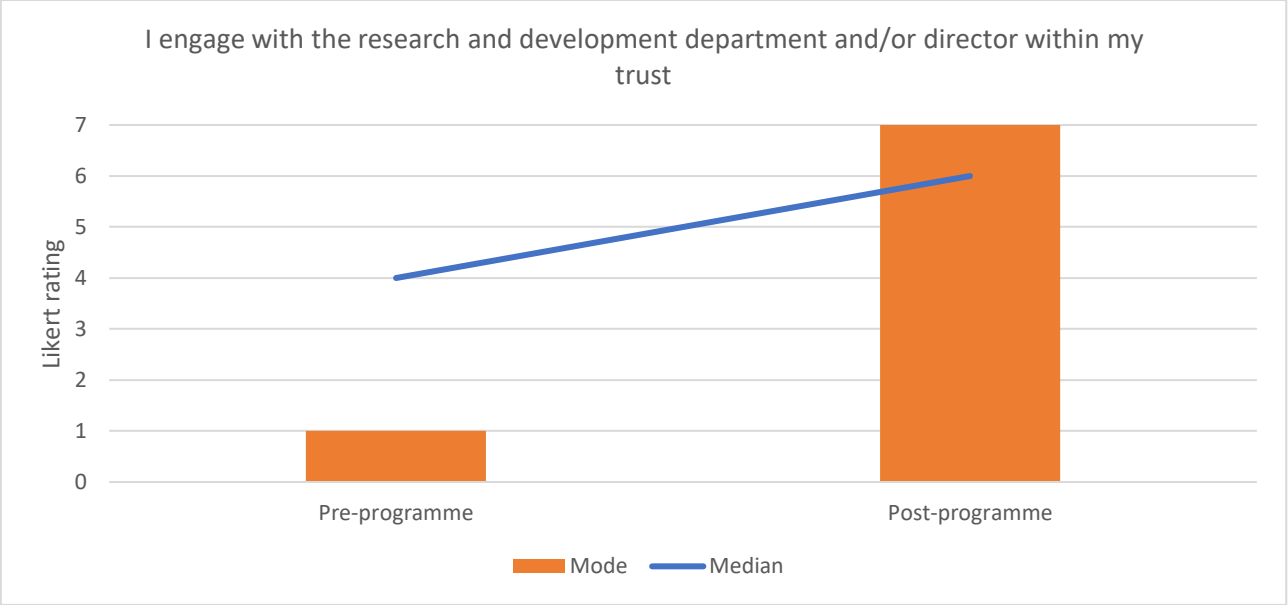


Figure 60

Despite most people 'strongly disagreeing' that they engaged with the R&D department and/or director in their trust prior to the programme, the frequency distribution of responses to this item shows a wide variation, as reflected in the median of 'neither agree nor disagree' (see Fig. 61). Mid-way through the ECRDP the median shifts to 'somewhat agree' (see Fig. 62). By the end of the programme, most participants 'strongly agree' that they engage with their R&D departments, with a median of 'agree' (see Fig. 63). However, there are still a number of participants who disagree or 'neither agree nor disagree' with this questionnaire item, the latter response perhaps reflecting an uncertainty with regards to what it means to 'engage'.

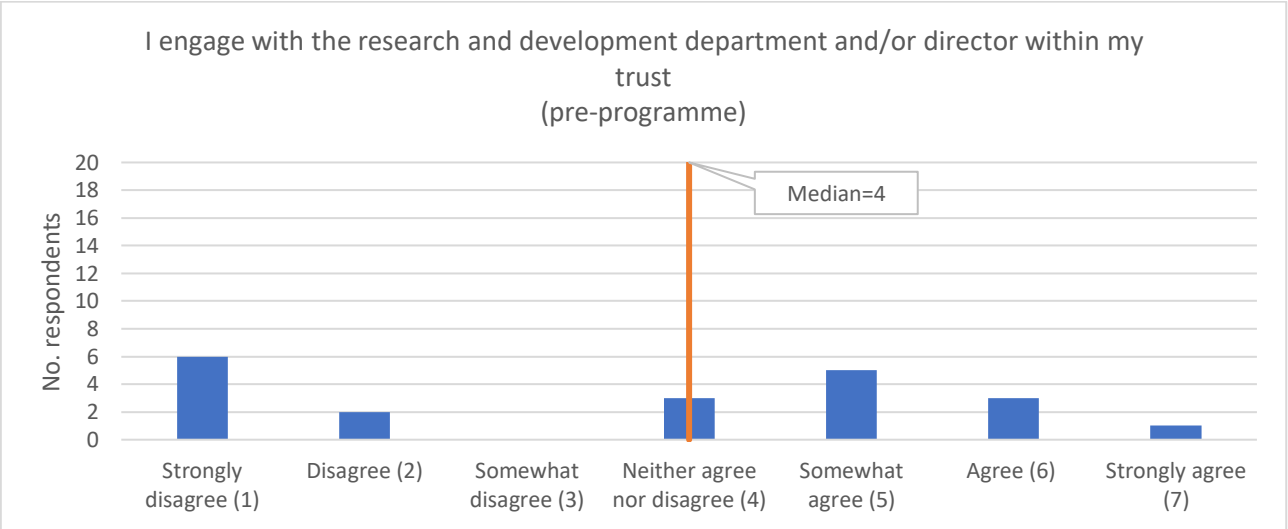


Figure 61

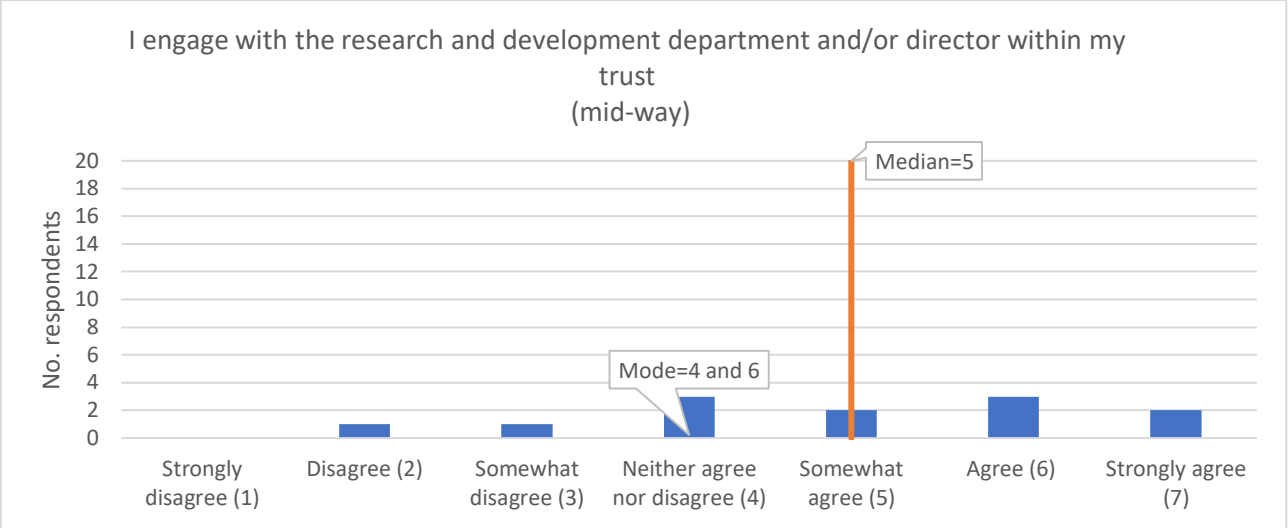


Figure 62

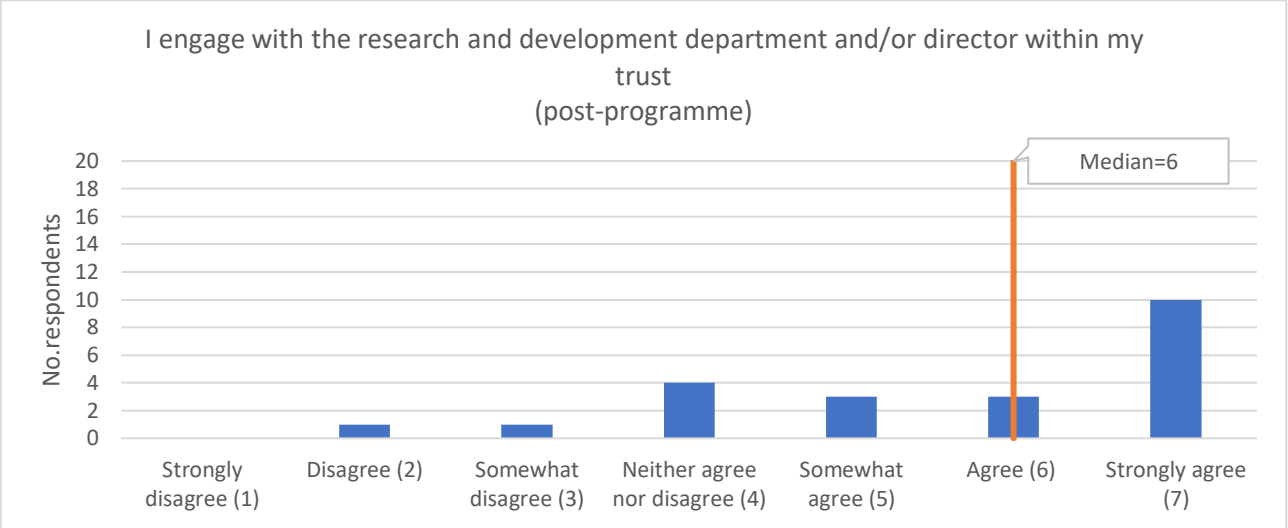


Figure 63

Networking with R&D colleagues within and/or outside your organisation (Professional and career development, B3; Networking)

Participants were asked whether they were networking with research and development colleagues within and/or outside their organisation in the mid-way and post-programme evaluation. This questionnaire item showed a relatively small increase of 12%, with a shift in the most frequent response from 'somewhat agree'/agree' to 'strongly agree' (see Fig. 64). However, it is important to note that baseline measures against this item were only taken in the mid-way evaluation.

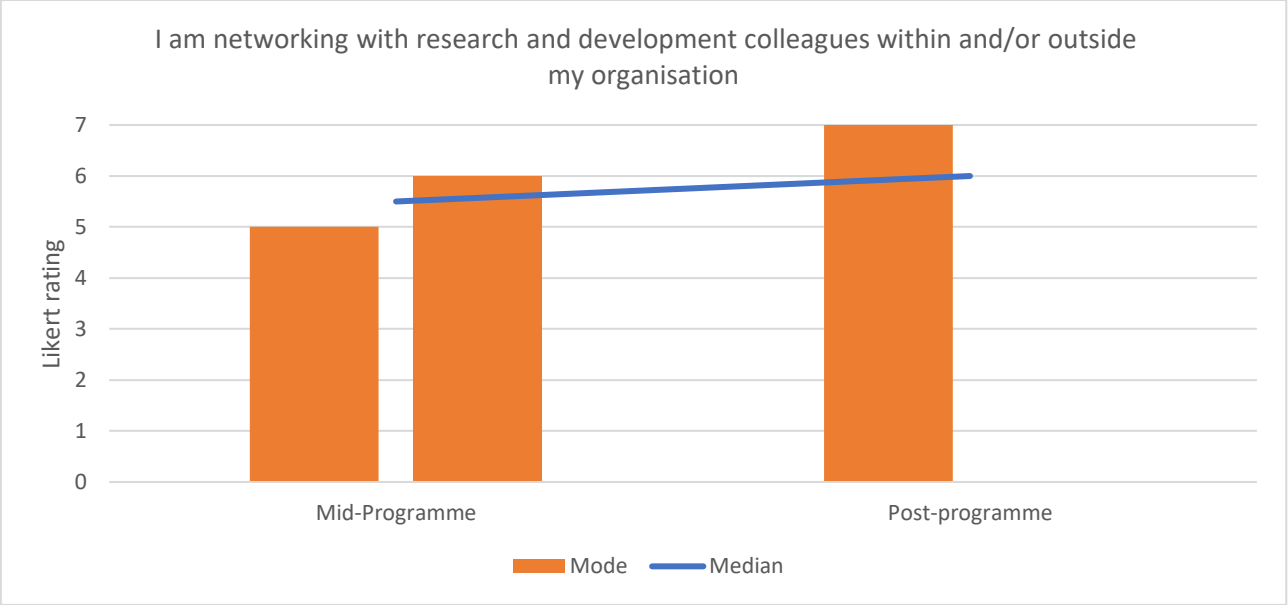


Figure 64

A median of somewhat agree-agree reflects the frequency distribution of all responses to this questionnaire item in the mid-programme evaluation (see Fig. 65), which shifts to 'agree' in the post-programme evaluation, although a small number of people disagreed or provided a neutral response to this statement following completion of the programme (see Fig. 66).

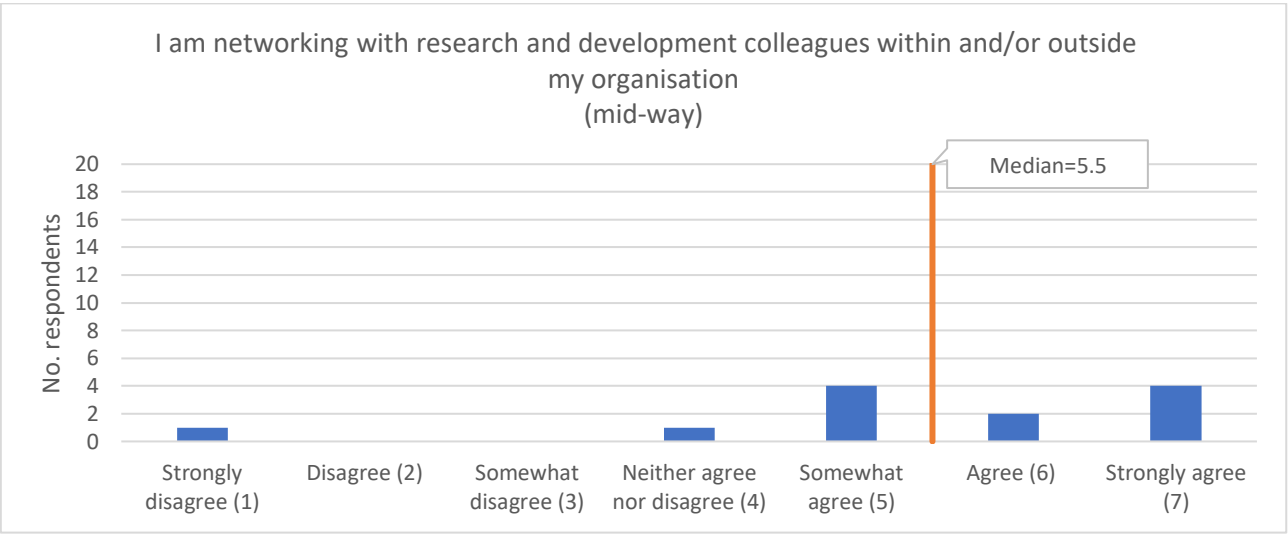


Figure 65

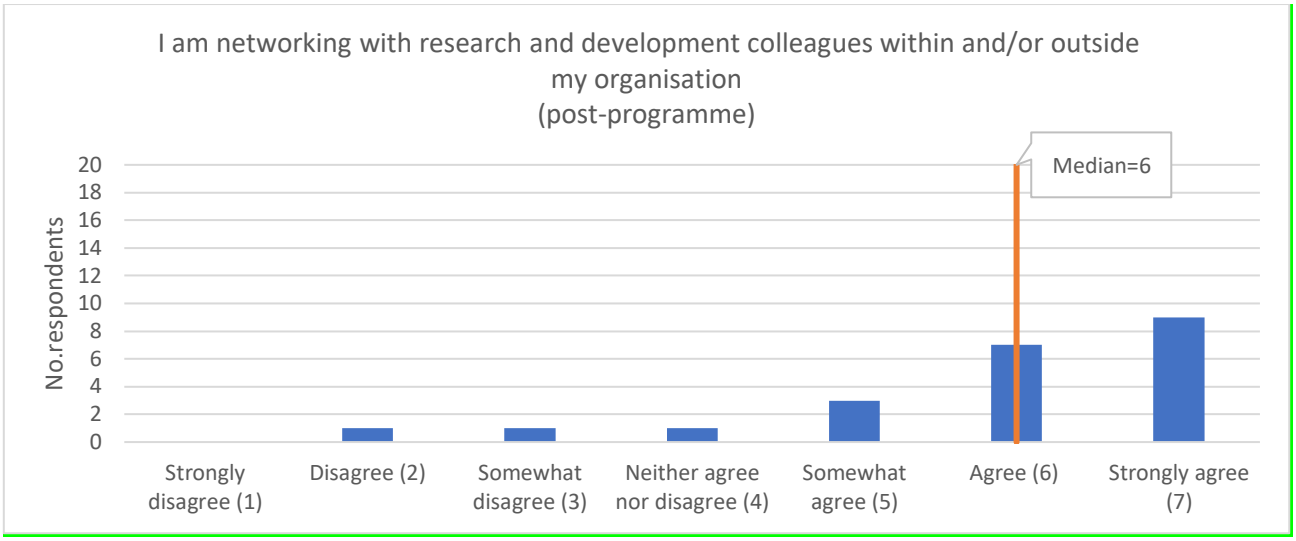


Figure 66

Together, these results suggest that participants are now starting to expand their professional networks and are more likely to be engaging with people within and/or outside their organisations including PIs, CIs, and NHS R&D departments and directors. However, some participants may benefit from additional support to build these networks.

Knowledge of and engagement in researcher/research development opportunities in and outside your organisation (Professional and career development, B3; Responsiveness to opportunities)

Participants' knowledge of the researcher/research development opportunities available through other organisations showed the third highest percentage increase across all the pre- and post-evaluation measures (124%). The most common response changed from 'somewhat disagree' to 'somewhat agree' for those participants completing both pre-and post-scores (see Fig. 67).

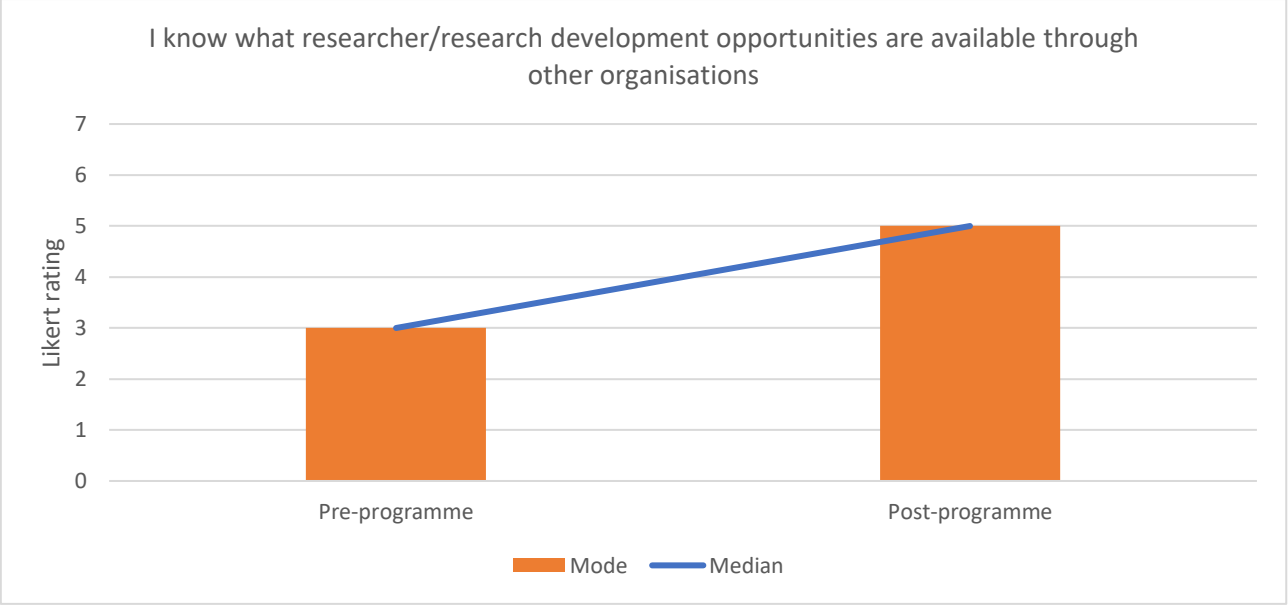


Figure 67

Frequency distributions of all responses to this questionnaire item show that 'strongly disagree' and 'somewhat disagree' were the most common responses prior to the programme (see Fig. 68), shifting to 'somewhat agree' and 'agree' in the mid-way evaluation (see Fig, 69). By the end of the programme, most respondents 'somewhat agreed' that they knew what development opportunities were available through other organisations, although some participants disagreed/somewhat disagreed with this statement or provided a neutral response (see Fig. 70). This result suggests that despite the significant change in scores against this questionnaire item, some participants would benefit from more information regarding potential opportunities in other organisations.

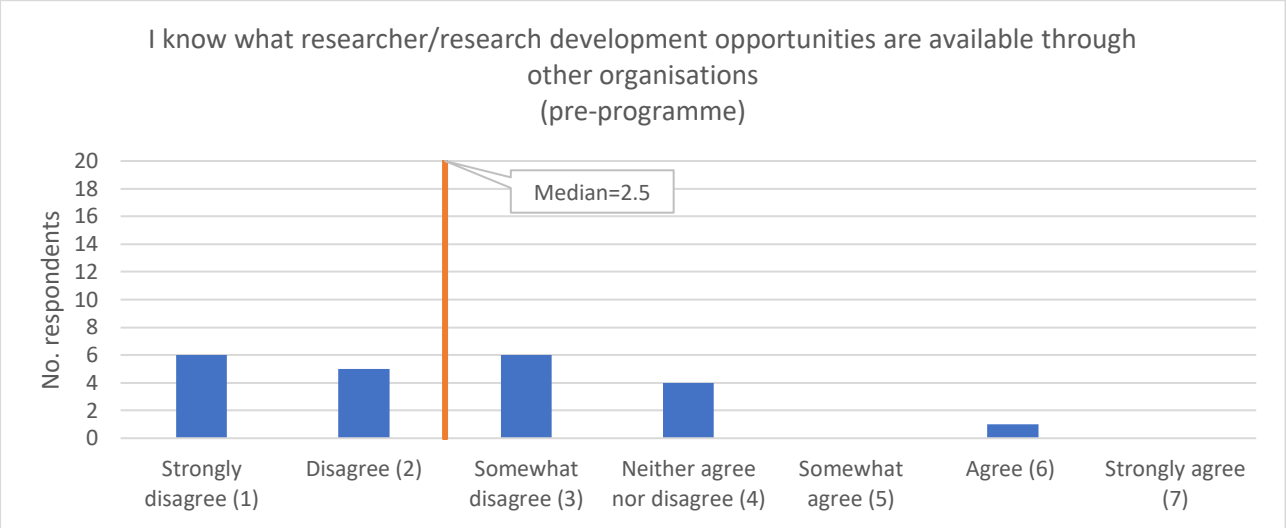


Figure 68

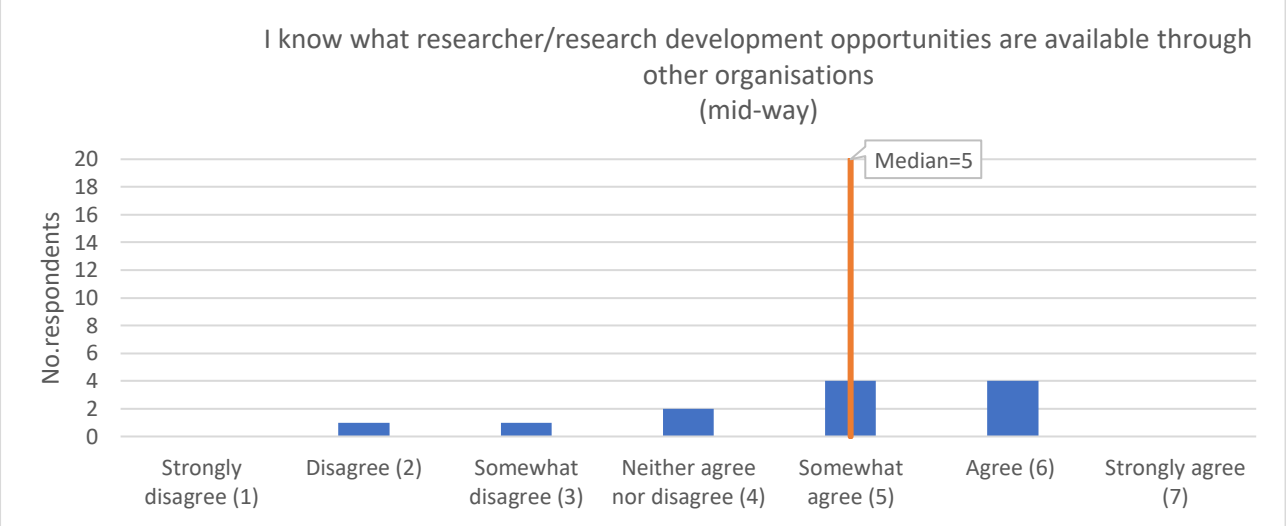


Figure 69

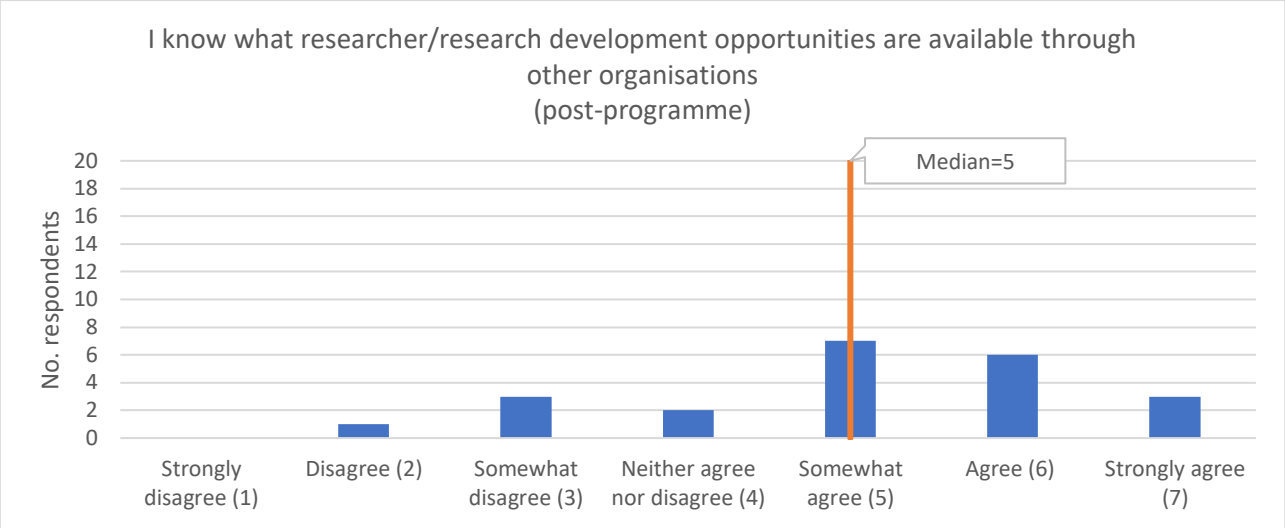


Figure 70

Participants' agreement with the statement "I have accessed researcher/research development opportunities through other organisations" also showed an increase of 104%, with a change in mode from 'disagree' to 'somewhat agree' (see Fig. 71).

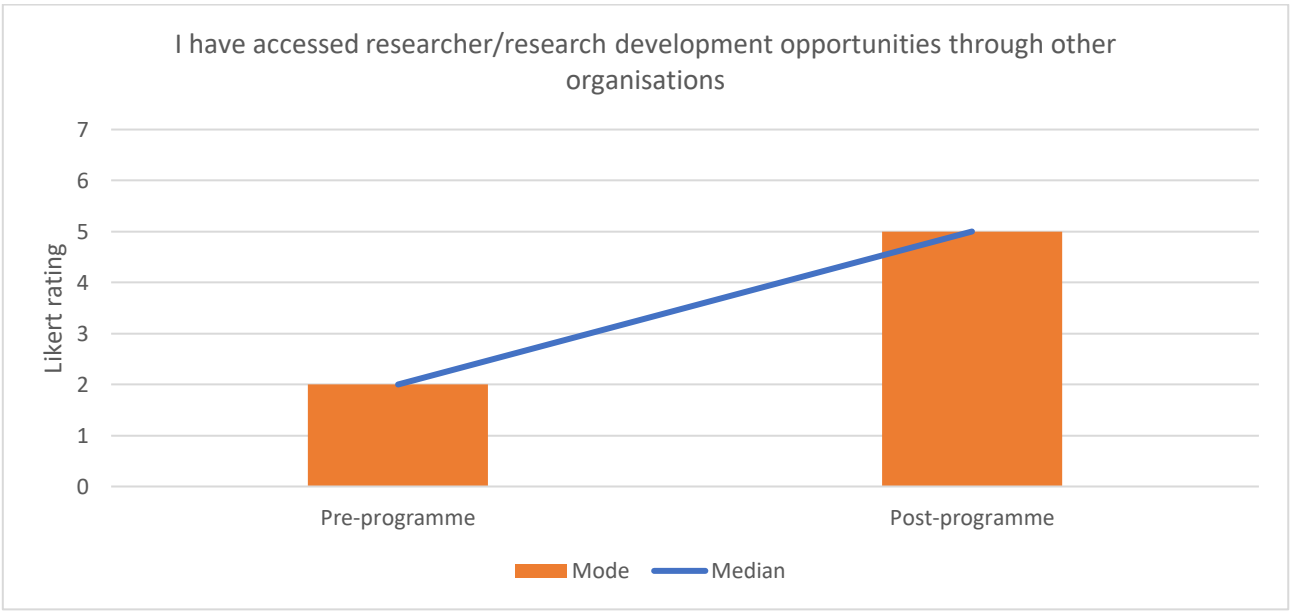


Figure 71

Frequency distributions for all participants responding to the pre-, and post-programme evaluations for this item are shown in Fig. 72 and Fig. 73 respectively. Despite 'somewhat agree' being the most common response in the post-programme evaluation, there is still a fairly wide distribution of responses, suggesting that some participants may have had little to no engagement with development opportunities in other organisations over the time period of the course. Given participants' clinical commitments and work on the ECRDP, this is perhaps unsurprising. However, some of the interactions on WhatsApp point to the participants engaging with opportunities available through the NIHR and other organisations.

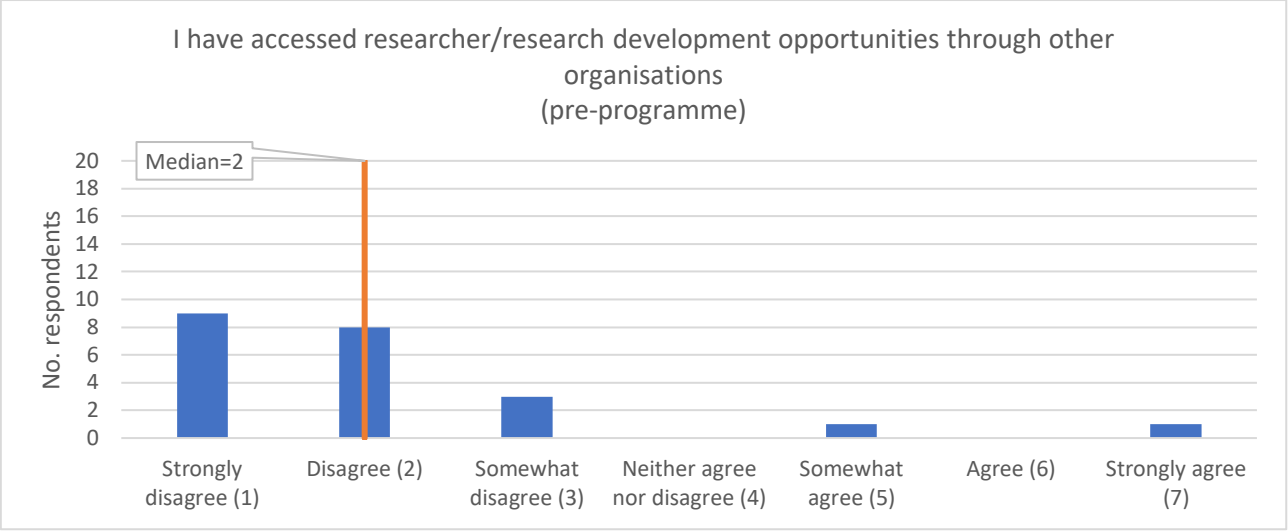


Figure 72

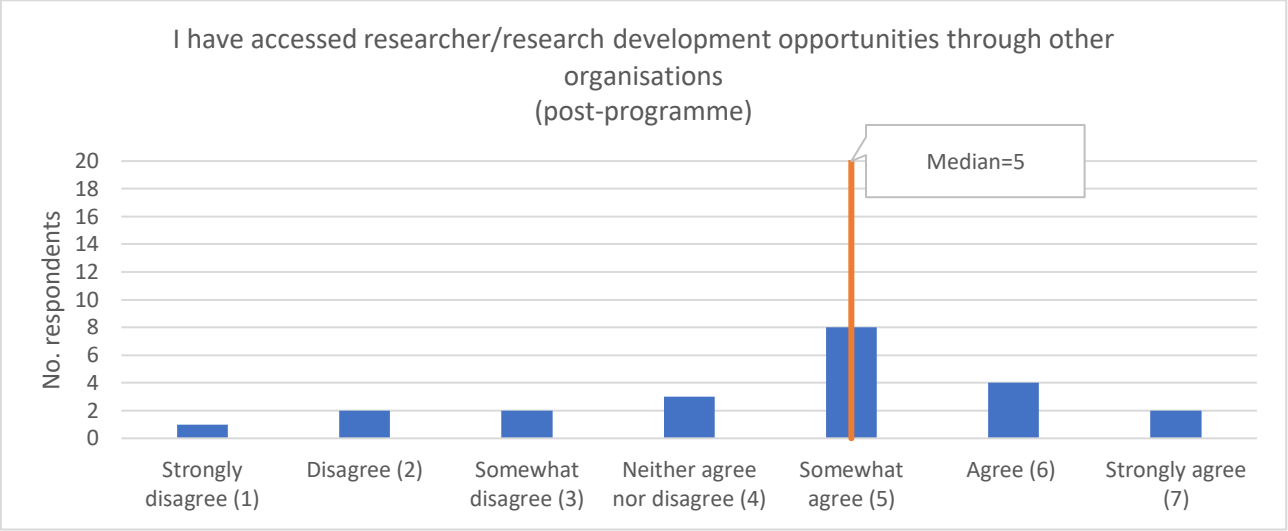


Figure 73

Participants knowledge of opportunities available within their own organisations only increased by 41%, with a change in median from 'neither agree nor disagree'- 'agree' to 'somewhat agree'-agree' (see Fig, 74).

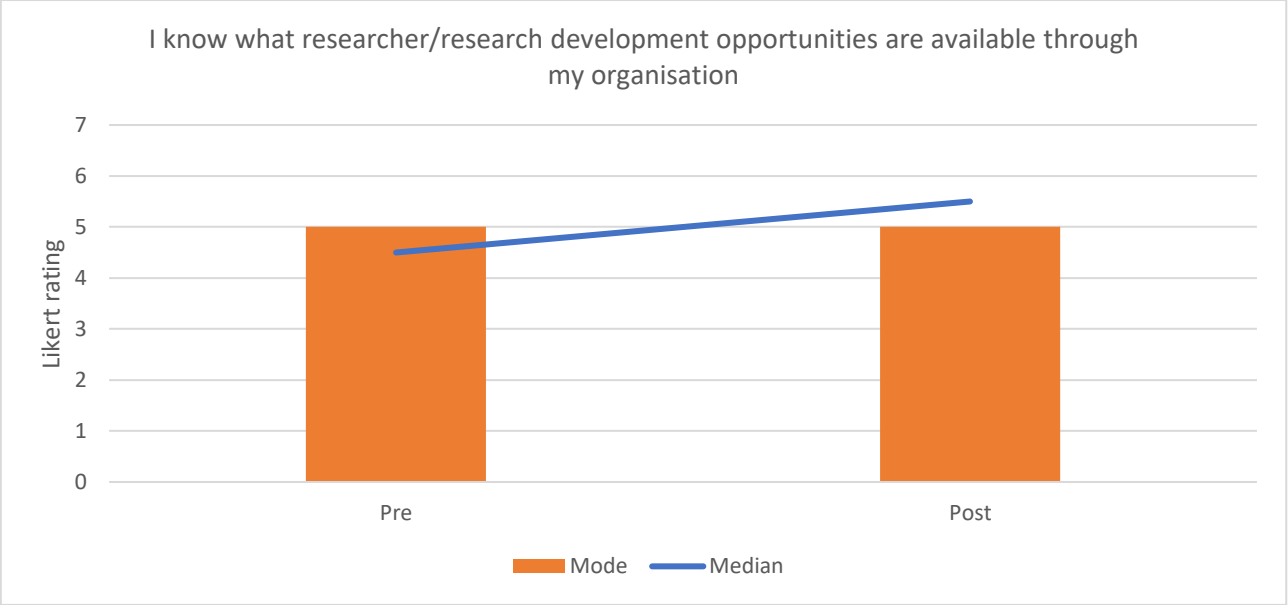


Figure 74

The frequency distribution of all responses to this item in the pre-programme evaluation, shows that 'somewhat agree' was the most common response, with the median at 'neither agree nor disagree' reflecting that a number of participants disagreed (strongly-disagree-somewhat disagree) or provided a neutral response to this statement (see Fig. 75). Mid-way through the ECRDP, the median shifted to 'somewhat agree' (see Fig. 76). By the end of the programme, most respondents 'somewhat agreed' that they knew what development opportunities are available through their organisation. Only a few responses reflected uncertainty or disagreement ('somewhat disagree') with this questionnaire item following completion of the course (see Fig. 77).

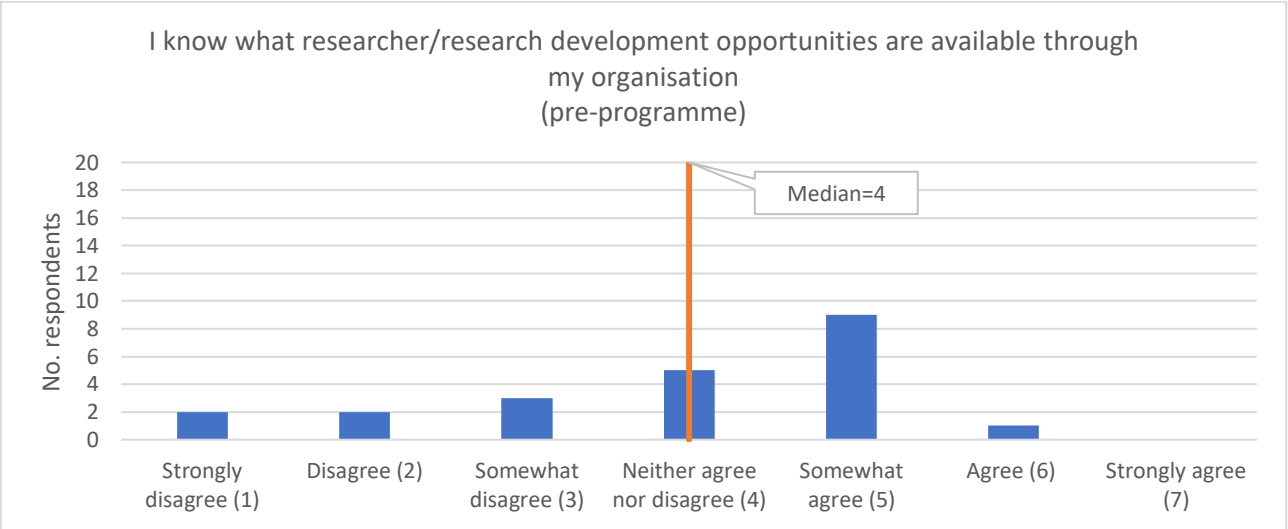


Figure 75

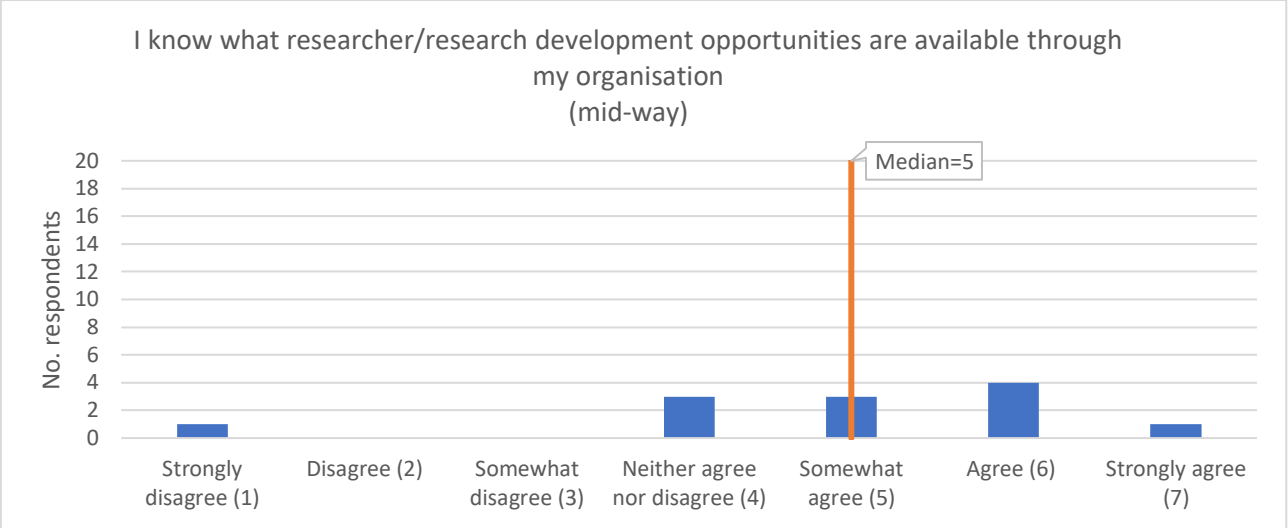


Figure 76

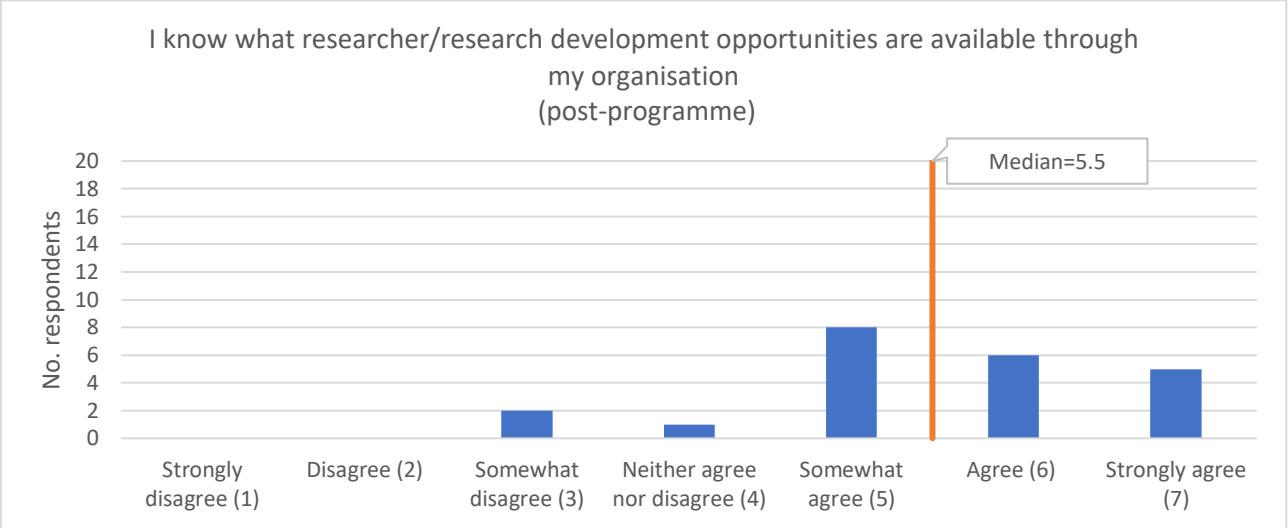


Figure 77

Participants' engagement with development opportunities in their organisation showed a percentage increase of 61%, reflecting a shift in median from 'somewhat disagree-neither agree nor disagree" to 'agree' (see Fig. 78)

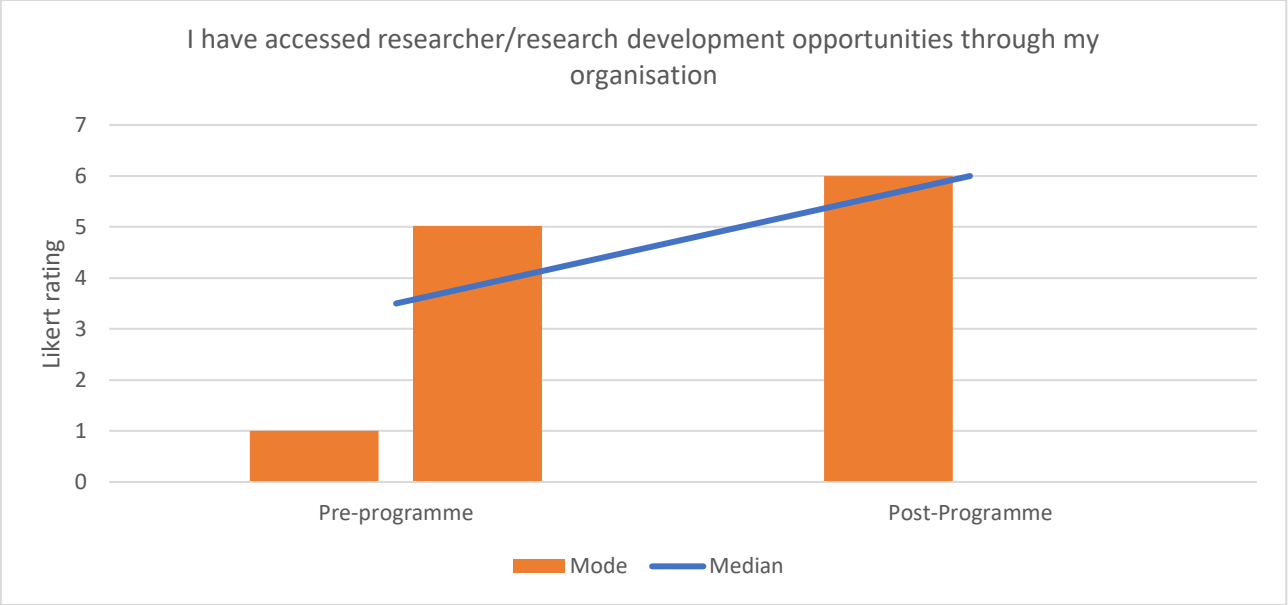


Figure 78

The frequency distribution of all responses to this item in the pre-programme evaluation show that most respondents 'somewhat agreed' that they had accessed development opportunities in their organisation prior to the programme, although a median of 'neither agree nor disagree' reflects the wide distribution of responses to this statement (see Fig. 79). Following completion of the programme, most respondents 'agreed' that they had accessed these opportunities, although some respondents disagreed (strongly disagree-somewhat disagree) or provided a neutral response (Fig. 80). Again, those who have had little engagement with opportunities in their organisation may reflect participants' existing work commitments and participation in the ECRDP. A neutral response may also suggest limited opportunities in some participants' employing organisations.

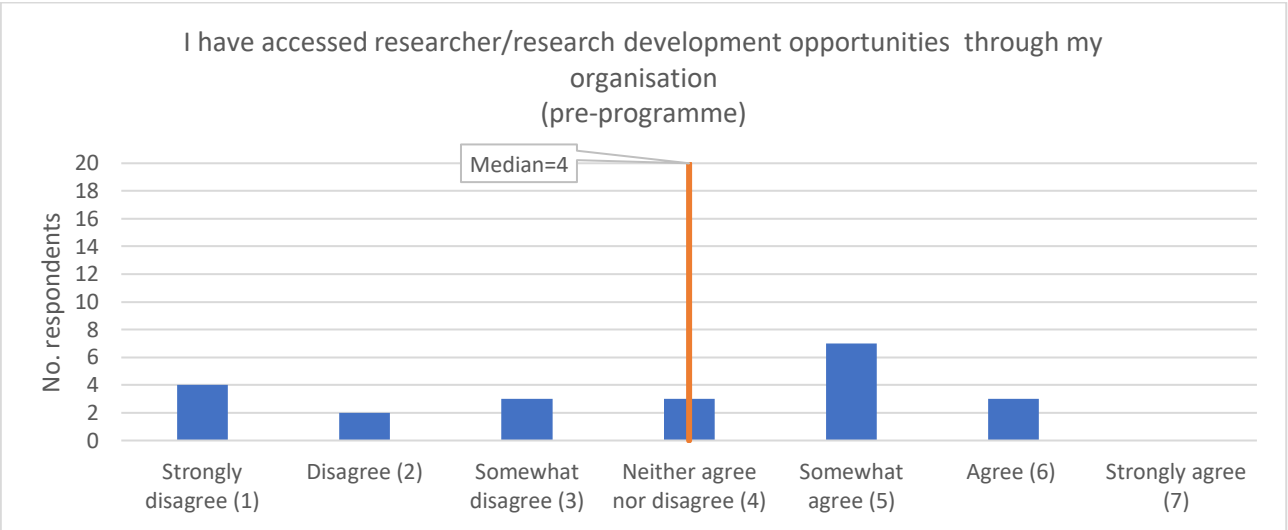


Figure 79

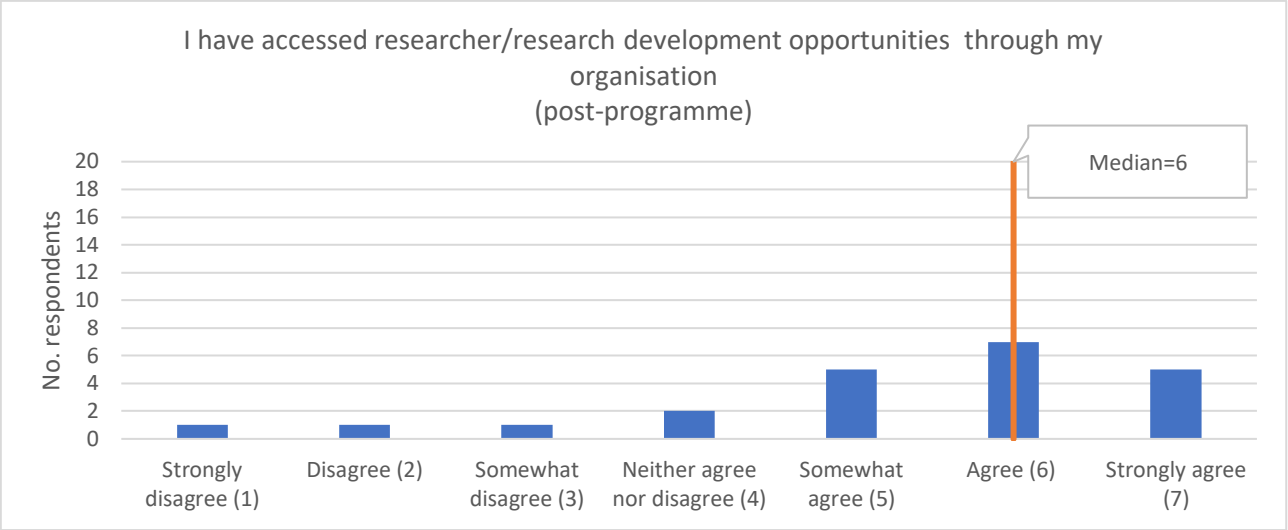


Figure 80

Together, these results suggest that, overall, participants are more alert and responsive to opportunities for networking (particularly through other organisations) following completion of the programme. However, some participants would benefit from more information regarding potential opportunities in other organisations.

Understanding of the knowledge, attributes and skills required to succeed as a research LEADER and researcher (Professional and career development, B3; Continuing professional development)

Research leader attributes

Participants' understanding of the knowledge, attributes and skills required to succeed as a research LEADER showed a percentage increase of 110%, with a change in median from 'somewhat disagree' to 'agree' (see Fig. 81).

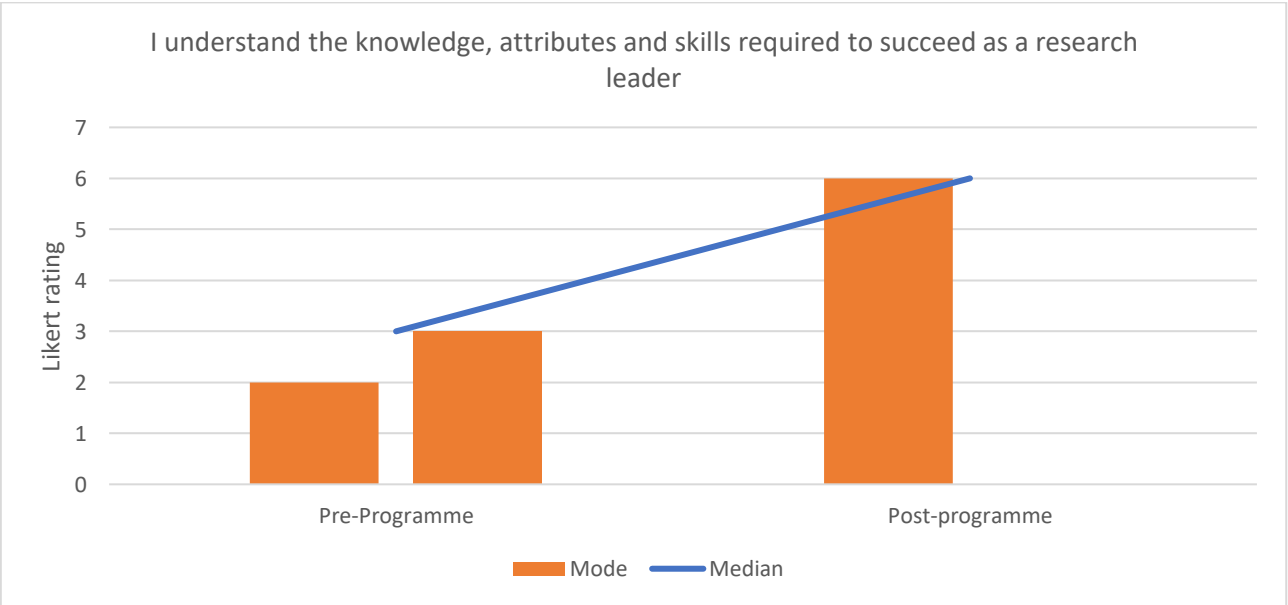


Figure 81

Frequency distributions of responses to this questionnaire item in the pre-programme evaluation show that most participants 'disagreed' (strongly disagree- somewhat disagree) with the statement, with 'disagree' and 'somewhat disagree' being the most common responses (see Fig. 82). Mid-way through the ECRDP ''somewhat agree' was the most frequent response (see Fig. 83), and by the end of the programme all respondents agreed ('somewhat agree'-'strongly agree') that they now understood the attributes required to succeed as a research leader (see Fig. 84).

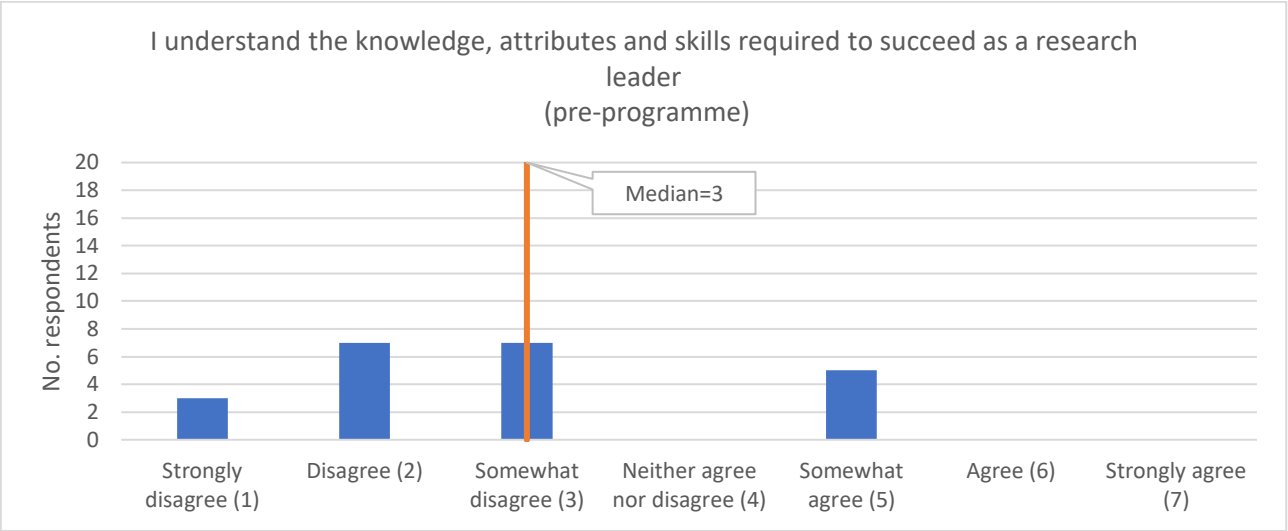


Figure 82

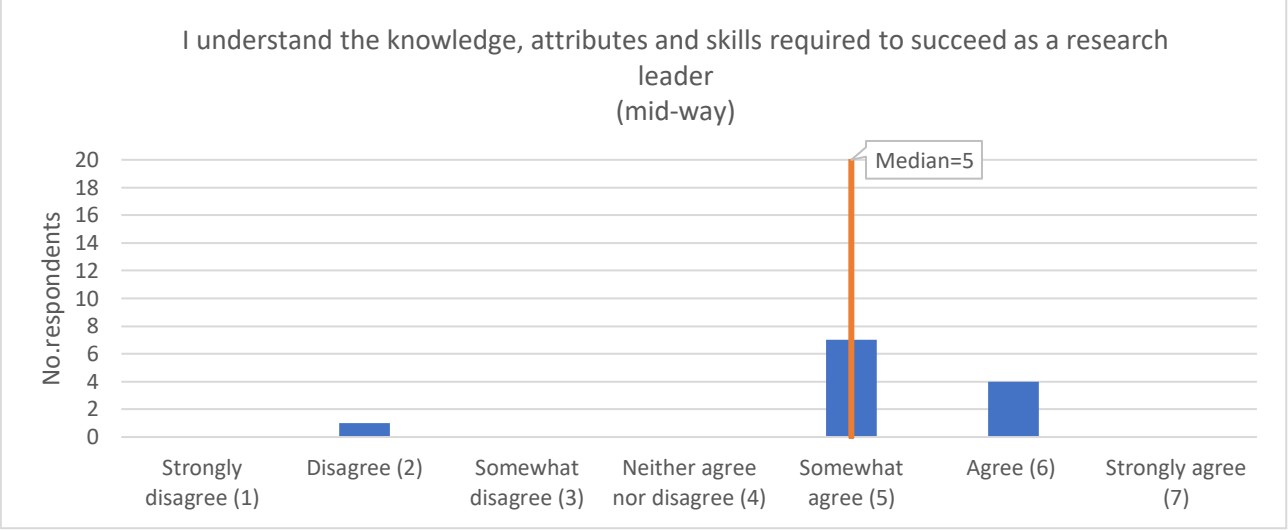


Figure 83

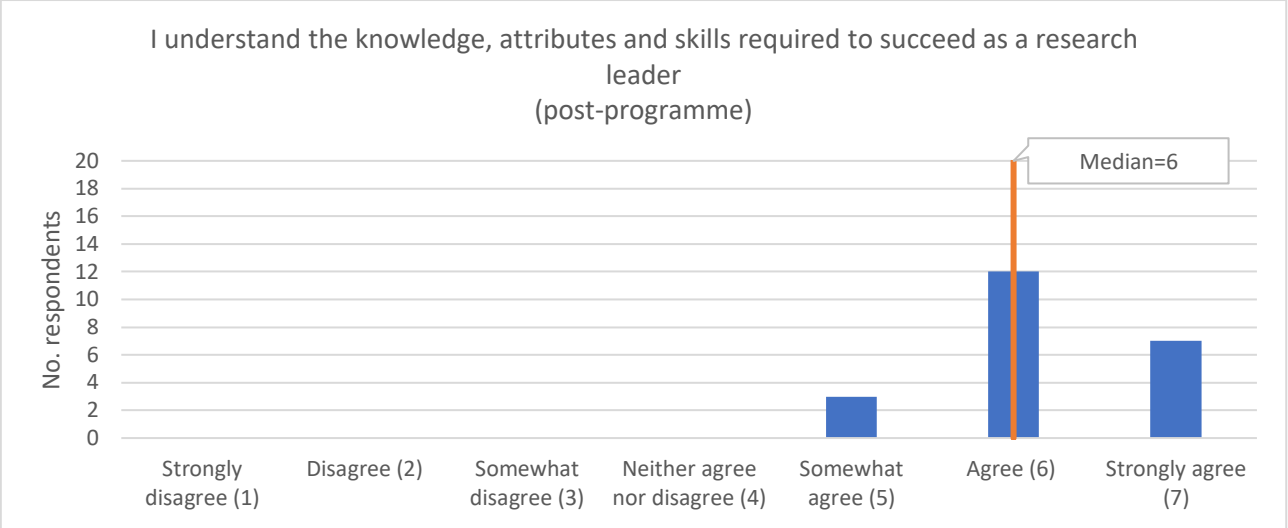


Figure 84

Researcher attributes

In comparison to participants understanding of the attributes of a research leader, the increase in understanding of the attributes required to succeed as a researcher did not show such a marked change, with an increase in overall scores of 54%, with a change in the most common response from 'somewhat disagree' to 'agree' (see Fig. 85).

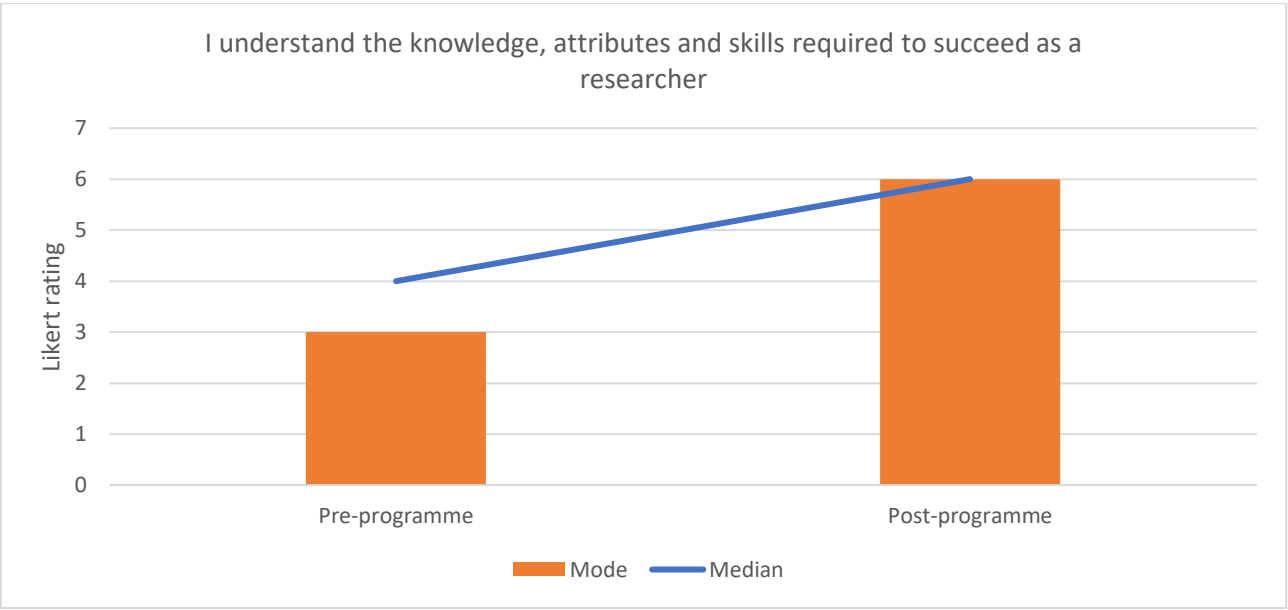


Figure 85

The frequency distribution of all responses to this statement in the pre-programme evaluation shows the spread of responses to this item, reflected in the median of 'neither agree nor disagree' (see Fig. 86). The most frequent response shifted from 'somewhat disagree' to 'somewhat agree' and 'agree' in the mid-way evaluation and post-programme evaluations respectively, with all respondents agreeing that they understand the attributes of a successful researcher by the end of the programme (somewhat agree-strongly agree) (see Fig. 87 and Fig. 88).

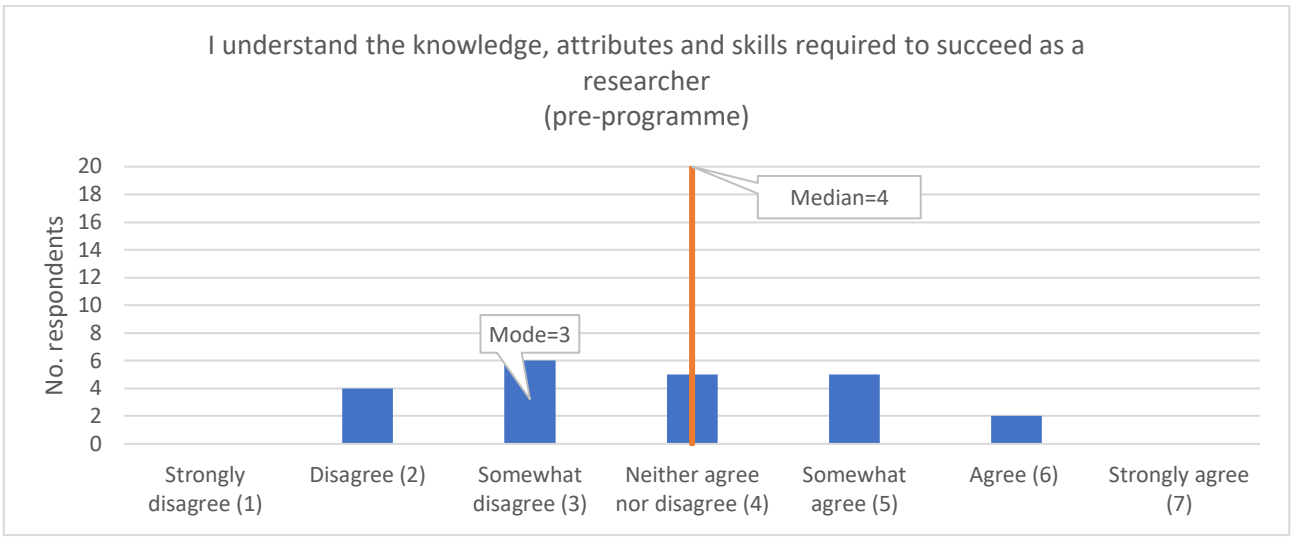


Figure 86

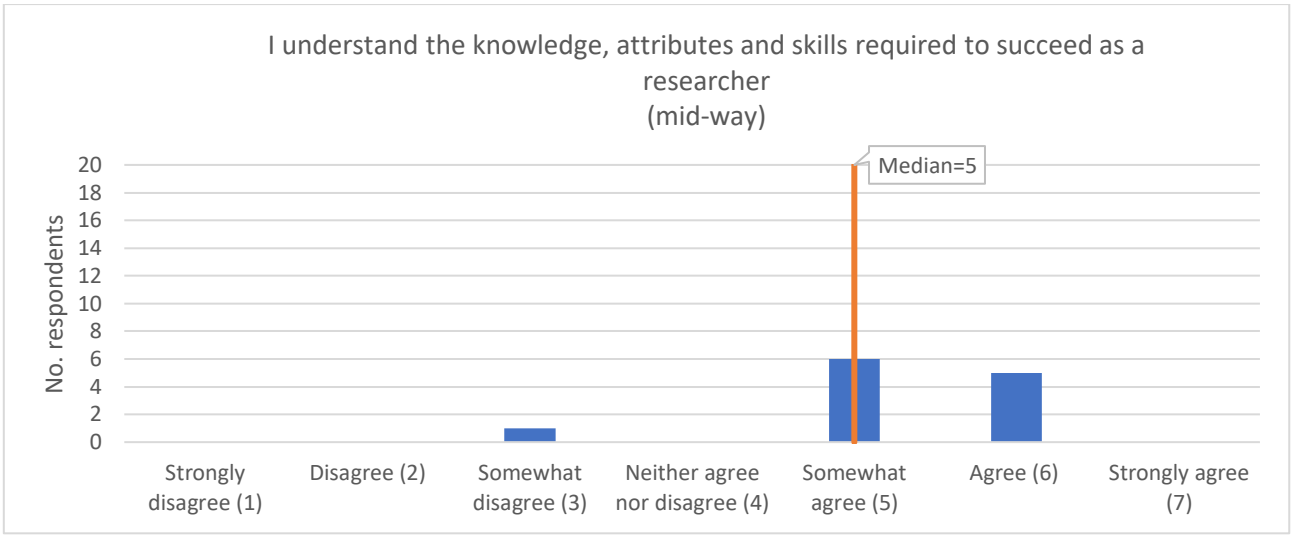


Figure 87

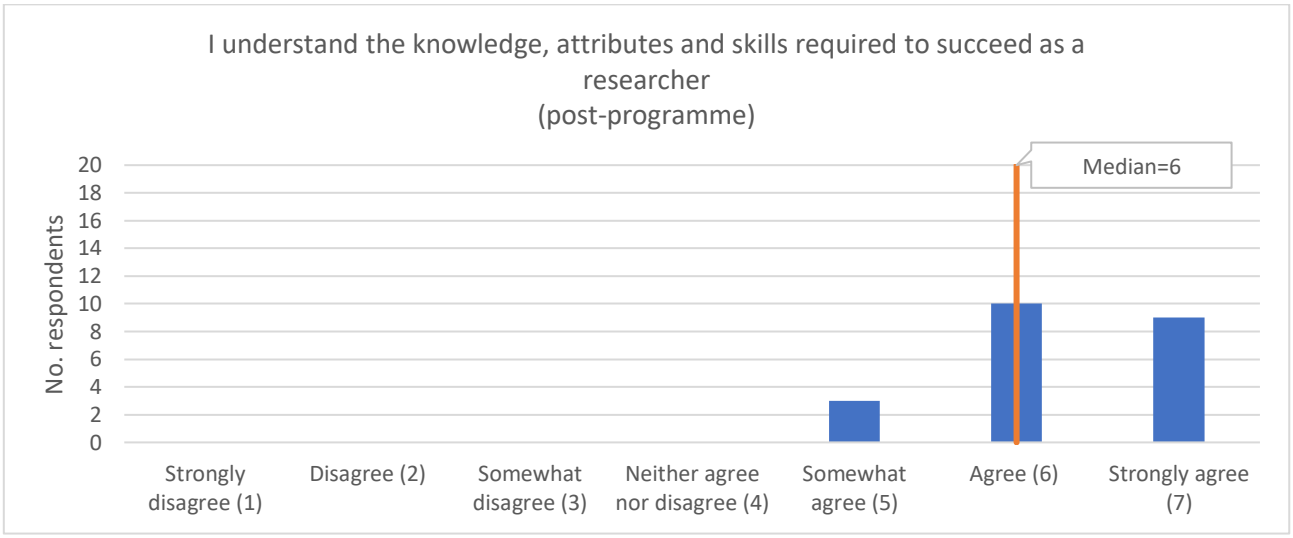


Figure 88

Participant descriptions of the key attributes of a researcher and research leader

In the pre-programme evaluation, participants were asked to describe the key attributes of a successful researcher and research leader. In this section, participants' responses to this question are mapped to the relevant RDF domain, sub-domain and descriptor and comparisons are made between the characteristics attributed to a successful researcher and those included in participants' descriptions of a successful research leader.

Mapping researcher and research leader attributes to RDF domains

As seen in Table 2, descriptions of a successful researcher primarily mapped to the 'personal effectiveness' domain, whereas attributes of a successful research leader aligned more with the domain of 'engagement, influence and impact'. Attributes related to 'engagement influence and impact' were not as frequently referenced in descriptions of a successful researcher, whereas 'knowledge and intellectual abilities' were more commonly cited. Few attributes aligned to the 'research governance and organisation' domain in descriptions of either a researcher or research leader.

Table 2. Number of researcher and research leader attributes described by participants aligned to the RDF domains

Researcher			Research Leader		
Domains	**N**	**%[24]**	**Domains**	**N**	**%[25]**
DOMAIN B: PERSONAL EFFECTIVENESS	*37*	43%	DOMAIN D: ENGAGEMENT, INFLUENCE AND IMPACT	41	43%
DOMAIN A: KNOWLEDGE AND INTELLECTUAL ABILITIES	*28*	33%	DOMAIN B: PERSONAL EFFECTIVENESS	37	39%
DOMAIN D: ENGAGEMENT, INFLUENCE AND IMPACT	*19*	22%	DOMAIN A: KNOWLEDGE AND INTELLECTUAL ABILITIES	12	13%
DOMAIN C: RESEARCH GOVERNANCE AND ORGANISATION	*2*	2%	DOMAIN C: RESEARCH GOVERNANCE AND ORGANISATION	6	6%

Mapping researcher and research leader attributes to RDF sub-domains

As seen in Table 3, most attributes in relation to becoming a **successful researcher** were aligned to the sub-domain of **personal qualities (B1)** and these appeared almost as frequently in descriptions of a research leader. Attributes aligned to **working with others (D1)** were the most commonly referenced in descriptions of a **research leader**, but these were less frequent in descriptions of a successful researcher.

[24] % of total number of references attributed to this domain
[25] As above.

Self-management (B2), Knowledge Base, (A1) and Communication and Dissemination (D2) were all commonly identified as important attributes to both **researchers and research leaders**.

Creativity (A3) and cognitive abilities (A2) came out much more strongly in descriptions of an **effective researcher**, whereas engagement and impact (D3) attributes were more frequently referenced in descriptions of a research leader.

Although only rarely cited, professional and career development (B3), research management (C2) and finance funding and resources (C3) were only cited in relation to being a successful research leader.

Table 3 Number of researcher and research leader attributes described by participants aligned to the RDF sub-domains

Researcher			Research Leader		
Sub-domains	N	%	**Sub-domains**	N	%
Personal Qualities (B1)	25	29%	**Working with others (D1)**	**27**	28%
Creativity (A3)	13	15%	**Personal Qualities (B1)**	**24**	25%
Self-Management (B2)	13	15%	**Self-Management (B2)**	**10**	10%
Working with others (D1)	10	12%	**Communication and Dissemination (D2)**	**10**	10%
Knowledge Base (A1)	9	10%	**Knowledge Base (A1)**	**8**	8%
Communication and Dissemination (D2)	8	9%	**Research Management (C2)**	**4**	4%
Cognitive Abilities (A2)	6	7%	**Engagement and Impact (D3)**	**4**	4%
Professional Conduct (C1)	1	1%	**Creativity (A3)**	**3**	3%
Engagement and Impact (D3)	1	1%	**Professional and Career Development (B3)**	**3**	3%
			Cognitive Abilities (A2)	**1**	1%
			Finance, Funding and Resources (C3)	**1**	1%
			Professional Conduct (C1)	1	1%

Mapping researcher and research leader attributes to RDF descriptors

Table 4 shows that although attributes relating to an '**inquiring mind'** were the most commonly used in describing an effective **researcher** (13%) (in terms of being 'open-minded,', 'inquisitive' and 'curious'), this descriptor didn't feature at all in the top descriptors of a research leader. Instead, **communication methods** ('communication skills' and being a 'good communicator') were the most frequent attributes described for a **research leader** (10%), which were less prominent in descriptions of a successful researcher (7%).

Integrity was the next most common descriptor aligned to attributes identified as important to a successful **researcher** (12%) (described in terms of 'openness and honesty, 'accuracy' and 'attention to detail'), whereas this appeared much less frequently in descriptions of a research leader (4%). **Enthusiasm** was amongst the second most frequent descriptors aligned to attributes of a successful research **leader** (8%), which included references to 'motivation' and 'passion'. This descriptor was highlighted a little less frequently in descriptions of a successful researcher (7%), which focused on 'passion'.

Attributes aligned to **'influence and leadership'** were prominent in descriptions of a successful **research leader** (in terms of 'leadership skills'), but were only referenced once in relation to a successful researcher. **'People management'** (primarily in terms of 'being supportive' and 'able to motivate others') and **'self-confidence'** were also referenced quite frequently in descriptions of a successful **research leader**, but did not appear in descriptions of a successful researcher.

The third most frequent descriptor aligned to **researcher** attributes was **'preparation and prioritisation'** (10%) (with reference to 'organisational skills' and 'being organised') and was also commonly identified in descriptions of a **research leader** (7%) (in terms of organisational skills and having a clear vision). **'Perseverance'** was the 4th most common descriptor identified in descriptions of researcher attributes (7%) (including references to 'determination', 'resilience' and 'drive'), and this was only marginally less prominent in descriptions of a research leader (4%). Collegiality (e.g., being 'friendly' and a 'good listener'), subject knowledge, and research methods were highlighted in similar frequencies in descriptions of both researchers and research leaders. 'Analysing' was mentioned in approximately 3% of the responses describing a successful researcher, but did not appear in descriptions of a successful research leader.

Innovation and mentoring appeared three times in descriptions of a research leader, but only once in descriptions of a researcher.

There were an additional 17 descriptors in the descriptions of researchers and research leaders, but each only had 1 or 2 references. Of these, CPD, income and funding generation, **networking**, policy, project planning and delivery, research strategy, supervision and teaching were only referenced in descriptions of a research leader. Communication media, ethics, information literacy and management, intellectual insight and problem solving were only identified in descriptions of successful researchers.

Table 4 Number of researcher and research leader attributes described by participants aligned to the RDF descriptors

Researcher				Researcher Leader			
Descriptor	**Sub-domain**	**N**	**%**	**Descriptor**	**Sub-domain**	**N**	**%**
Inquiring Mind	Creativity (A3)	11	13%	Communication methods	Communication and Dissemination (D2)	10	10%
Integrity	Personal Qualities (B1)	10	12%	Enthusiasm	Personal Qualities (B1)	8	8%
Preparation and prioritisation	Self-management (B2)	9	10%	Influence and leadership	Working with others (D1)	8	8%
Perseverance	Personal Qualities (B1)	6	7%	Preparation and prioritisation	Self-management (B2)	7	7%
Collegiality	Working with others (D1)	6	7%	People Management	Working with others (D1)	6	6%
Enthusiasm	Personal Qualities (B1)	6	7%	Self-confidence	Personal Qualities (B1)	5	5%
Communication methods	Communication and Dissemination (D2)	6	7%	Collegiality	Working with others (D1)	5	5%
Subject knowledge	Knowledge base (A1)	4	5%	Perseverance	Personal Qualities (B1)	4	4%
Research methods: practical application	Knowledge base (A1)	3	3%	Integrity	Personal Qualities (B1)	4	4%
Analysing	Cognitive Abilities (A2)	3	3%	Research methods: practical application	Knowledge Base (A1)	3	3%
				Subject knowledge	Knowledge Base (A1)	3	3%
				Innovation	Creativity (A3)	3	3%
				Mentoring	Working with others (D1)	3	3%

Changes in understanding of the knowledge, attributes and skills required to succeed as a research LEADER

Most respondents ‘somewhat disagreed’ that the residential had developed their understanding of the key attributes of a successful research leader (Fig. 89).

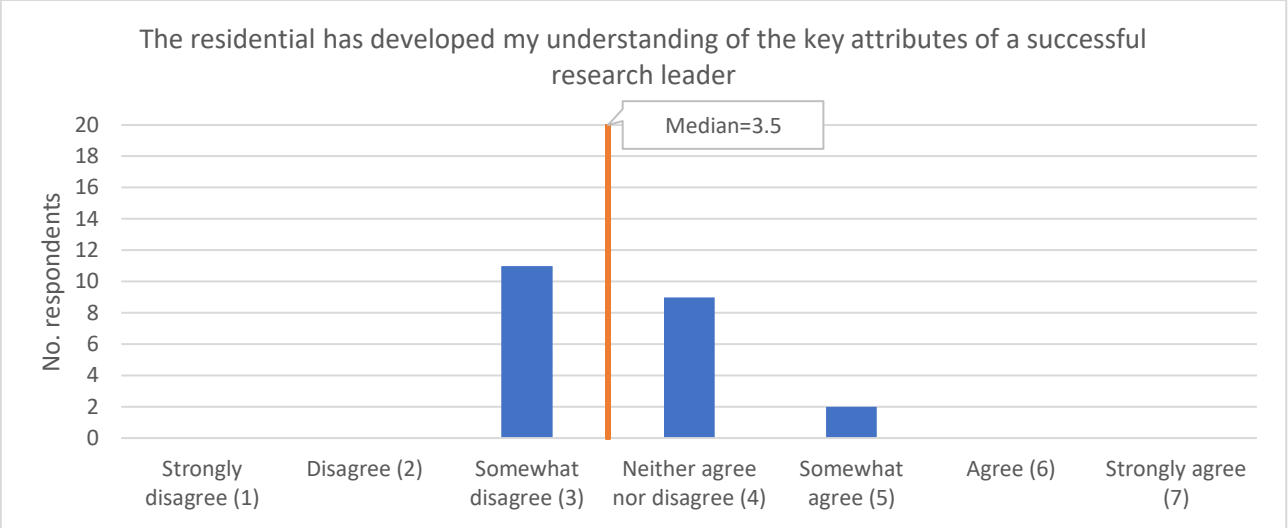


Figure 89

Respondents who commented on what ways that the residential had developed their understanding mainly reported a general improvement in their understanding of the "key qualities" needed in a research leader. One participant described how the course had "*broadened my understanding of what being a research leader really entails*" *. Another simply highlighted the "importance of leadership" and another described being a "positive influential leader". One respondent noted that their view of leadership had been "very narrow before" and another reflected that the insights into being a research leader was "the bit I gained most from". Two participants gave a more detailed response highlighting the distinction between leadership and management and identifying some specific attributes related to 'openness' as key to being a research leader:

> *"My understanding of the term leader has changed during the course. I previously used the terms leader & manager interchangeably when describing a work setting. I now see them as distinct and understand the importance of enthusiasm, motivation and vision as attributes of a leader"*

> *"The importance of being open minded to questions, a difference of opinion/criticism of your research and to see it as a learning opportunity. The importance of listening to your patients, colleagues, managers etc, to be able to understand what is important in terms of the care we provide which in turn supports research plans"*

Another participant, emphasised the importance of working with others in their new understanding of being a research leader:

> *"I feel it has helped me understand what is required to be a successful leader. More importantly about the importance of sharing of knowledge, and approaching people for help"**

In the mid-way evaluation, some respondents reflected on how their understanding of the key attributes of a successful research leader has changed since the residential. For some, this was about a broader appreciation of “leadership qualities” and a deepening understanding of how “personal attributes” such as “personality type, engagement styles” and “resilience” are important factors in research leadership:

> *“I feel the consideration of personal values and ideas has become more important”.*

Similarly, others reflected on a broadening definition of leadership to encompass personal attributes that support working with others:

> *“I guess before the residential I thought a research leader had to be someone who was extremely knowledgeable, powerful and had a strong voice. However, I now know that a successful research leader is someone who is passionate, driven, a good listener, effective communicator and someone who is reliable and trustworthy. Knowledge is important and so is creativity but there are other key attributes that lead to success”*

> *“I understand more about how research leaders need to prioritise research, encourage team to see the value in research and allow for staff to develop into competent researchers”.*

> *“More of a team approach rather than an individual working alone”*

> *“I have realised it's not just all about my research, but my responsibility to bring others along on my research journey with me! I am able to understand a leadership compared to managerial role”*

For this last participant, broader strategies for nurturing research leaders could now be understood in relation to individual ‘personal development:

> *“I can now see more clearly how my personal development links with a wider NIHR and NHS strategy to develop AHPs as research leaders”*

A couple of participants placed more of an emphasis on “knowledge and intellectual abilities” such as “experience and application of theory into practice” and “knowing your research question” in relation to the key attributes of being a research leader.

In the post-programme evaluation, 16/22 respondents described how their understanding of the key attributes of a successful research leader has changed since beginning the programme.

Many of the comments simply pointed to an increased understanding of these attributes, with one participant reflecting that they had been "unaware of certain elements of this prior to the course". A number of respondents highlighted how their improved understanding of the key attributes of a successful research leader, particularly the importance of "leadership skills", was helping them to structure their future development and progress their research career:

> *"The work with the facilitators and alongside my peers on this programme has deepened my appreciation of these attributes and how I can go about developing them in the future"*

> *"I have examples and strategies of how to improve engagement and develop my leadership skills. Just need to practice in real life!"*

> *"The course helped me understand more about myself and if I have the attributes to become a leader in research"**

Some respondents provided a more detailed understanding of what a research leader looks like, particularly in terms of working with and 'inspiring' others:

> *"Ability to set a clear vision and direction to inspire others is really important, before I thought researcher leads were only project managers"*

> *"I understand so much more about leadership in general and more about the responsibility of a research leader in terms of management of research and team from start to finish including publishing and disseminating research".*

> *"I had never studied anything about leadership before. Unlike many course members I am not in a leadership role at work. I am a band 6 therapist. Therefore, it's been really invaluable to me to learn about the different ways that leaders can motivate and inspire".*

Similarly, other participants highlighted the importance of social skills in a successful research leader including "networking", "building good relationships and "collaboration".

As in the mid-way evaluation there was recognition that the "*skills required are so much broader than just research skills*", with one participant highlighting an increased awareness of the "personal skills required" and another specifying a list of attributes spanning multiple domains of the RDF:

"Extensive knowledge of your research area, support and mentor aspiring researchers, continue to work on development of both softer skills and research knowledge, aligned with key stakeholders, critical question existing evidence practice and generate new research avenues. Innovate"

Changes in understanding of the knowledge, attributes and skills required to succeed as a researcher

Most participants were unsure whether the residential had developed their understanding of the key attributes of a successful researcher (see Fig. 90)

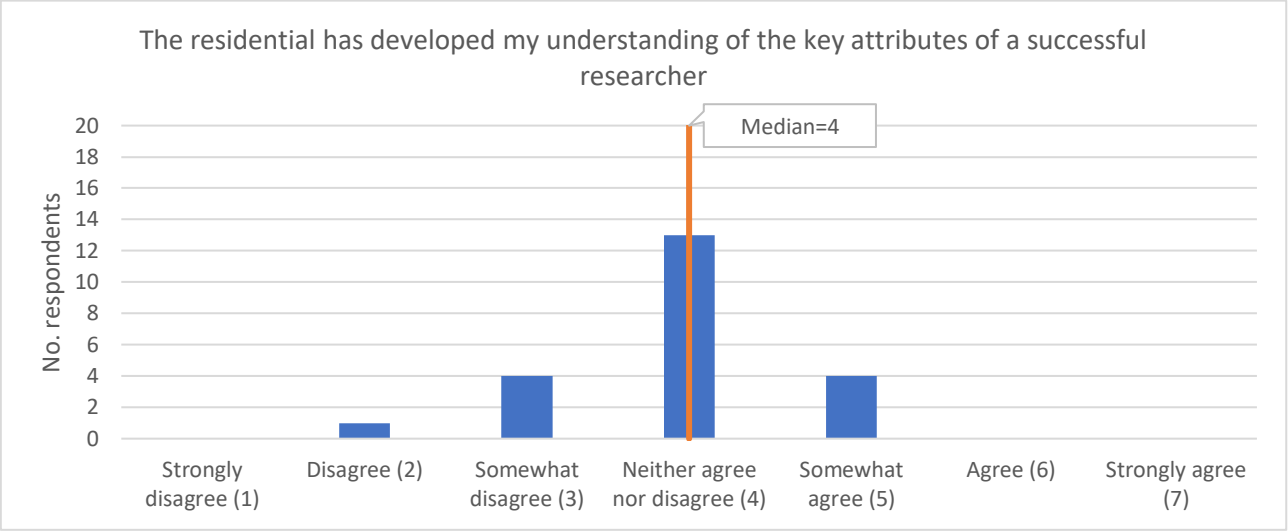


Figure 90

Those participants who did comment on ways in which the residential had shifted their understanding frequently referred to the importance of **networking,** making connections and collaboration**:**

"Importance of networking, this isn't something I thought about much beforehand"

"I now know that networking is vital to enable me to achieve my goals!! Also, by networking I will get to hear others journeys and hopefully obtain ideas to undertake mine"

"I understood its more about connections networking and curiosity than about being an academic"

"Being a successful researcher is much more than producing your own work in isolation".

"The importance of establishing a network of support and learning"

*"Someone who is passionate about research generally and not just their own. Individual's that fly the flag for research within their trust and are willing to be champions and network by whatever means they can"**

A couple of people also highlighted the importance of confidence in networking and the use of social media. Enthusiasm was also noted as a key attribute.

Two people commented that they had a better general understanding of the range of attributes of a successful researcher through exploring the RDF during the residential, with one participant describing these characteristics as more "*dynamic [and] open to lots of different personality types*" than previously thought. Similarly, another participant reflected that "*understanding my learning style and using reflection to build my action plan*" was an important part of becoming and being a researcher. The importance of creating a "structured action plan" was also highlighted by another respondent.

Some of the responses from the mid-way evaluation also placed emphasis on the importance of networking as a key attribute of a successful researcher, with one participant writing "*it's not who you know, but who knows you!*" and another describing the importance of making "connections".

The role of leadership and "leadership skills" also came through in the mid-way evaluation as a key attribute of being a successful researcher, with one participant underlining that these skills were important for "embed(ing) research into practice". Another described a "*better understanding of the bigger picture i.e., leadership and being influential*". Resilience was also linked to leadership as a key attribute of being a researcher by two participants:

> *"I now appreciate that researchers are required to be leaders and resilient. They must be able to work with a host of different people and be able to appreciate others personalities and work styles"*

In addition, self-awareness was highlighted by three of the respondents as a key attribute of being a successful researcher:

> "*I have gained a greater understanding of the role of self-awareness in research".*

Another described how:

> *"I now have a better understanding of the personal qualities required to be a successful researcher. This has enhanced since the residential now that I have attended workshops, networked with researchers and shadowed meetings as part of my placement"*

One respondent also highlighted creativity as a key attribute of a successful researcher.

In the post-programme reflections, a number of respondents generally reflected on having "a lot more knowledge" about the "personal and professional attributes" of being a researcher. Some participants articulated how their understanding of the key attributes of a researcher had shifted from a more individualised, academic perspective to one that embraced a wider set of skills, with an emphasis on **networking** and leadership, as well as personal qualities such as resilience and self-awareness.

> *"When I started this programme, I was thinking that the only way to do research was through a PhD, this course has also shown me the importance of networking and of leadership in this field"*

> *"It has changed profoundly. I thought research skills entailed critical analysis, knowledge of research methods etc. I hadn't considered skills of networking, leadership, resilience etc etc"*

> *"I think I felt that it was more an individual task rather than a team effort and now recognise the important of leadership, self-awareness and how to change"*

> *"I'm aware of the personal and professional attributes that are essential. Beforehand I thought it would only be academic"*

> *"I now [...] understand the key qualities of a good researcher in more detail. Prior to the programme I didn't really know what it took but now I know"*

> *"I think before the course I was focused on more traditional things such as research methods or stats however I have a much broader idea of what skills I need to continue to develop. I would never previously have thought about for using on developing skills such as networking etc"*

> *"Internal and mostly external networking is vital. Being a team player to ensure goals and objectives are met".*

Another participant described their understanding of a successful researcher as a "creative confident expert".

Identifying development priorities (Professional and career development, B3; Continuing professional development)

Overall, the evaluation reflected an increase in participant's understanding of how to identify and prioritise their research development needs, with a percentage increase in scores of 58%. The most common response shifted from 'neither agree nor disagree' prior to the start of the programme to 'agree' upon completion (see Fig. 91).

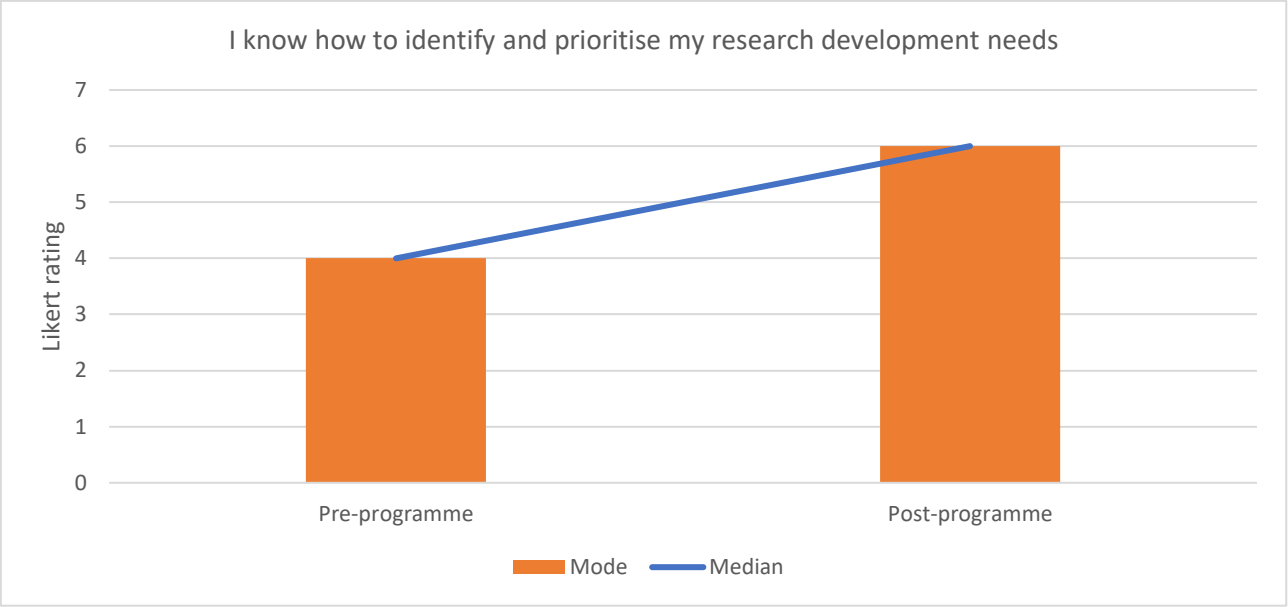


Figure 91

Frequency distributions of responses to this questionnaire item in the pre-programme evaluation show that most participants 'somewhat disagreed' with this item, with the median of 'somewhat disagree-neither agree nor disagree' reflecting the spread of responses (see Fig. 92). By mid-way through the ECRDP, 'somewhat agree' was the most frequent response (see Fig. 93). At the end of the programme, all respondents agreed (somewhat agree-strongly agree) that they knew how to identify and prioritise their research development needs (see Fig, 94).

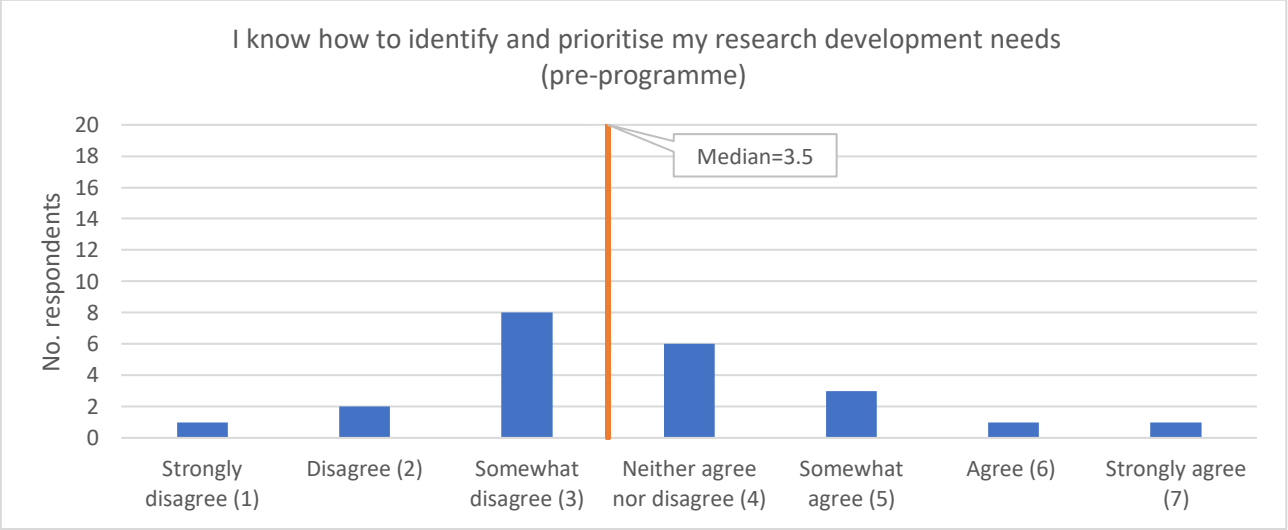


Figure 92

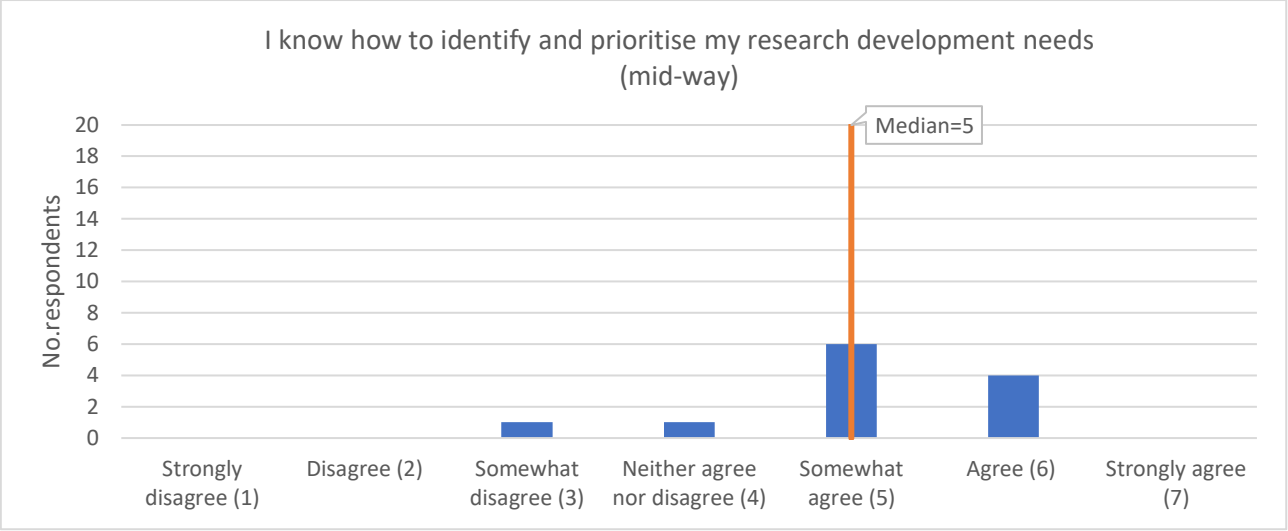


Figure 93

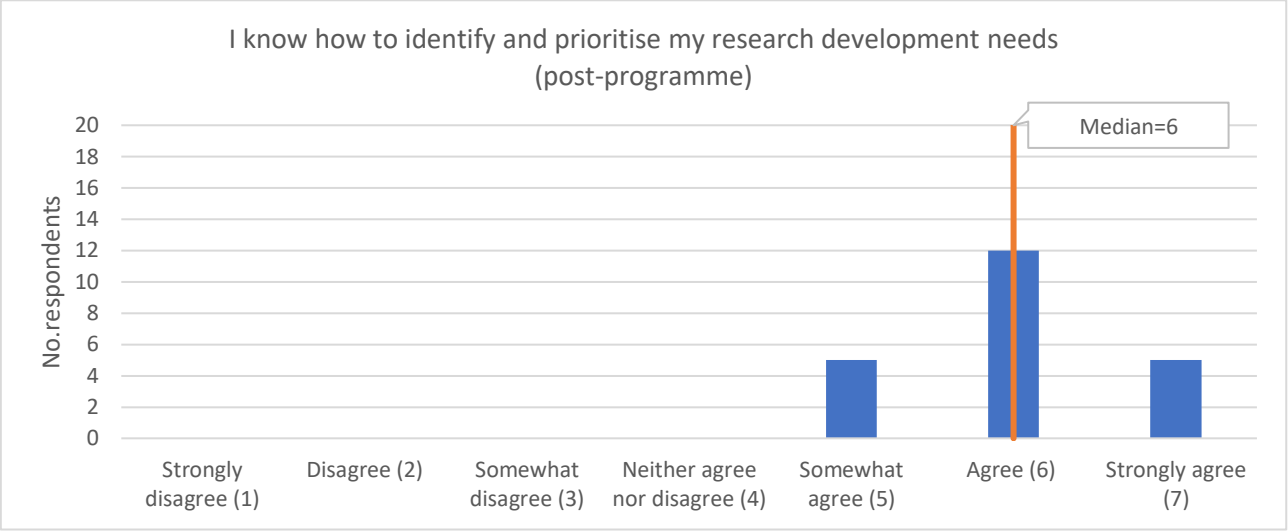


Figure 94

There was a slightly smaller increase of 49% in response to whether participants actively worked on identifying and prioritising their research development needs', however the most common response still shifted from 'somewhat disagree' to 'agree' (see Fig. 95).

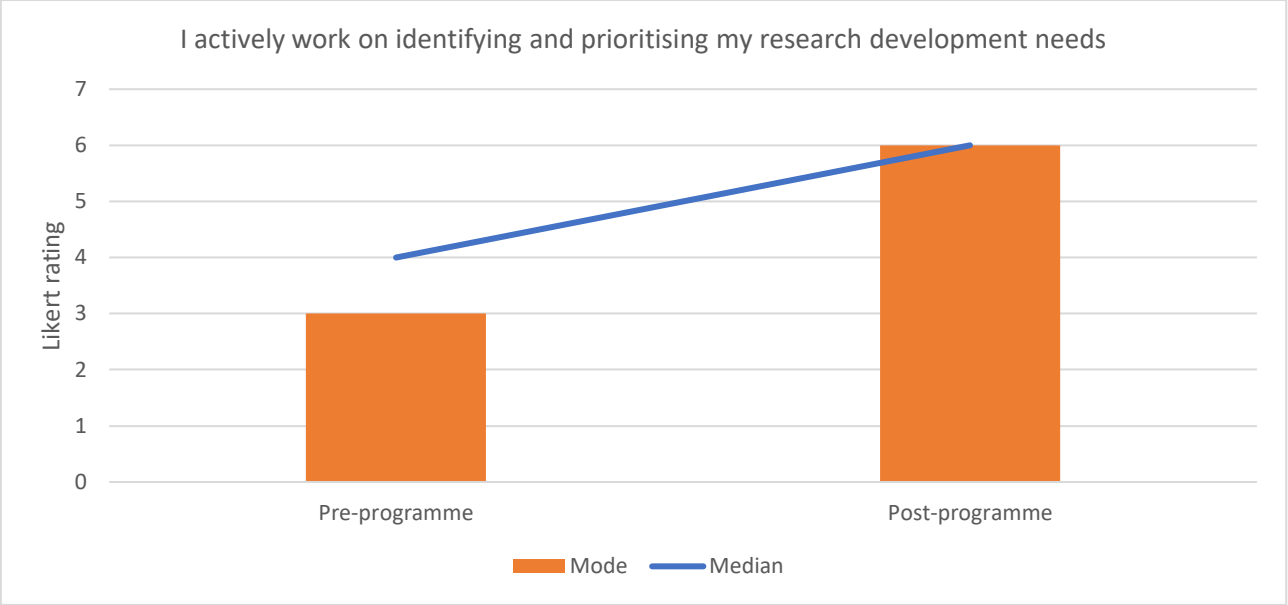


Figure 95

Prior to the programme, there was quite a wide spread of responses in relation to this questionnaire item, reflected in the median 'neither agree nor disagree' (see Fig. 96). The median shifted to 'somewhat agree-agree' by mid-way through the course (see Fig. 97) and by completion of the programme, all respondents agreed (somewhat agree-strongly agree) that they actively work on identifying and prioritising their research development needs, with the exception of one participant (see Fig. 98).

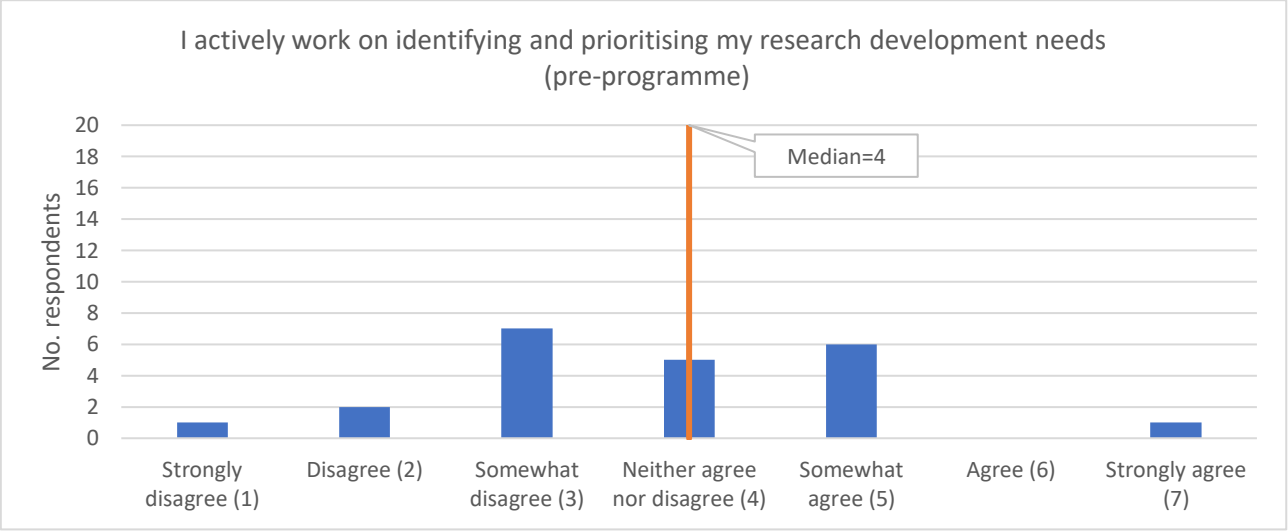


Figure 96

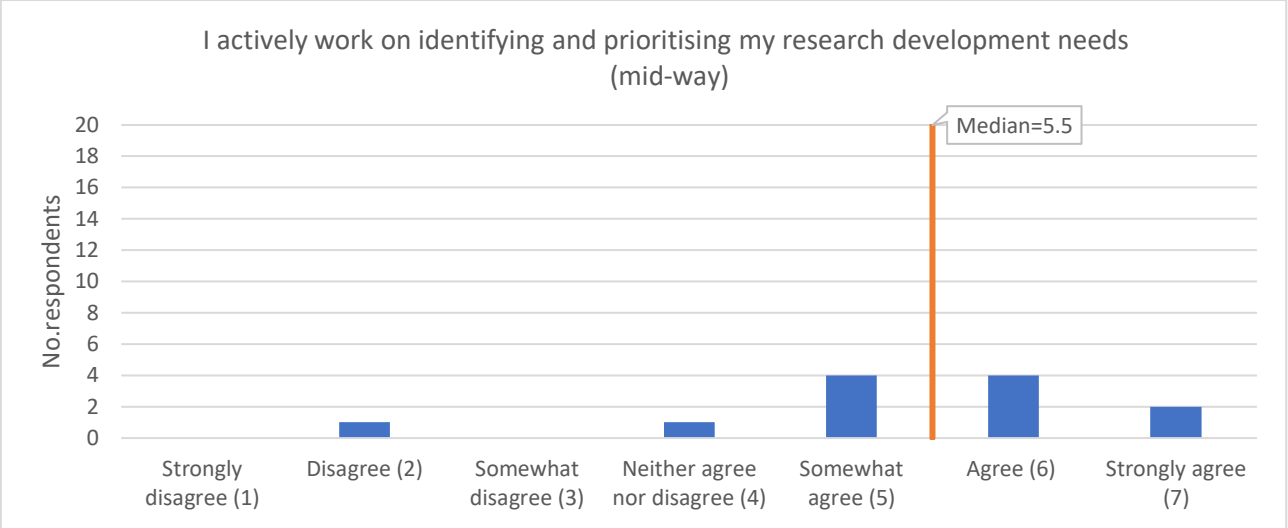


Figure 97

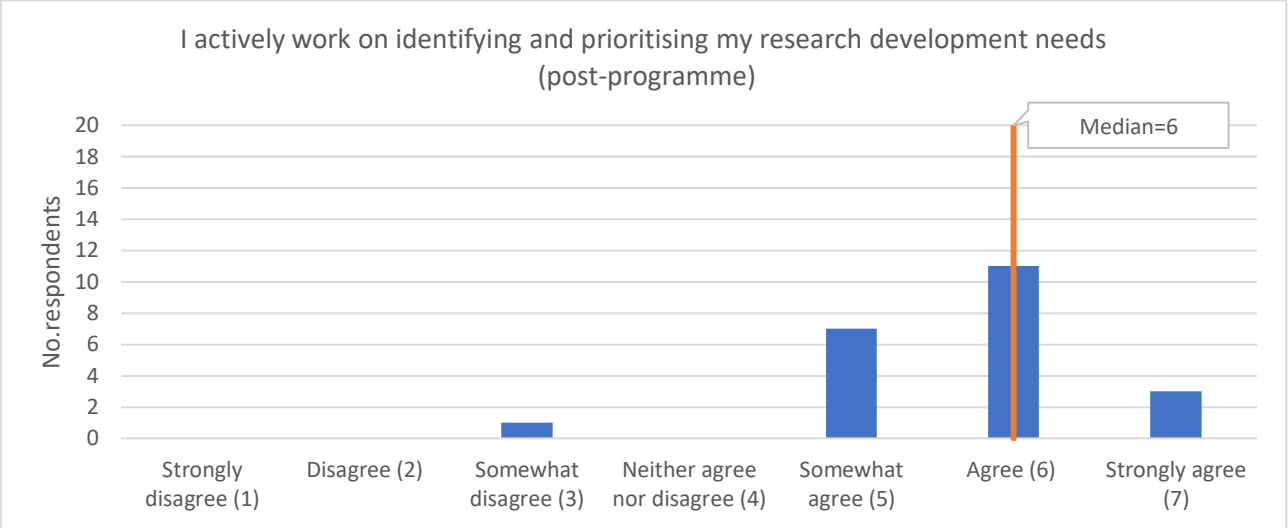


Figure 98

Participants' agreement with the statement describing having people to talk to about their researcher development needs showed an increase of 41%, with a change in median from 'neither agree nor disagree' to 'agree' (see Fig. 99).

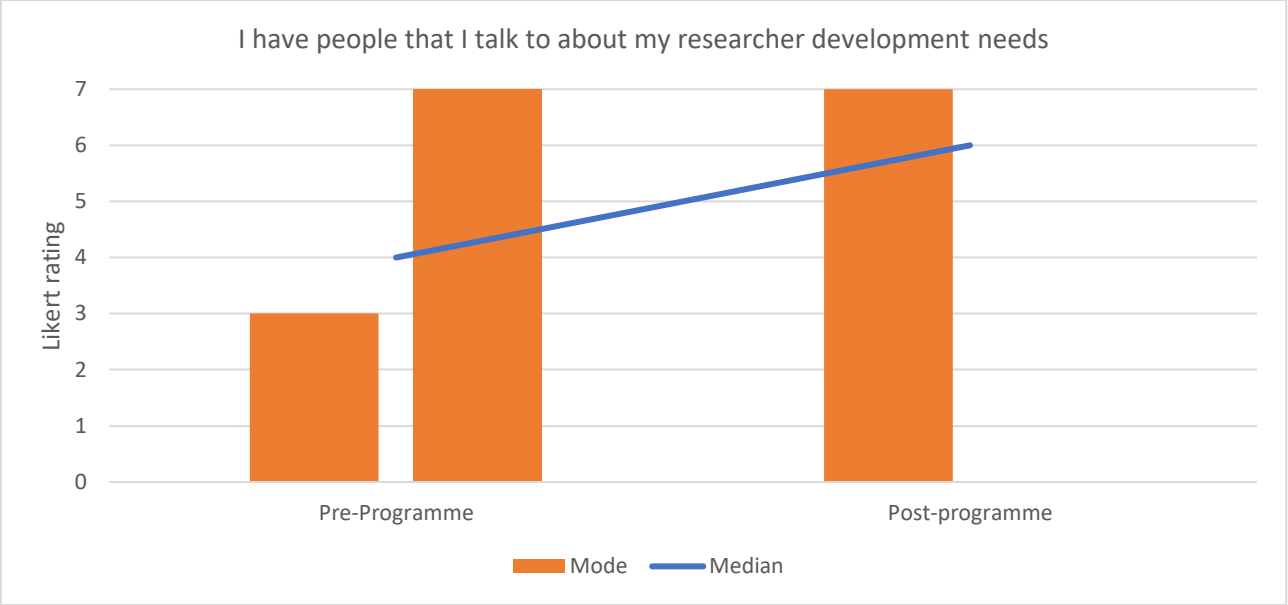


Figure 99

As reflected in the median of 'neither agree nor disagree-somewhat agree', there was a wide distribution of respondents in relation to this questionnaire item in the pre-programme evaluation, with a slight skew towards agreement with the statement (see Fig. 100). Mid-way through the ECRDP, there was a shift in the median to agree-strongly agree (see Fig. 101) and by the end of the programme all respondents agreed (somewhat agree-strongly agree) that they have people to talk to about their researcher development needs (see Fig. 102).

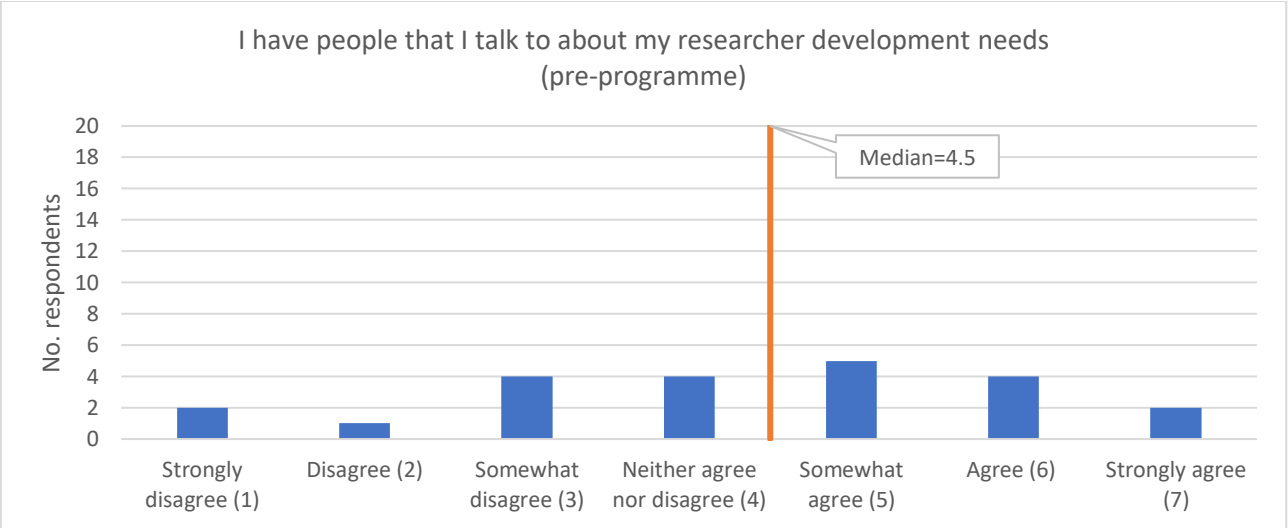


Figure 100

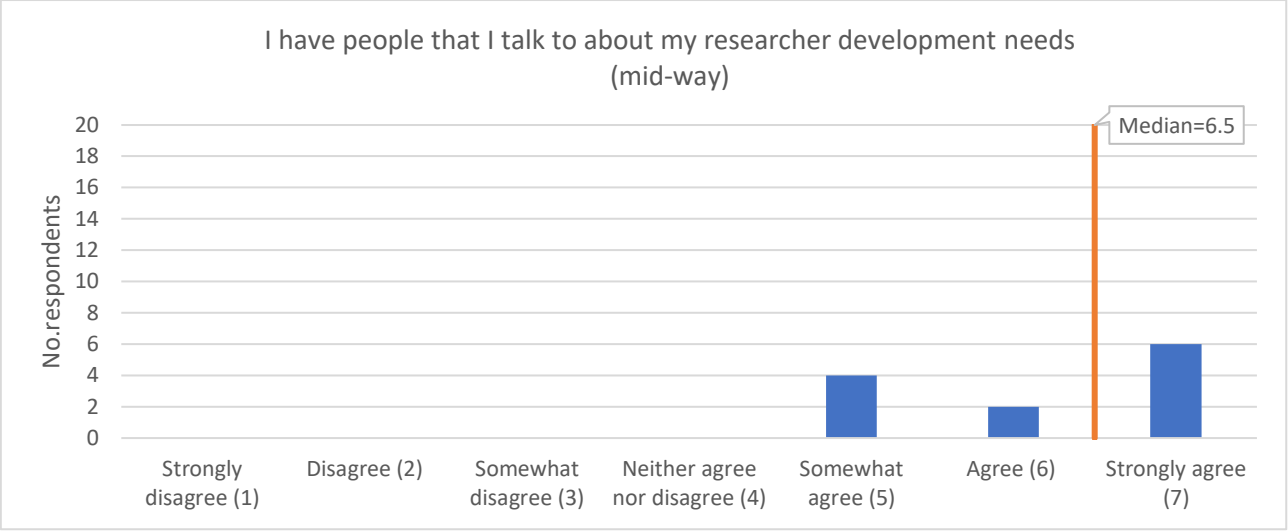


Figure 101

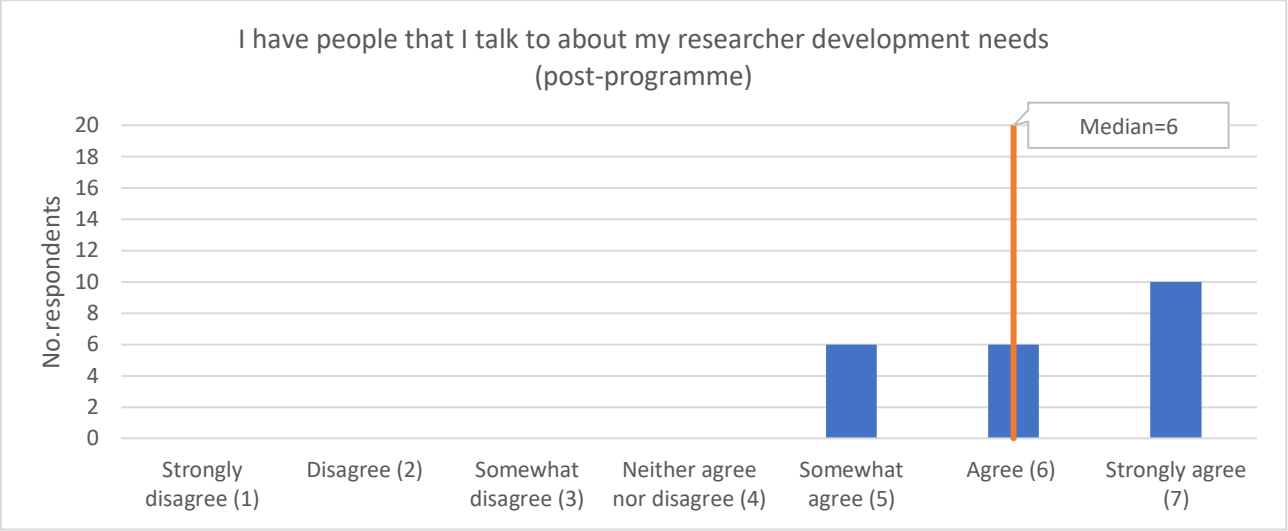


Figure 102

These results suggest that following completion of the programme, participants feel more certain of their abilities to identify and prioritise their research development needs and that they have people to talk to about their CPD in line with the documented aims of the programme. In addition, the change in participants' understanding of the knowledge, attributes and skills required to succeed as a research LEADER provides evidence to support an increased understanding of the factors/dimensions that create and enable leadership in research.

Participant descriptions of their development priorities

During the pre-programme and post-programme evaluations, participants were asked to identify their development priorities, which were then mapped to the relevant RDF domain, sub-domain and descriptor during data analysis. This section presents a comparison between the development priorities identified prior to and following completion of the course.

Mapping development priorities to RDF domains

Both pre- and post-programme evaluations showed that the majority of development priorities fell within the **'personal effectiveness'** domain, with a slight increase in the proportion of priorities aligned to this domain in the post-programme evaluation (see Table 5). The number of references to development priorities in relation to the **'knowledge and intellectual abilities**' and 'engagement, influence and impact' domain remained more of less the same. Development priorities mapped to the 'research governance and organisation' domain were the least common both prior to and following completion of the programme, with the proportion of comments aligned to this domain falling from 17% to 6%.

Table 5 Number of development priorities described by participants aligned to the RDF domains

Pre-programme development priorities			Post-programme development priorities		
Domain	**N**	**%[26]**	**Domain**	**N**	**%[27]**
DOMAIN B: PERSONAL EFFECTIVENESS	20	29%	DOMAIN B: PERSONAL EFFECTIVENESS	24	37%
DOMAIN D: ENGAGEMENT, INFLUENCE AND IMPACT	18	26%	DOMAIN A: KNOWLEDGE AND INTELLECTUAL ABILITIES	19	29%
DOMAIN A: KNOWLEDGE AND INTELLECTUAL ABILITIES	17	24%	DOMAIN D: ENGAGEMENT, INFLUENCE AND IMPACT	18	28%
DOMAIN C: RESEARCH GOVERNANCE AND ORGANISATION	12	17%	DOMAIN C: RESEARCH GOVERNANCE AND ORGANISATION	4	6%

Mapping development priorities to RDF sub-domains

As shown in Table 6, the majority of development priorities described prior to the programme fell within the '**knowledge base'** (A1) sub-domain and **professional and career development** (B3) (20%). Post-programme, most of the development priorities fell into the 'professional and career development' and the proportion of references to this area increased to 31%. The number of developmental priorities aligned to the 'knowledge base' sub-domain remained the same.

'**Communication and dissemination'** was the third most cited developmental area in the post-programme evaluation at 14%, which was a significant increase from 3% of the references in the pre-programme responses. The importance of development priorities in relation to **cognitive abilities** also increased from 3% of the comments in the pre-programme evaluation to 8% in the post-programme responses.

Developmental priorities in relation to engagement and impact remained the same with a slight decline in references to development in relation to 'personal qualities' There was a notable decline in the proportion of comments relating to 'working with others' (from 16% to 6%), research management, and finance, funding and resources (both falling from 9% to 3 %).

[26] % of total number of references
[27] As above.

Although self-management and professional conduct appeared at least once in the pre-programme comments, these were not identified in the post-programme responses.

Table 6 Number of development priorities described by participants aligned to the RDF sub-domains

Pre-programme development priorities			Post-programme development priorities		
Sub-domains	N	%	Sub-domains	N	%
Knowledge Base (A1)	14	20%	Professional & Career Development (B3)	20	31%
Professional & Career Development (B3)	14	20%	Knowledge Base (A1)	14	22%
Working with others (D1)	11	16%	Communication & Dissemination (D2)	9	14%
Research Management (C2)	6	9%	Cognitive Abilities (A2)	5	8%
Personal Qualities (B1)	6	9%	Engagement and Impact (D3)	5	8%
Finance, Funding and Resources (C3)	6	9%	Personal Qualities (B1)	4	6%
Engagement and Impact (D3)	5	7%	Working with others (D1)	4	6%
Cognitive Abilities (A2)	2	3%	Research Management (C2)	2	3%
Self-Management (B2)	2	3%	Finance, Funding and Resources (C3)	2	3%
Communication & Dissemination (D2)	2	3%	Creativity (A3)	0	0%
Creativity (A3)	1	1%	Self-Management (B2)	0	0%
Professional Conduct (C1)	1	1%	Professional Conduct (C1)	0	0%

Mapping development priorities to RDF descriptors

As shown in Table 7, '**networking**' was the most frequently cited developmental priority area both before and after the programme, although the number of references increased slightly in the post-programme evaluation. There was also a slight shift in how people talked about their development priorities in relation to networking, with pre-programme comments describing people's ambitions to understand the wider research networks and institutions to post-programme priorities more focused on strengthening and actively developing their networks.

Development priorities relating to '**research methods: theoretical knowledge**' were commonly cited in both the pre- and post-programme evaluations.

A notable change in overall development priorities over the course of the programme is the disappearance of any comments relating to **influence and leadership** in the post-programme evaluation. In the pre-programme evaluation, this was the most cited areas of development alongside theoretical knowledge of research methods and networking. Descriptions of development in this area included references to gaining

a greater understanding of the skills and attributes needed to lead research, how to influence people to support research ideas and being able to "lead my own research".

Instead, **career management** became the third most refenced developmental area in the post-programme evaluation, whereas no priorities relating to this domain were cited in the pre-programme evaluation. The post-programme development priorities related to 'career management' included **the possibility of starting on an associate PI programme, making an MRes application, applying for and completing an internship, taking up a PI and research role and applying for PCAF funding.**

Communication methods was the fourth most cited development priority following the programme compared to only 1 reference to this area in the pre-programme comments. The post-programme priorities in this area included learning more about "research dissemination", submitting an abstract for a conference and improving abilities to articulate ideas more confidently.

Comments relating to '**problem solving' and 'publication'** also appear more frequently in the post-programme comments, the former focusing on developing research questions and research project ideas and the latter on building publications.

Developmental priorities related to the practical application of research methods remained at a similar level. During the pre-programme evaluation, priorities related to this area focused on developing understanding of implementing research and developing practical research skills. In the post-programme evaluation, the comments were primarily about getting more involved in research.

There was a very slight decline in references to development priorities aligned to 'self-confidence'. However, comments in relation to this area were more specific in the post-programme evaluation, for example, gaining confidence in starting a project or motivating others whereas before the programme the comments tended to be more generically about 'building confidence'.

Project planning and delivery also show a small decline in frequency as does income funding and generation. Developmental priorities in relation to project planning and delivery were about increasing knowledge and understanding in this area, for example developing research governance skills and understanding research processes within the NHS. One participant after the programme described their plans for achieving this objective:

> *"To understand the process of carrying out a research project from start to finish. I am doing this by a collaboration with a researcher on a small project. She will meet with me regularly to keep her to timings and for me to understand the research process better"*

Developmental priorities mapped to 'society and culture' and 'CPD' also decreased. With reference to society and culture, the pre-programme responses included understanding more about the wider impact of research, as well as aiming to contribute towards service development and improvements. Two participants articulated very specific ambitions in this area:

"To learn how to provide replicable and cost-effective interventions for others in dementia care by research"

"Improving community services for older people, providing effective and financially viable services and ensuring patients have excellent service that impacts positively on quality of life"

Priorities aligned to the '**responsiveness to opportunities'** descriptor in the pre-programme evaluation disappeared in the post-programme evaluation. Pre-programme comments in relation to this included understanding the opportunities available as well as "maximising" the available opportunities. This finding may reflect that participants' experience during the ECRDP improved participants' understanding of and engagement with other development opportunities (see above).

Although only having one reference each in the pre-programme comments, 'analysing', 'preparation and prioritisation' ("knowledge of priorities for NHS research"), time management', ethics, mentoring ("better understanding of how to implement research and to support others to do this") and policy ("an understanding of regional and local research policies, principles and priorities") all disappear from the post-programme development priorities.

In comparison, developmental priorities relating to public engagement appears for the first time in the post-programme comments, but is only cited twice referring to PPI/PPIE. The remainder of the descriptors in the post-programme responses are only referred to once, with 'evaluating' and 'collaboration' both appearing for the first time.

Table 7 Number of development priorities described by participants aligned to the RDF descriptor

Pre-programme development priorities				Post-programme development priorities			
Descriptor	**Sub-domain**	**N**	**%**	**Descriptor**	**Sub-domain**	**N**	**%**
Networking	Professional and Career Development (B3)	8	11%	Networking	Professional and Career Development (B3)	13	20%
Research methods: theoretical knowledge	Knowledge Base (A1)	7	10%	Research methods: theoretical knowledge	Knowledge Base (A1)	8	12%
Influence and leadership	Working with others (D1)	7	10%	Career management	Professional and Career Development (B3)	6	9%
Project Planning and Delivery	Research Management (C2)	6	9%	Communication methods	Communication and Dissemination (D2)	5	8%
Self-confidence	Personal Qualities (B1)	6	9%	Research methods: practical application	Knowledge Base (A1)	4	6%
Income and funding generation	Finance, Funding and Resources (C3)	6	9%	Problem Solving	Cognitive Abilities (A2)	4	6%
Research methods: practical application	Knowledge Base (A1)	4	6%	Self-confidence	Personal Qualities (B1)	4	6%
Society and culture	Engagement and Impact (D3)	4	6%	Publication	Communication and Dissemination (D2)	4	6%
Continuing professional development	Professional and Career Development (B3)	3	4%	Project Planning and Delivery	Research Management (C2)	2	3%
Responsiveness to opportunities	Professional and Career Development (B3)	3	4%	Income and funding generation	Finance, Funding and Resources (C3)	2	3%
Information seeking	Knowledge Base (A1)	2	3%	Public engagement	Engagement and Impact (D3)	2	3%
People Management	Working with others (D1)	2	3%	People Management	Working with others (D1)	2	3%
Problem Solving	Cognitive Abilities (A2)	2	3%	Society and culture	Engagement and Impact (D3)	2	3%
Subject knowledge	Knowledge Base (A1)	1	1%	Subject knowledge	Knowledge Base (A1)	1	2%
Analysing	Cognitive Abilities (A2)	1	1%	Information seeking	Knowledge Base (A1)	1	2%
Preparation and prioritisation	Self-Management (B2)	1	1%	Evaluating	Cognitive Abilities (A2)	1	2%

Time management	Self-Management (B2)	1	1%	Continuing professional development	Professional and Career Development (B3)	1	2%
Ethics	Professional Conduct (C1)	1	1%	Collaboration	Working with others (D1)	1	2%
Team working	Working with others (D1)	1	1%	Team working	Working with others (D1)	1	2%
Mentoring	Working with others (D1)	1	1%				
Communication methods	Communication and Dissemination (D2)	1	1%				
Publication	Communication and Dissemination (D2)	1	1%				
Policy	Engagement and Impact (D3)	1	1%				

Changing development priorities

Most participants responded 'somewhat disagree' or 'neither agree or disagree' to whether their development priorities had changed over the residential (see Fig. 103), with a number of respondents reflecting that it was too early to comment on this, although one participant wrote that it had allowed them to "re-evaluate" and reorder priorities in terms of their research project.

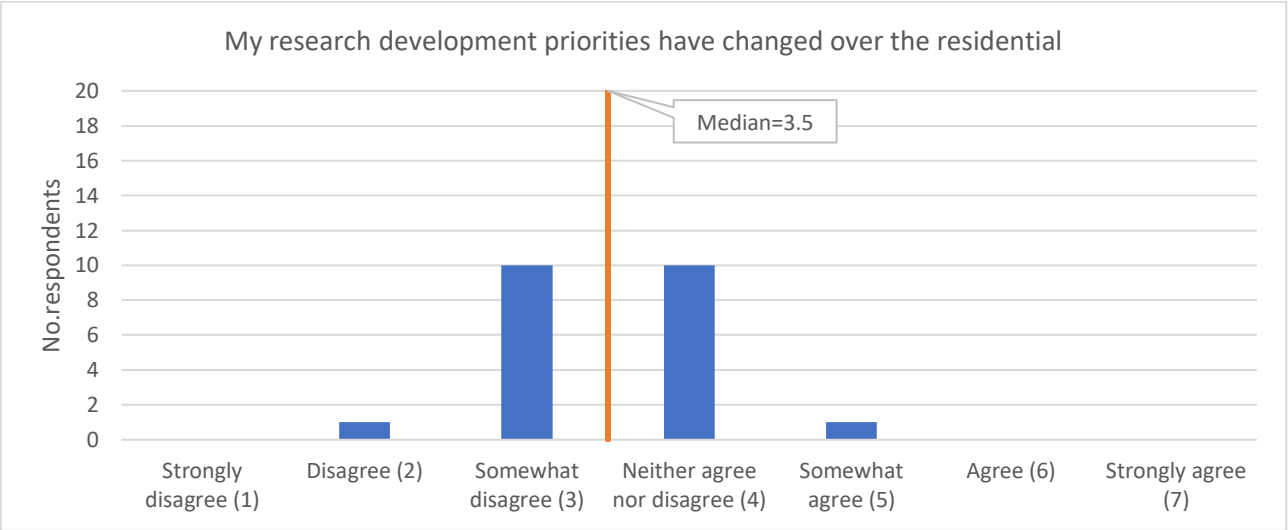


Figure 103

By the mid-way and post-programme evaluations, most respondents 'agreed' that their research development priorities had changed since the residential, with only one participant disagreeing with this questionnaire item (see Fig. 104 and Fig. 105).

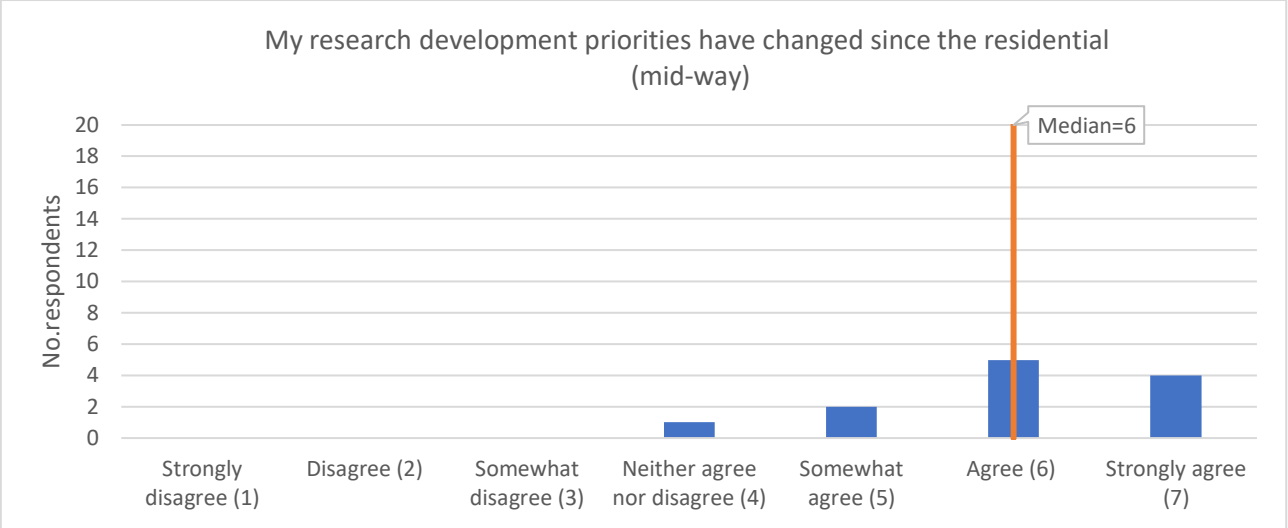


Figure 104

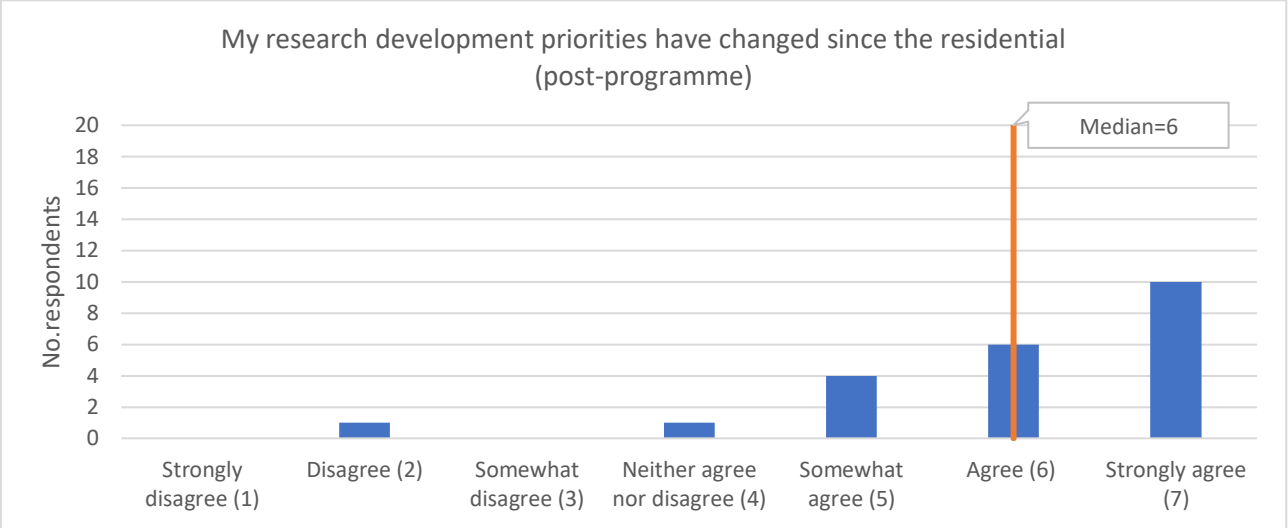


Figure 105

At the mid-way evaluation, comments broadly reflected a greater awareness of their development needs and the attributes needed to be an effective researcher/leader (see above). Participants were using this knowledge to create a development plan with a clearer vision for a "potential pathway" to their future career, with a focus on the next steps for applying to **internships, PhDs, fellowships and post-doctoral programmes:**

> *"I felt that this would probably be a standalone course, but now I want to pursue it further with hopefully leading to a PhD in the future"*

> *"I am now using the Vitae RDF. I am more aware of the wider knowledge and skills required to be a successful researcher […] I have a clearer view of my longer-term development as a clinical academic - prior to this programme I would never have considered life beyond a PhD - now I understand where the NIHR ICA programmes can take me post doc and how this would link with my ongoing development as a clinical academic. I can see more clearly how my research question and clinical roles intertwine"*

A focus on developing a research question was also reflected in another participant's comments,

Lastly for one participant, they reflected that they would need to take their research development at a *"slower pace [..] due to other commitments"*.

Research career aspirations (Professional and career development, B3; Continuing professional development)

Prior to the programme, a number of participants described their research career aspirations in terms of specific qualifications and/or training programmes, such as a research masters, the NIHR pre-doctoral or ARC scheme, with a number of people pointing to a PhD. One participant wanted to have "*the qualifications to progress when opportunities present themselves*".

Others highlighted specific roles they were aiming towards, such as a "lead research radiographer", a "clinical academic"/"clinical researcher" or a PI to "lead on my own research ideas". One participant simply described their ambition to become an "autonomous researcher" and another described a long-term ambition to "*work closely with NW leads and R&D projects across trusts*". Others were aspiring more generally to incorporate research into their existing or future clinical roles, and one participant who was new to research simply wanted to get more involved.

Some of the comments highlighted the overall contribution people wanted to make to research that improved the patient health outcomes and quality of life through informing best practice or conducting research in a particular area, such as type 1 diabetes. For some, it was about promoting, supporting and encouraging others to engage in research. Others talked about building their knowledge, skills, confidence and experience with the hopes of leading to a role as a researcher and/or research leader. One participant described wanting to be involved more in academic research, but was "*unsure of more specific aspirations/what that looks like*".

Following completion of the programme, 9/22 respondents described their research career aspirations in terms of becoming a "**clinical academic**". One participant articulated an ambition to become a CI or lead an R&D department and another described becoming a Nurse PI. The role of clinical academic for one participant was about "*staying in practice and increasing research capacity within my trust*". Another participant described wanting to become a "*clinical researcher conducting research to meet the needs of the population of east Lancashire with spinal pain*".

6 participants pointed to a PhD and others suggested alternative qualifications such as an NIHR ICA Fellowship, postgrad/MRes and PCAF.

Some comments variously described more general ambitions to encourage other clinicians to get more involved in research, 'lead' or be involved with research. Examples ranged from developing their own research project and publishing findings to continuing to develop their knowledge and skills, network and take advantage of any opportunities.

One respondent wrote, however, that they had "no idea!".

Personal Qualities (B1)

Although 'personal qualities' (B1) showed the lowest overall percentage increase (73%) across all the RDF sub-domains reflecting high pre-programme baseline scores in the RDF self-assessment, this sub-domain was a key focus of the programme and a number of pre- and post-programme evaluation measures were designed to explore this area in more detail.

Confidence in leading and conducting research (Personal Qualities, B1; Self-confidence)

The largest percentage increase in the evaluation measures aligned to this sub-domain was the 115% increase in scores related to participants' confidence in leading research. This change reflects a shift from 'strongly disagree' as the most common response to 'neither agree nor disagree in the post-programme evaluation' (see Fig. 106)

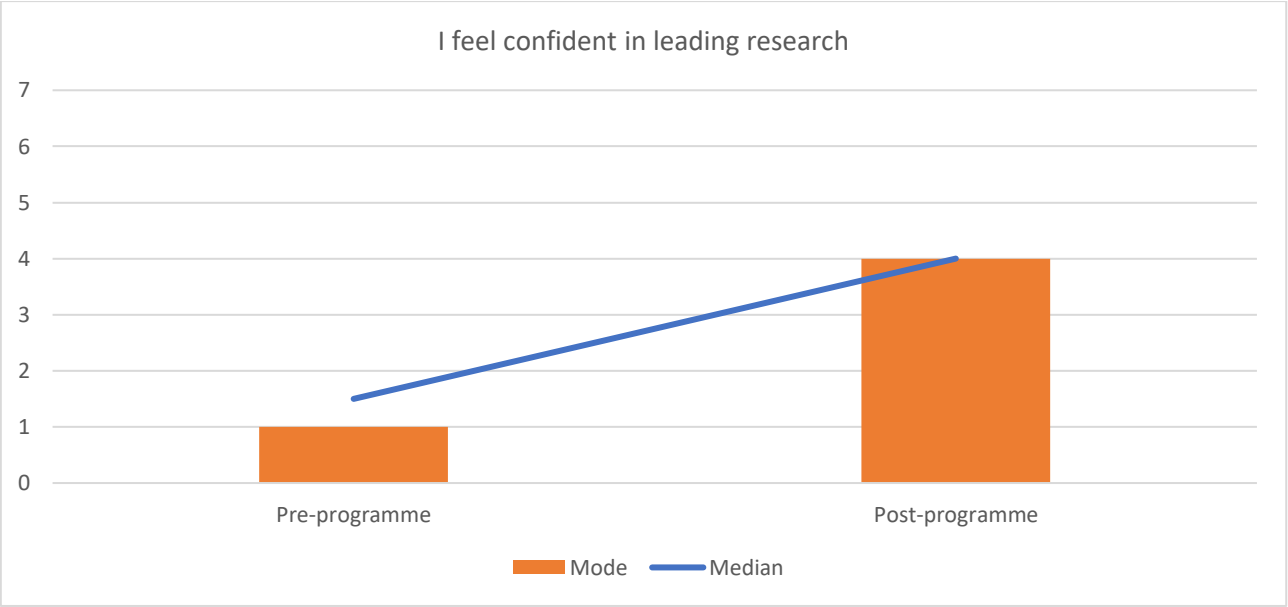


Figure 106

None of the respondents agreed (somewhat agree-strongly agree) that they had confidence in leading research prior to the programme, with a median of strongly disagree-disagree) (see Fig. 107). Mid way through the evaluation, a couple of respondents now agreed (somewhat agree/agree) that they had confidence in leading research, and there was a shift in the median to 'neither agree nor disagree', with this being the most common response (see Fig. 108). The median and mode remained at 'neither agree nor disagree' following the programme, with 8 respondents agreeing (somewhat agree-agree) that they felt confident in leading research and one noting that they now felt *"more equipped with the right tools to lead in research"* (see Fig. 109). 'Neither agree nor disagree' may partially reflect few opportunities to lead research in their clinical jobs, with only a few respondents identifying this as part of their current role (see Fig. 110). Given that some respondents also disagreed (strongly disagree-somewhat disagree) with this statement, many participants are likely to need further support in this area.

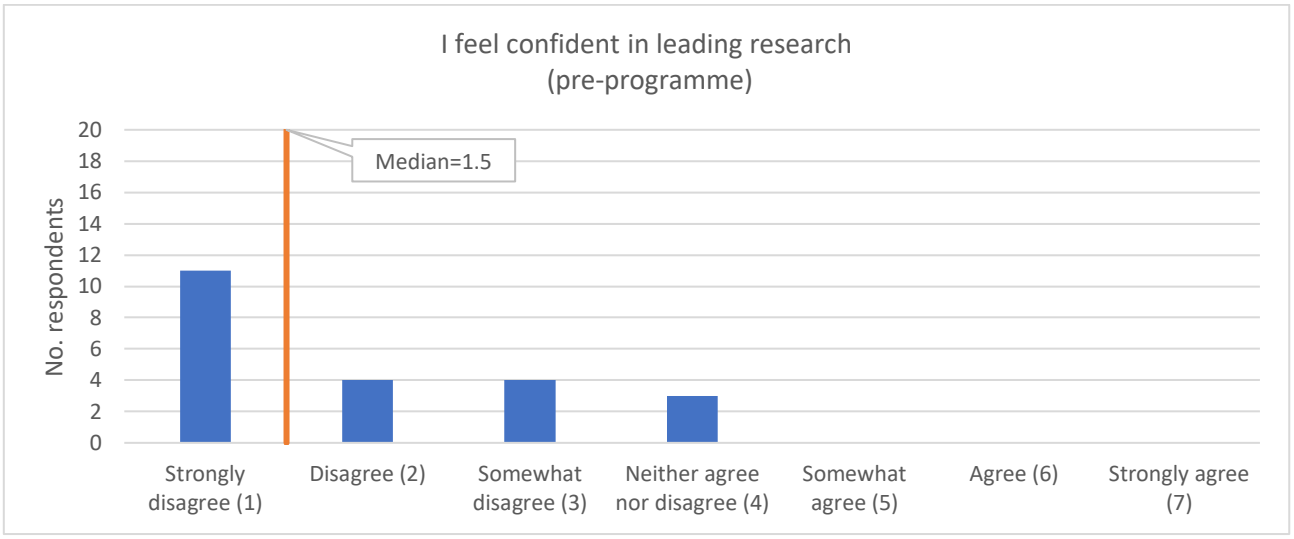


Figure 107

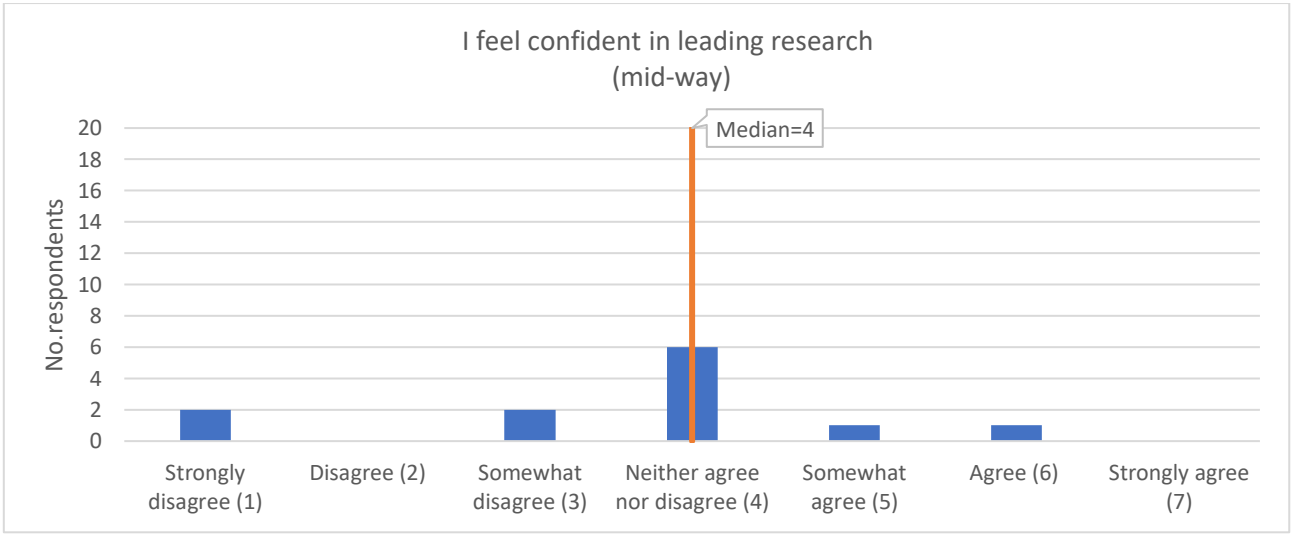


Figure 108

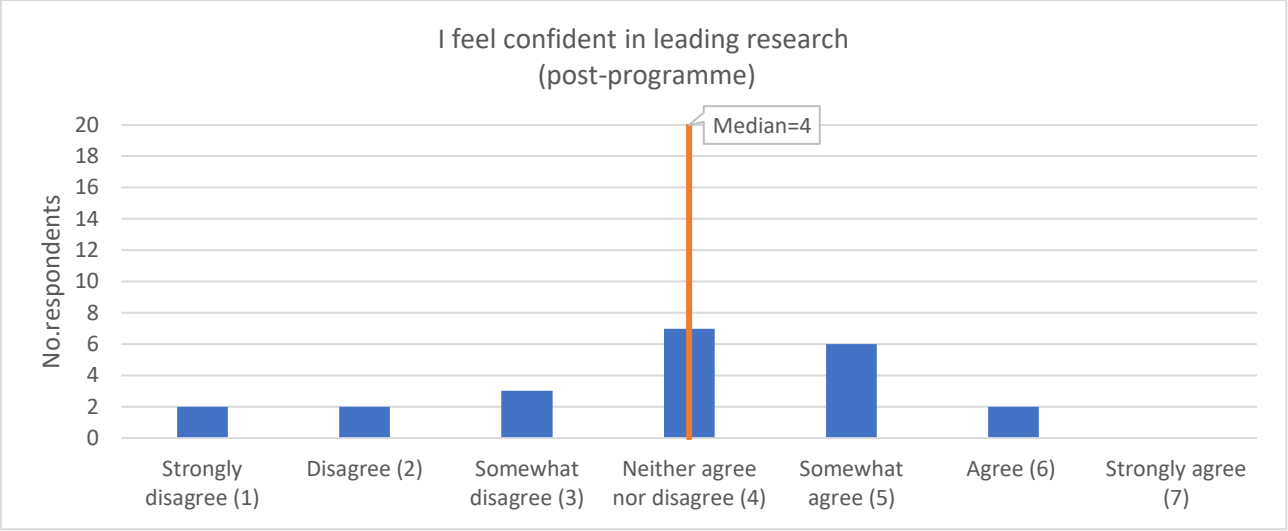


Figure 109

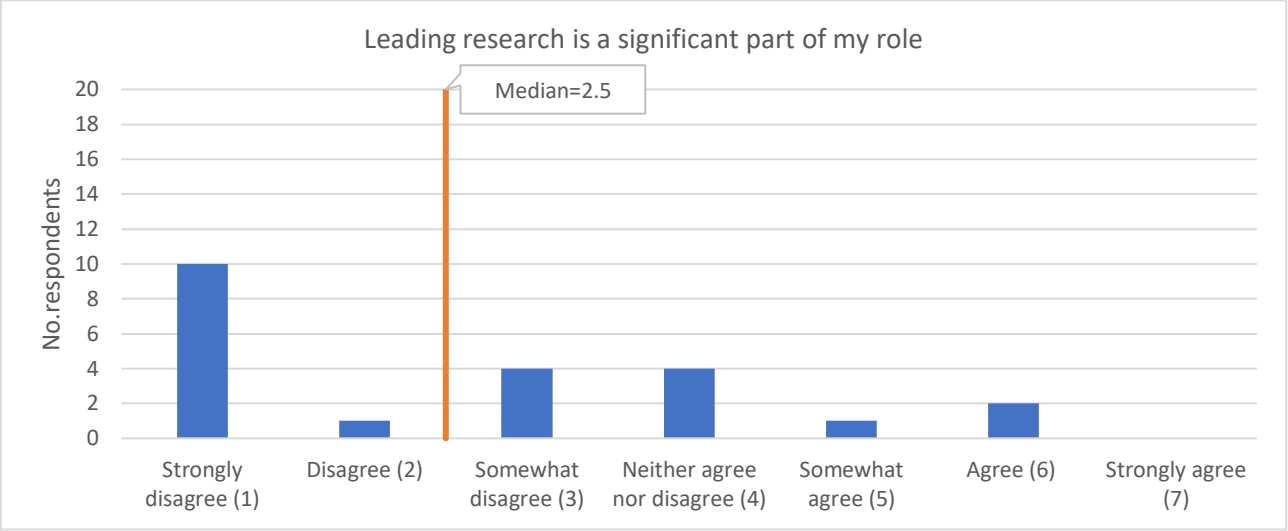


Figure 110

In terms of participants' sense of confidence in conducting research, there was only a percentage increase of 48% in scores against this questionnaire item, with a change in the median from 'somewhat disagree' to 'somewhat agree' (see Fig. 111).

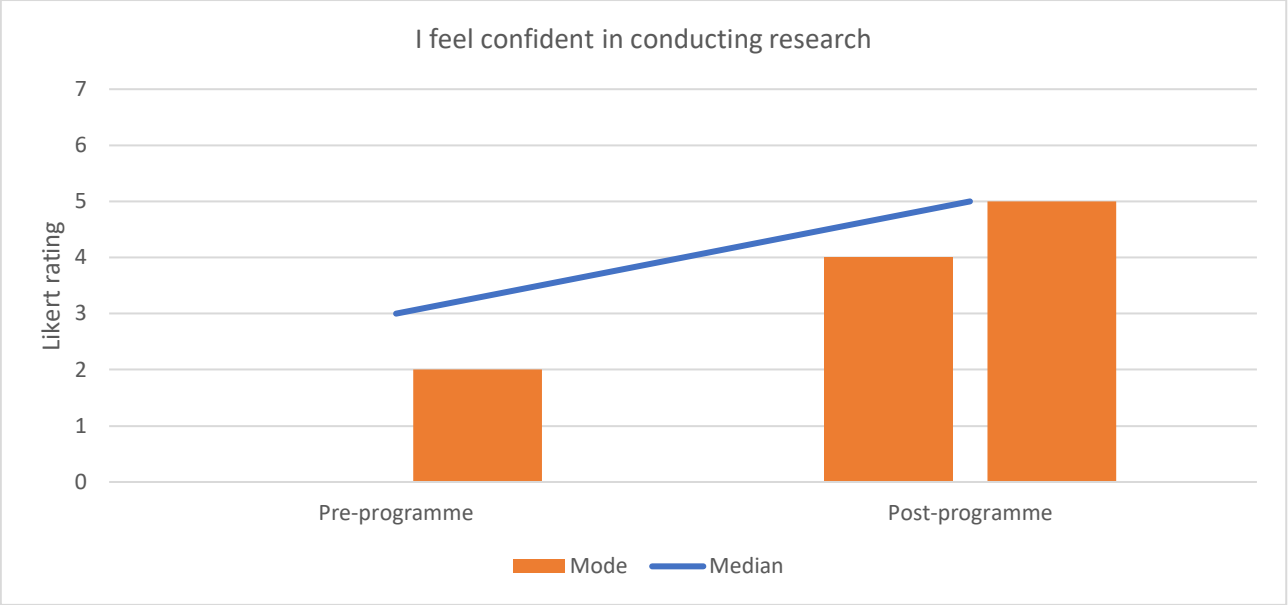


Figure 111

Prior to the programme, 'disagree' was the most common response to the statement "I feel confident in conducting research" for all respondents, although some participants 'somewhat agreed' with this questionnaire item (see Fig. 112). In the mid-way evaluation, there was an even spread of responses reflected in the median response of 'neither agree nor disagree' (see Fig. 113). Following completion of the programme, most participants 'somewhat agreed' that they felt confident in conducting research, with a further 4 participants 'agreeing' to this statement (see Fig. 114). Disagreement with this questionnaire item together with a high number of neutral responses also suggests that many participants need to develop their confidence in relation to conducting research. These results might also reflect that a number of participants disagreed (strongly disagree-somewhat disagree) or 'neither agreed nor disagreed' that research was a significant part of their current role, the latter result perhaps also reflecting some uncertainty over what is considered to be 'significant' (see Fig. 115).

Taken together, these findings suggest that participants feel a little more confident in conducting research compared to leading research following completion of the programme. In the post-programme evaluation, one participant reflected on their increased confidence in conducting research within their role:

> *"Gaining confidence in myself and utilising the tools learnt through the course to better my research delivery. Received feedback from team leader that she has actively seen a positive change in my approach to research delivery and confidence in discussing research with PIs and other research staff"*

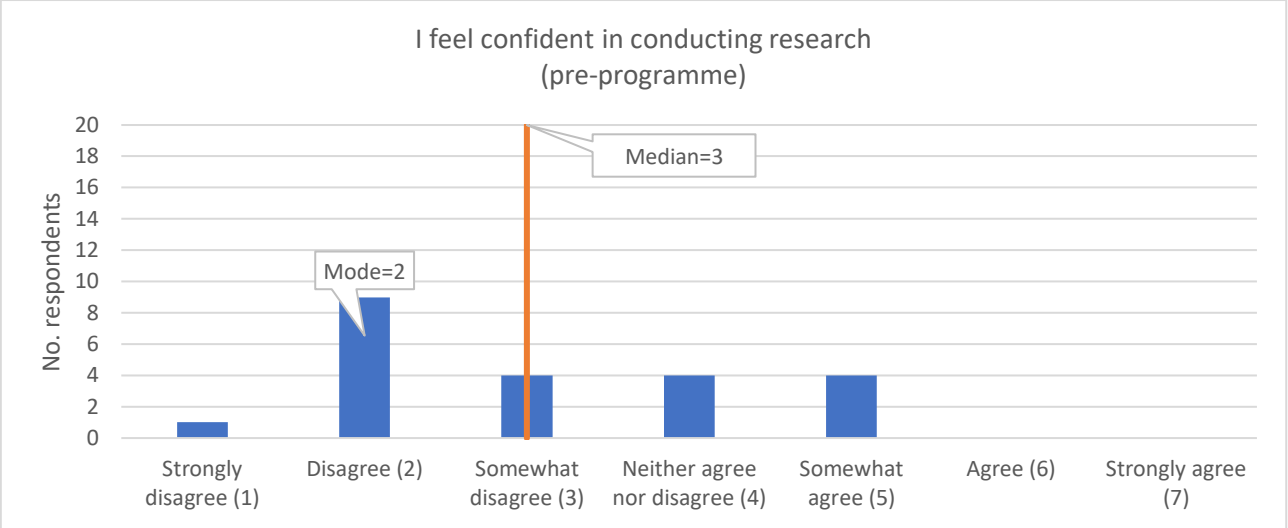


Figure 112

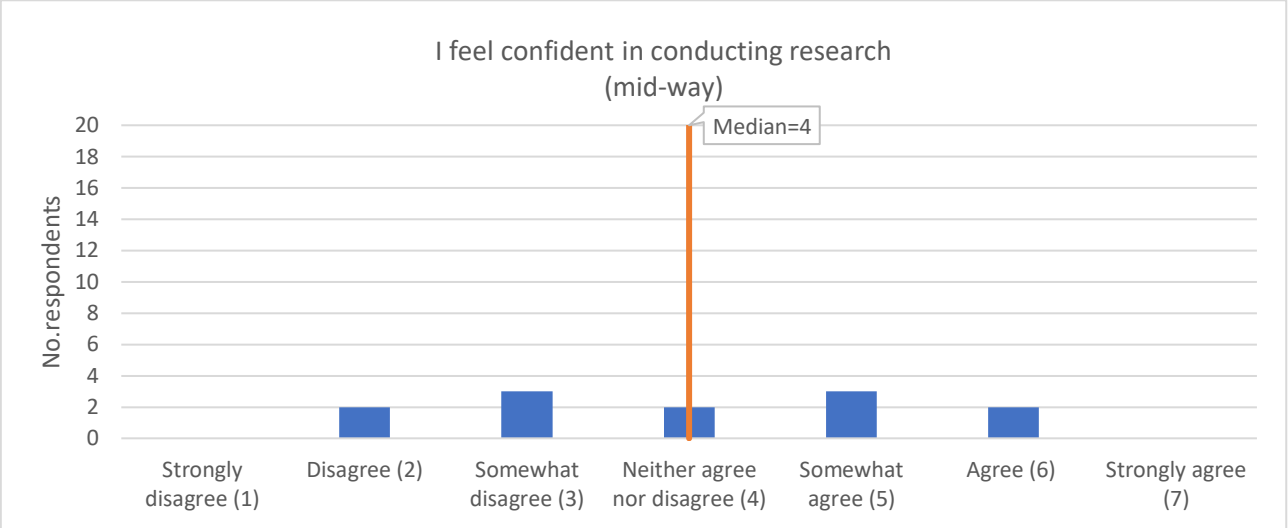


Figure 113

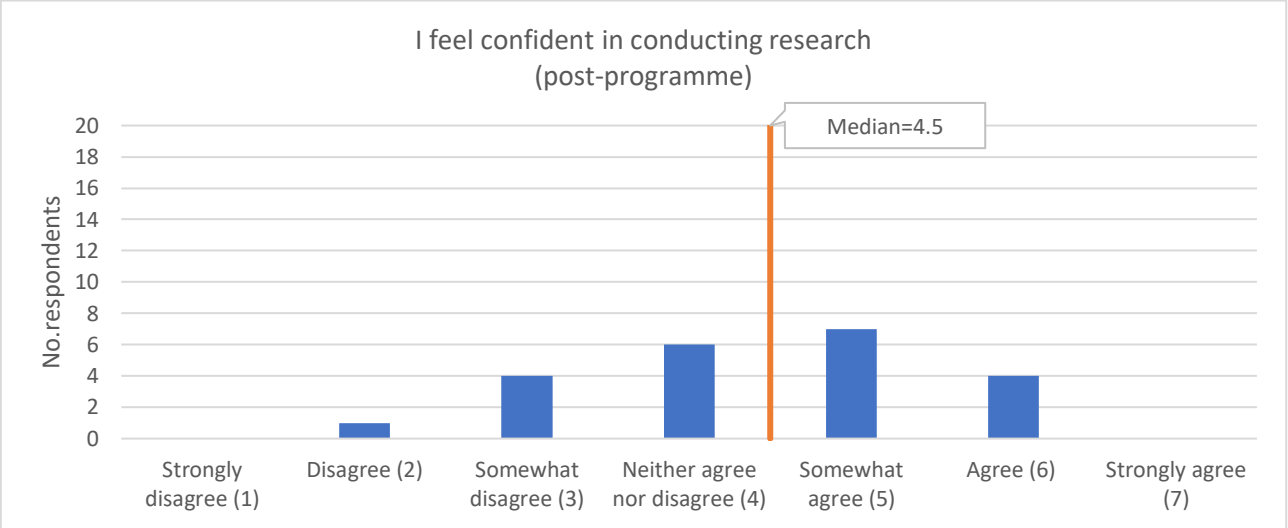


Figure 114

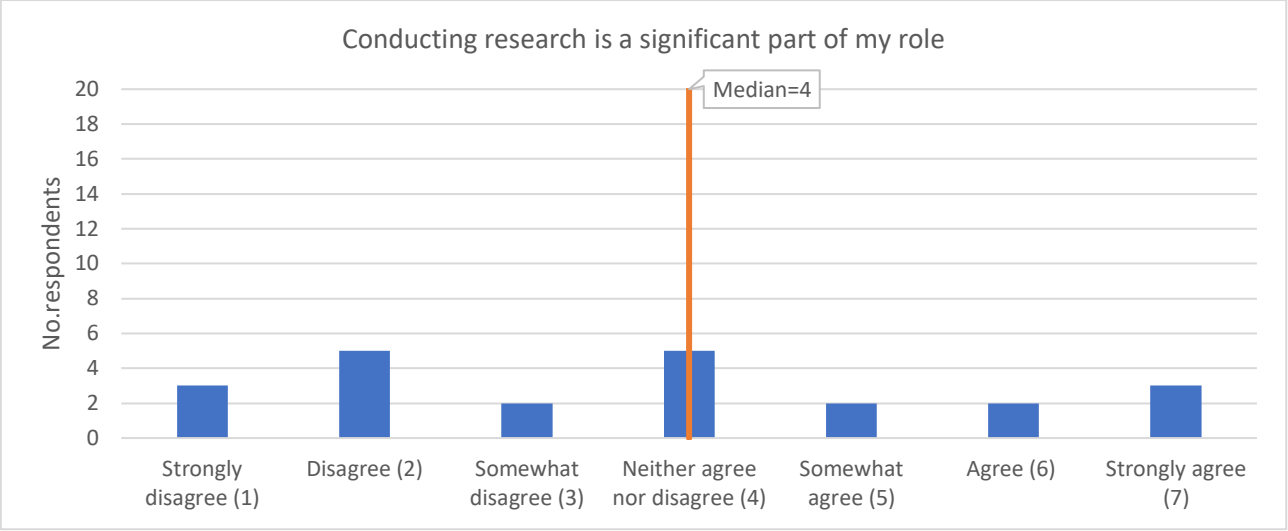


Figure 115

Confidence in articulating research knowledge, skills and capabilities (Personal Qualities, B1; Self-confidence)

There was a more marked increase (70%) in participants' sense of confidence in articulating their research knowledge, skills and capabilities, reflecting a change in the median from 'somewhat disagree' - 'neither agree nor disagree' to 'somewhat agree' (see Fig. 116).

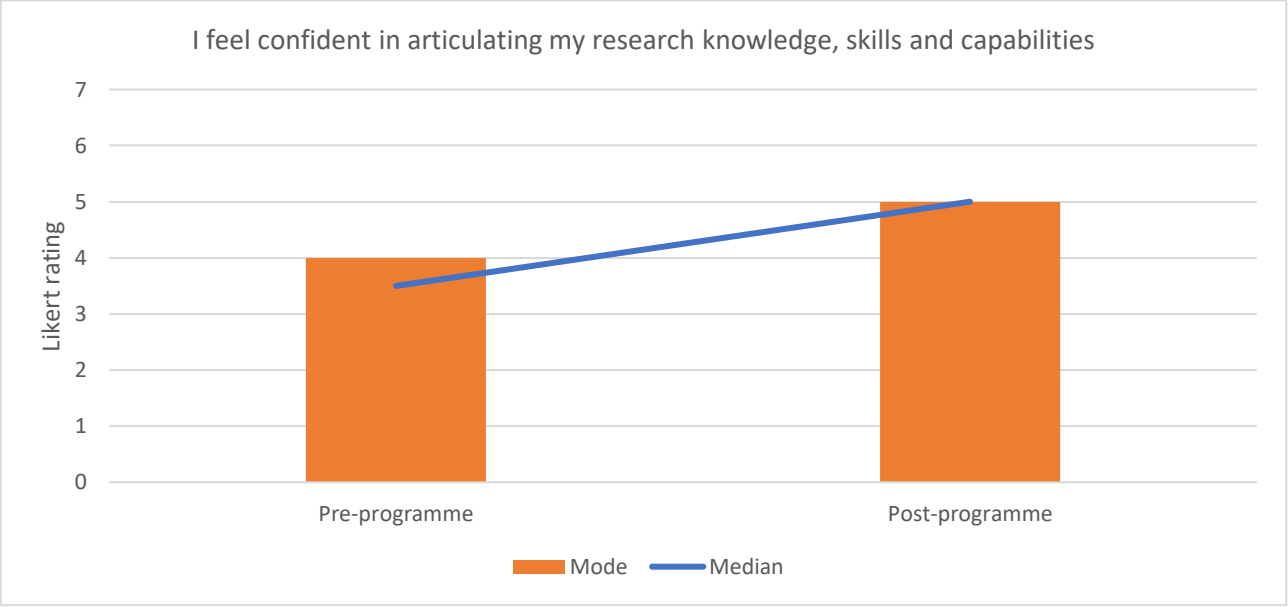


Figure 116

The frequency distribution of all responses prior to the programme show that 'disagree' and 'neither agree nor disagree' were the most common responses, with a median of 'somewhat disagree' reflecting the skew of responses towards disagreement with this statement (see Fig. 117). In contrast, most participants 'somewhat agreed' that they felt confident in articulating their research knowledge, skills and capabilities in the mid-way and post-programme evaluations (see Fig. 118 and Fig. 119). Although some participants provided a neutral response, no respondents 'disagreed' (strongly disagree-somewhat disagree) with this

statement upon completion of the programme. This overall improvement in confidence may be partially tied to participants' increased understanding of how to identify and prioritise their research development needs (see above).

However, given that 'somewhat agree' was the most common response at the end of the course and a number of respondents 'neither agreed nor disagreed' with the statement, further support in developing confidence in this area would be beneficial for some participants.

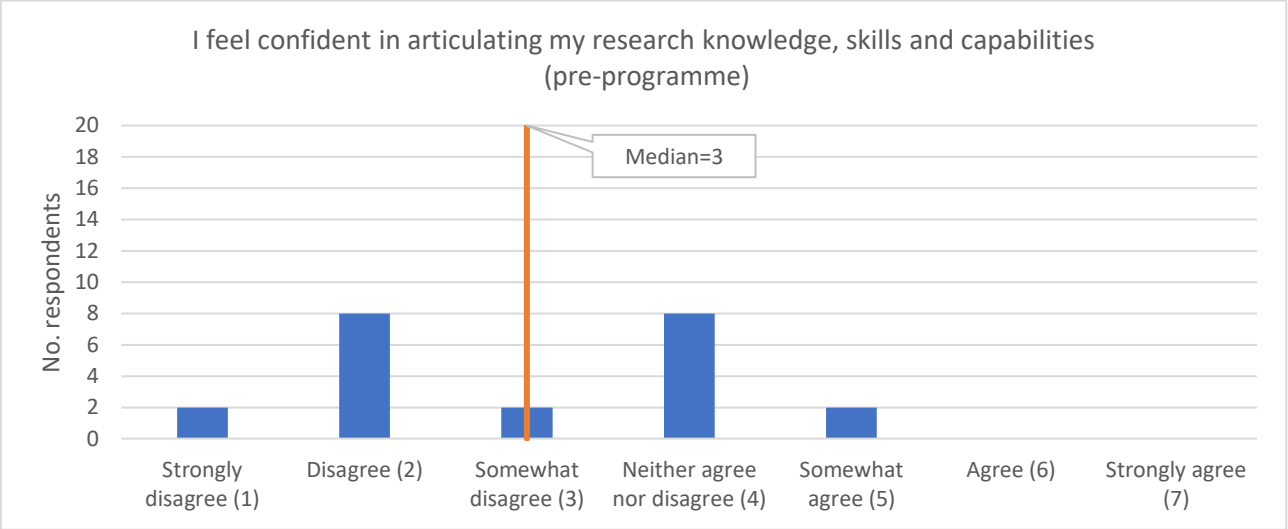


Figure 117

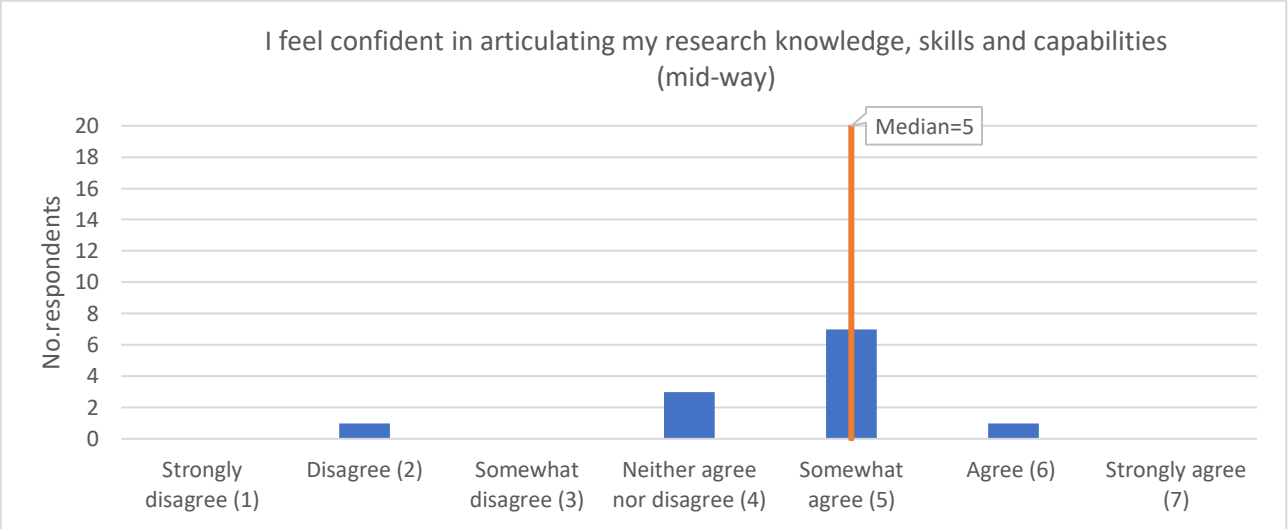


Figure 118

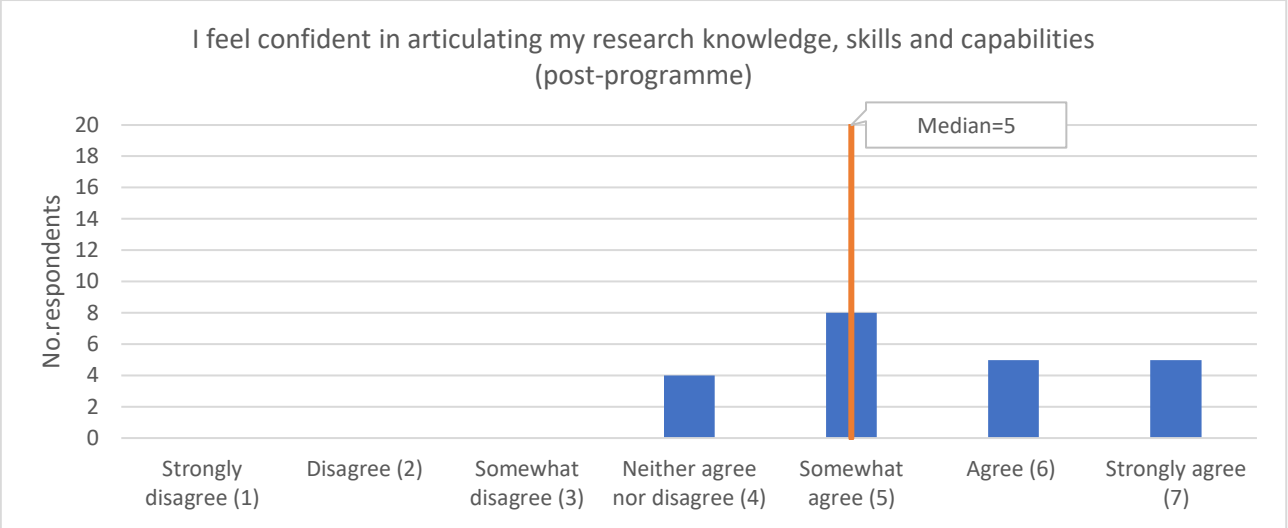


Figure 119

Confidence and developing confidence in others (Personal Qualities, B1; Self-confidence)

There was also a percentage increase of 17% in participants' self-reported confidence in their capabilities more generally, with a change in median from 'somewhat agree' to 'agree' (see Fig. 120).

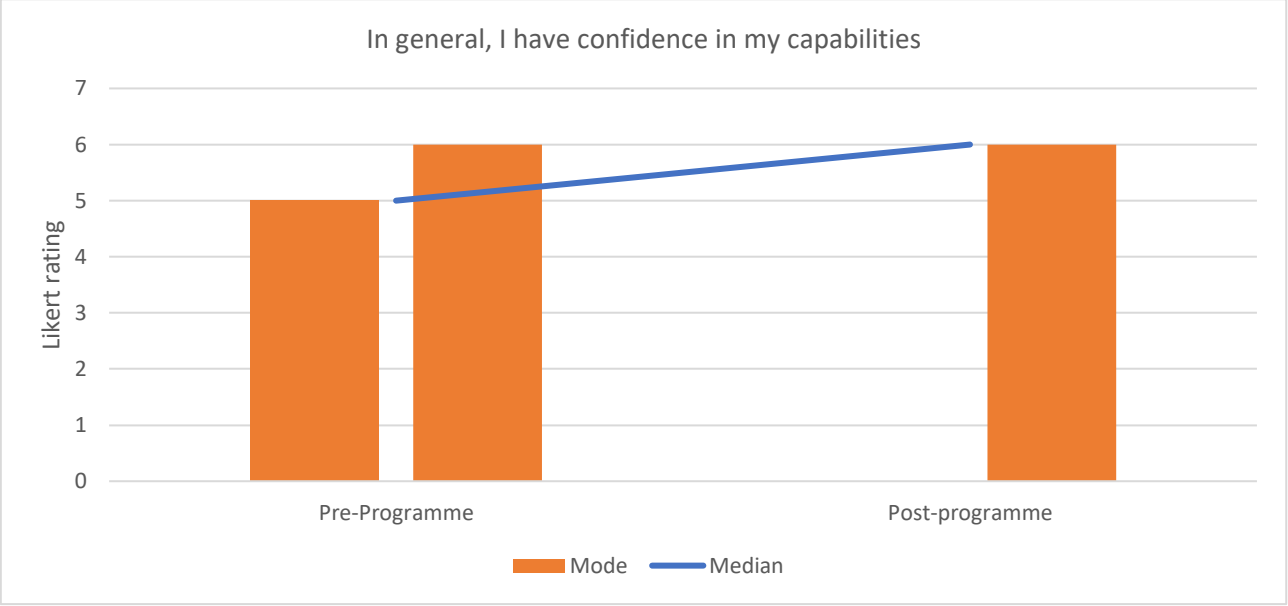


Figure 120

The frequency distribution of all responses to this statement in the pre-, mid- and post-programme evaluations can be seen in Fig. 121, Fig. 122 and Fig. 123 respectively. These graphs show a shift in the median from 'somewhat agree' to 'somewhat agree-agree' mid-way through the course and 'agree' following completion of the course. All participants agreed ('strongly agree-somewhat agree') that they had confidence in their capabilities by the end of the programme.

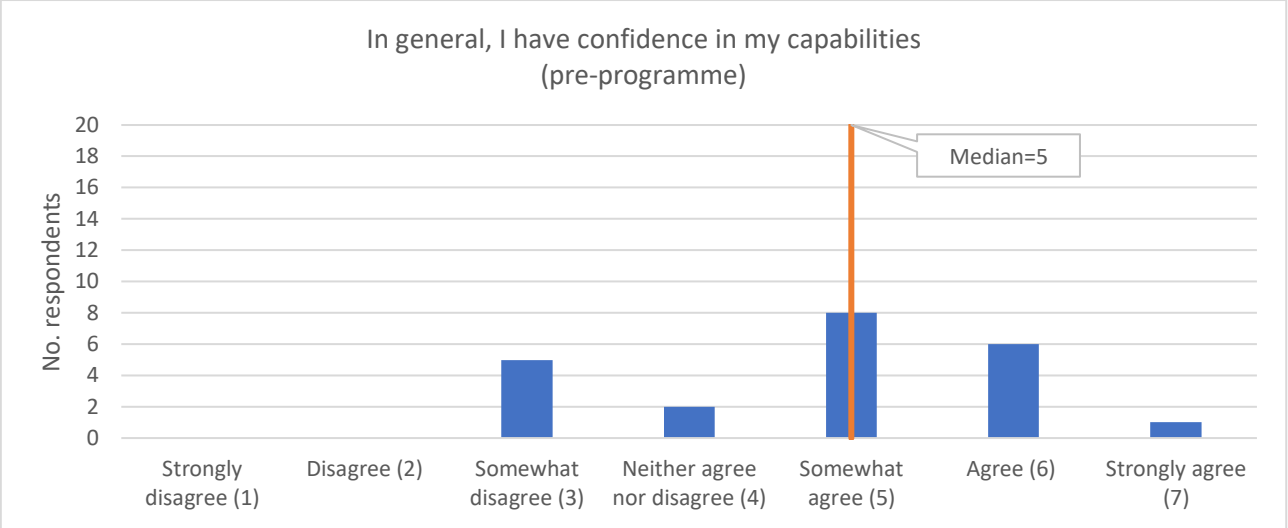


Figure 121

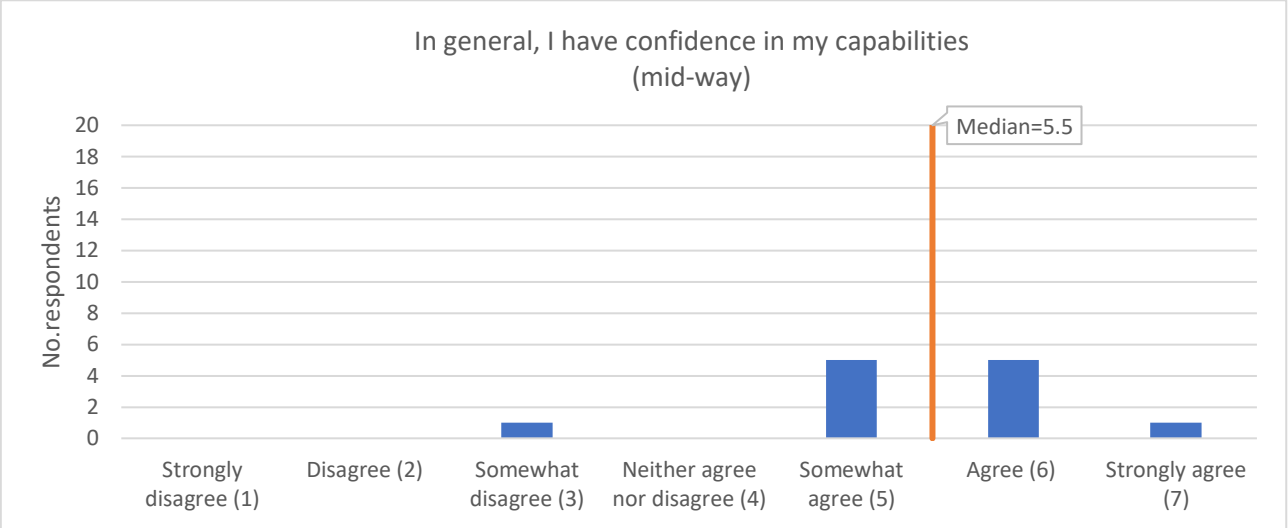


Figure 122

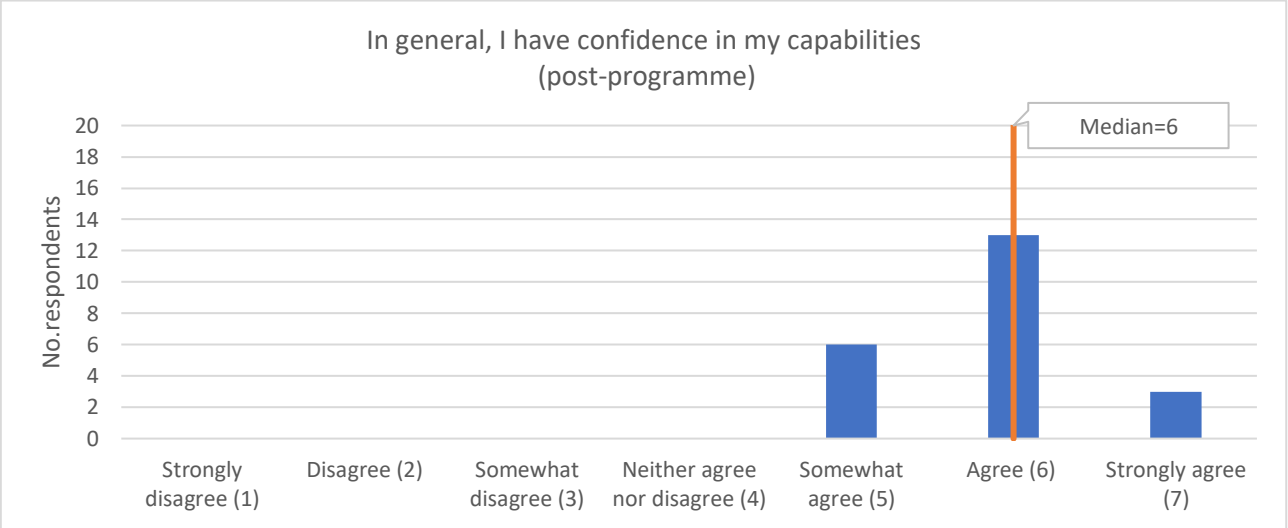


Figure 123

Participants' scores for developing confidence in others showed a 12% increase, with a change in the median from 'somewhat agree' to 'agree' (see Fig. 124).

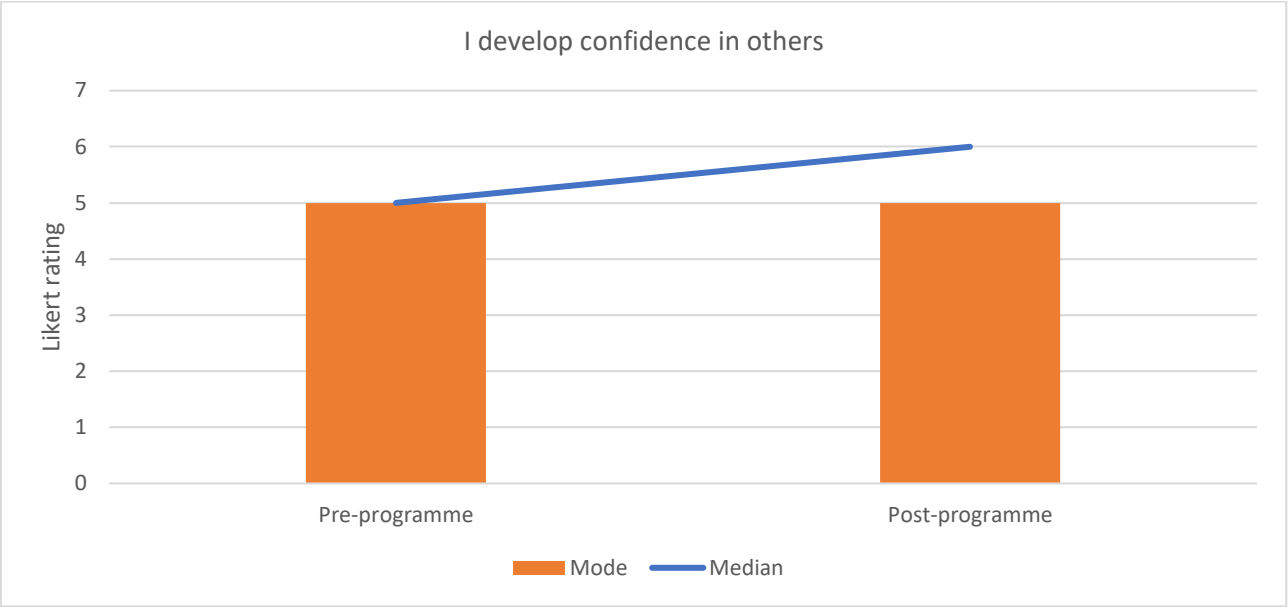


Figure 124

The distribution of responses from all respondents in the pre-programme and mid-way evaluation can be seen in Fig. 125 and Fig. 126, with somewhat agree' being the most common response at both of these times. By the end of the programme, all participants 'agreed' (strongly agree-somewhat agree) that they developed confidence in others, with only one participant providing a neutral response (see Fig. 127).

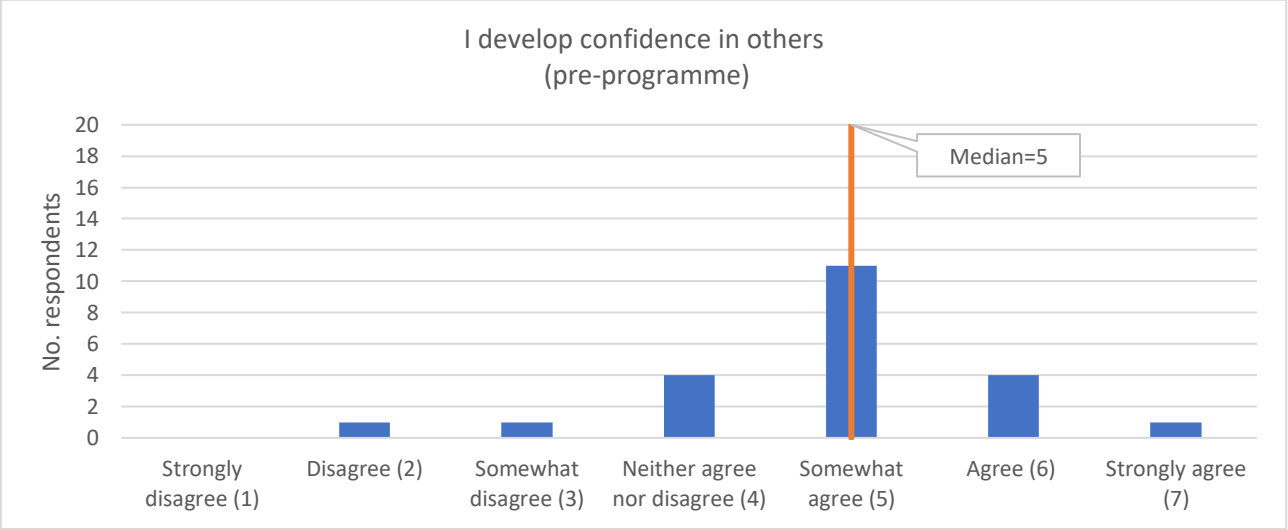


Figure 125

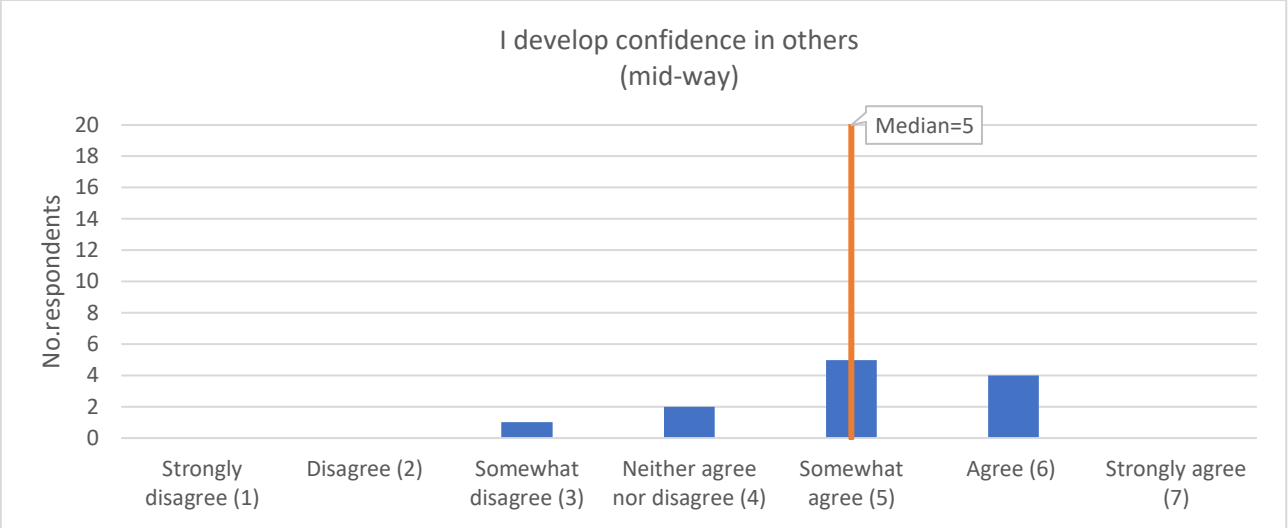


Figure 126

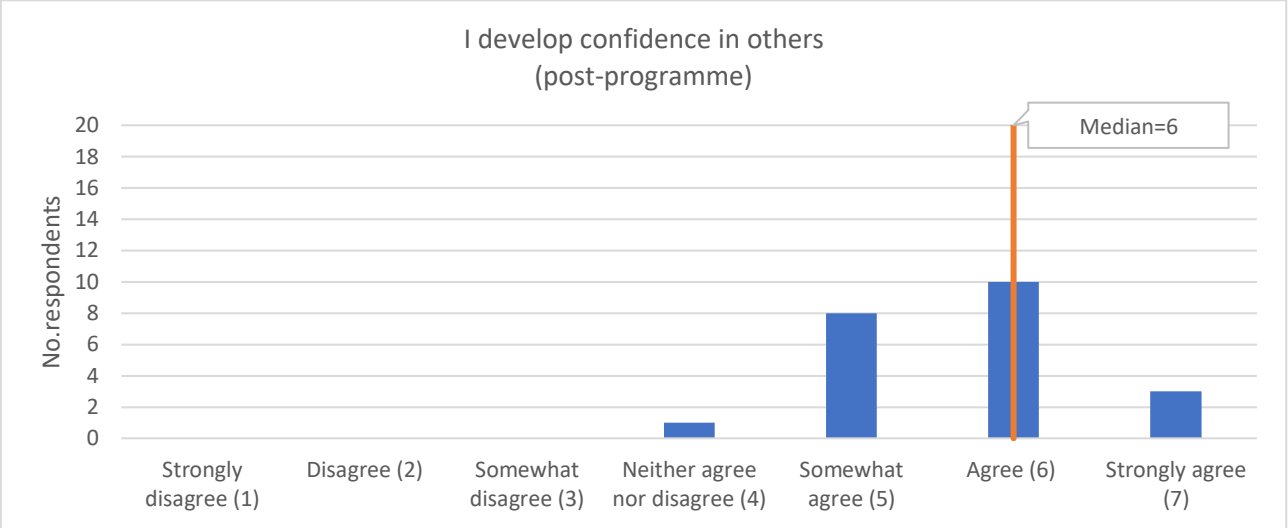


Figure 127

Resilience and self-belief (Personal Qualities, B1; Perseverance)

'Somewhat agree' and 'somewhat agree'/'agree were the most common responses to participant's evaluation of their resilience and self-belief respectively mid-way through the programme, with only one participant disagreeing with these statements (see Fig, 128 and Fig. 129).

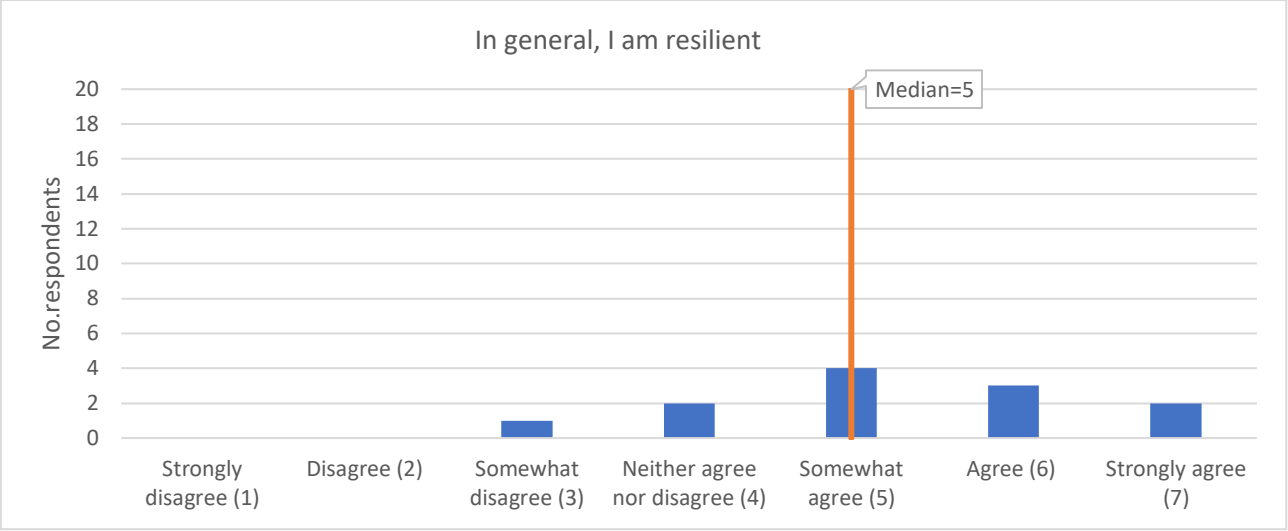


Figure 128

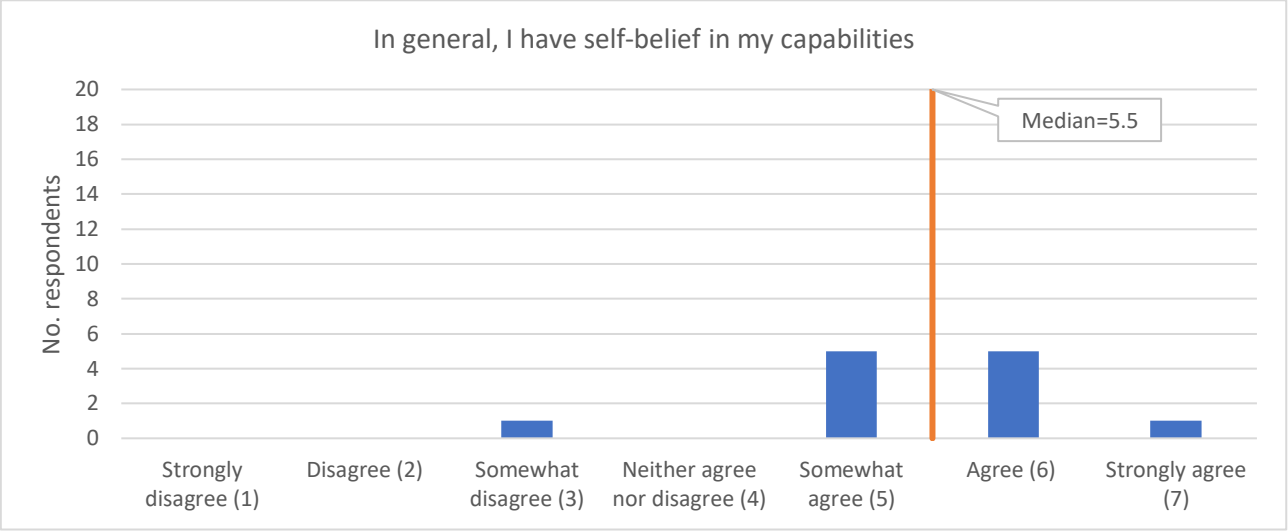


Figure 129

Practising self-reflection (Personal Qualities, B1; Self-reflection)

Self-reflection and reflective practice were highlighted in the residential as “crucial to becoming a reflective practitioner” and participants were encouraged to “embed reflective practice into their learning journeys” to strengthen their capacity to learn from experience and “to think about where you are now and where you want to be”.

Participants scores in relation to whether they practise self-reflection showed the lowest percentage increase across all the pre- and post-evaluation measures at 11%, although there was a change in mode from ‘somewhat agree’ to ‘agree’ (see Fig. 130).

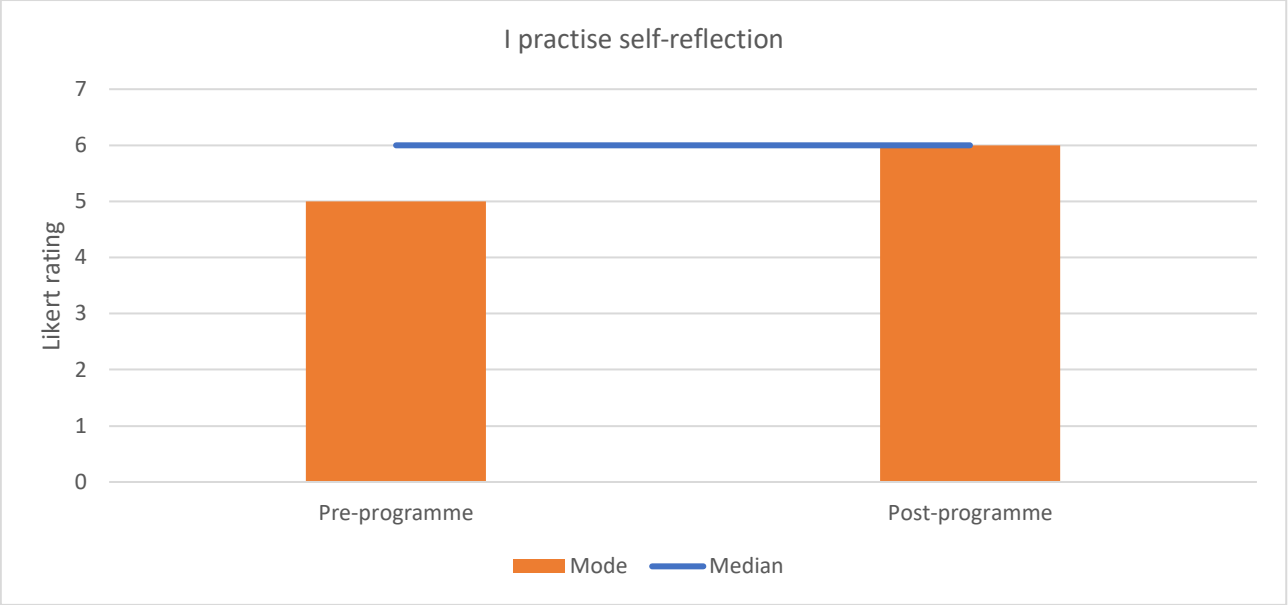


Figure 130

All respondents to the pre-programme evaluation agreed (somewhat agree- strongly agree) that they practised self-reflection with the exception of one participant (see Fig. 131). The median of somewhat agree-agree in the pre-programme evaluation shifted to 'agree in the mid-way and post-programme evaluations (see Fig. 132 and Fig. 133). All participants agreed (somewhat agree-strongly agree) that they practise self-reflection following completion of the programme.

In the mid-way and post-residential evaluations, two participants highlighted the value of this focus on reflection:

> *"I've always done reflections in clinical work, following a course or training; but turbo reflection in a more structured manner and for each learning module has been inspirational. I found the 'not sure about' and 'think about later' prompts useful and not something I had added to my reflections earlier."*

> *"I feel that the increased use of reflection since the residential has been helpful in both the course and in work"*

However, one participant noted that they found the reflective practice a particularly challenging aspect of the residential as they felt "it's not something I'm good at".

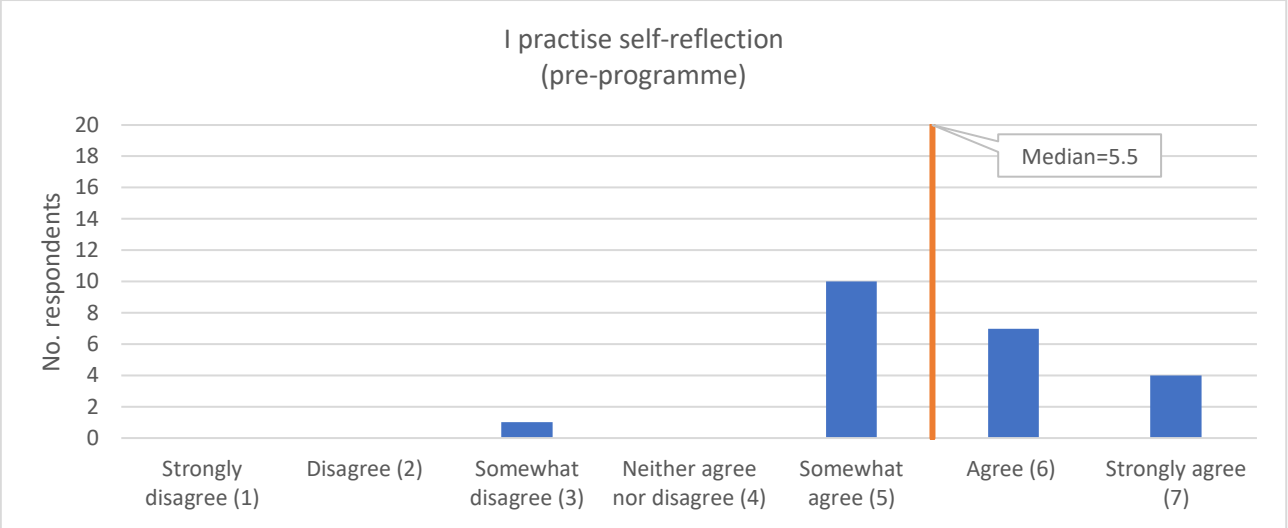


Figure 131

Figure 132

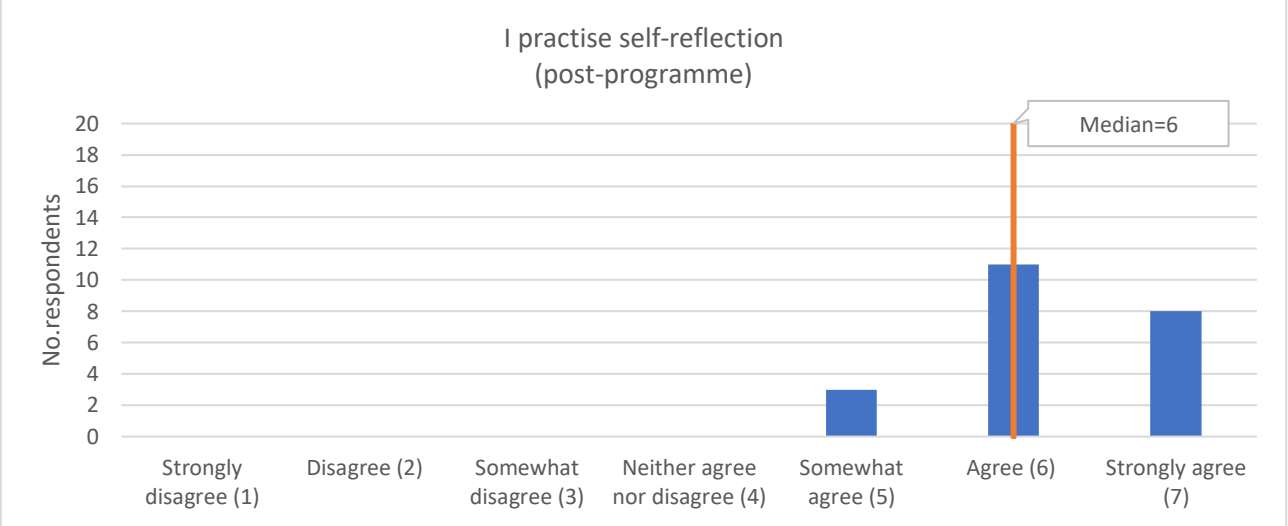


Figure 133

Self-awareness (Personal Qualities, B1; Self-reflection)

With the exception of one respondent, all participants agreed ('somewhat agree-strongly agree') that they are self-aware in the mid-way evaluation, with 'agree' being the most common response (see Fig. 134).

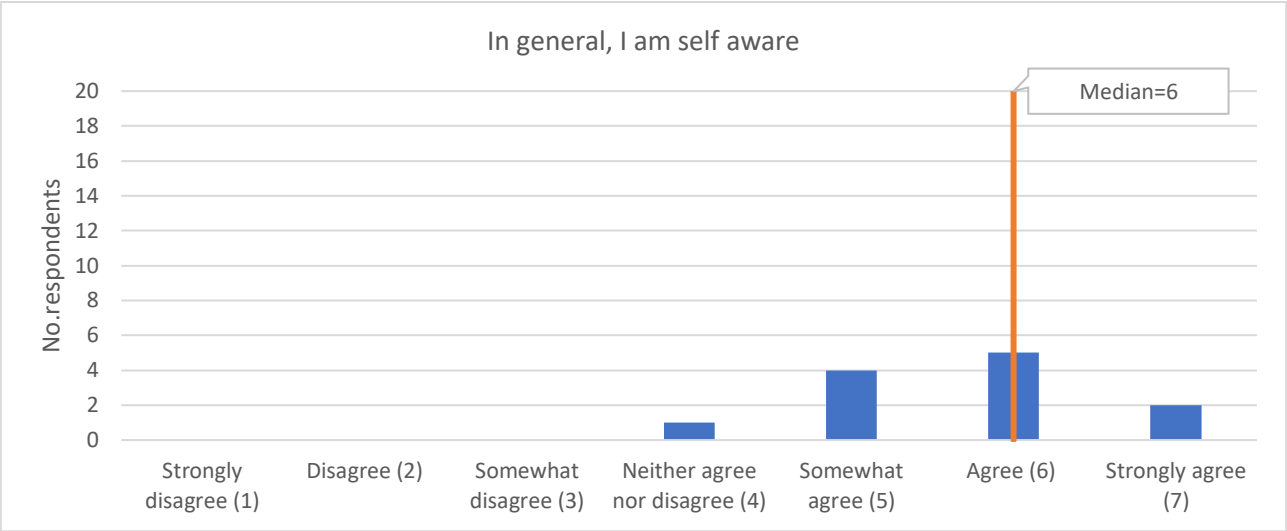


Figure 134

The evaluations highlighted the value that a number of participants placed on the focus on "personal" and "self" development in the course,

> *"So far, this has been a really helpful program, both with regard to developing my research skills and for development in other areas of my professional and personal life-I find it helpful and enjoyable"*

In particular, participants reflected on how the programme had helped to develop their self-awareness:

> *"I also have a better understanding of my own personal traits and areas I would like to develop [...] Having some time to reflect and become more self-aware- not many other courses in the NHS allow you to really develop yourself and take that time out of practice to think about yourself"*

> *"I do feel I am more self-aware e.g., around learning styles, personality type".*

> *"I already feel I understand myself and others better".*

> *"[The most valuable aspect of the course has been] the chance to explore myself and my preferences e.g., personality style conflict and influencing styles"*

> *"[The most valuable aspect of the course has been] self-development as it's helped me in all aspects of life"*

"I now have improved self-awareness"[28]

"I now have better self-awareness"

"I am more aware of the values and views I might bring to any research I am involved in and how they might affect what I do. The sessions on the RDF and with my coach/mentor have been helpful in understanding this"

Some comments reflected more specific aspects related to this increased sense of self-awareness. For example, one participant noted that they had learnt that their "*career and how I feel in my job has a significant impact on all other aspects of my life*" whilst another now recognised "*have achieved a lot and should be proud of that*". Similarly, other participants reflected that the course had helped them to recognise that they already have a considerable amount of knowledge applicable to developing a research career:

"I have a well-established level of basic knowledge regarding research & leadership"

"I do have a reasonable amount of knowledge about my speciality"

"I learnt that I should be more confident with what I do and know; as there are a lot of people on this course like me who are very new to this process of clinical research. This has been most reassuring"

Some participants also highlighted some personal qualities that they felt that they had learnt about themselves whilst participating in the residential:

" I am more independent and able than I thought."

"I am very determined!"

"I am an overthinker and oversharer"

Participants' encouragement of self-reflection in others showed a percentage increase of 15%, with a change in mode from 'somewhat agree' to 'agree' (see Fig. 135).

[28] https://local.nihr.ac.uk/news/greater-manchester-health-professionals-reflect-on-invaluable-crn-funded-development-programme/30283

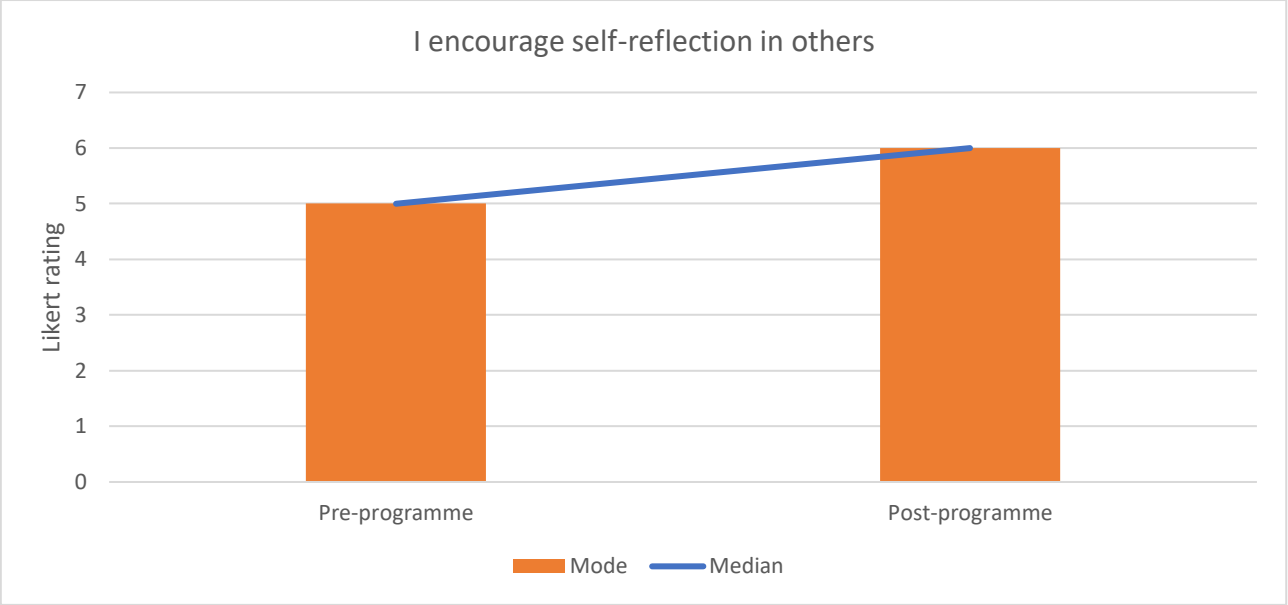


Figure 135

The frequency distribution of all responses to this item in the pre-programme evaluation show a skew of responses towards agreement with this statement, with a median of 'somewhat agree (see Fig, 136). The median response stays the same during the mid-way evaluation, but increases to 'agree' in the post-programme evaluation (see Fig. 137 and Fig. 138).

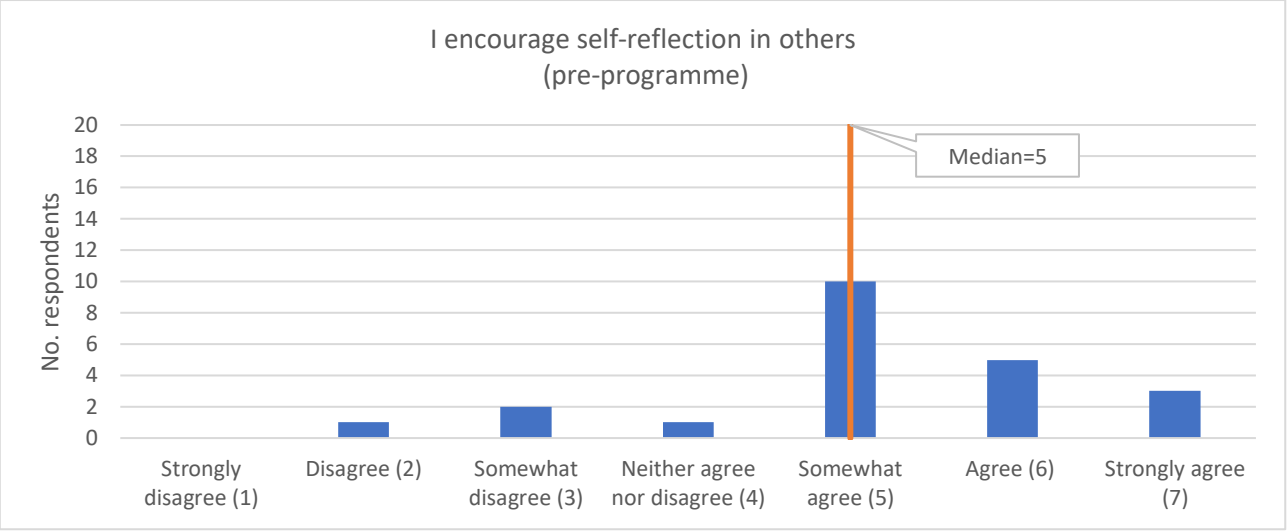


Figure 137

Figure 136

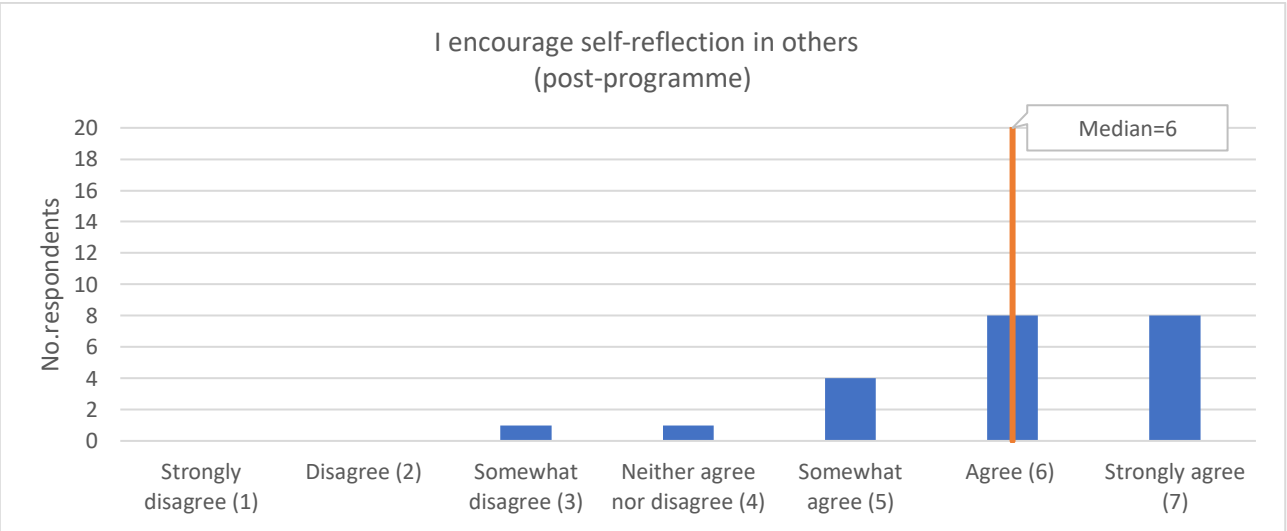


Figure 138

4.2.4. The extent of change

Based on the percentage change in overall scores against the statements in the evaluation questionnaires, it is possible to compare the extent of change against the different ECRDP aims and outcomes.

As seen in Table 8, participants' understanding of research income generation and funding processes showed the largest overall percentage increase. This is in line with participants' knowledge of 'finance, funding and resources' (C3) showing the fourth highest increase across all the sub-domains in the RDF self-assessment.

Participants' reporting of engagement with principal and/or chief investigators in their region showed the second largest overall increase at 133%, whereas scoring against the item measuring engagement with R&D departments and directors only increased by 60%.

Knowledge of development opportunities available through other organisations had the third highest increase, with participants' accessing these opportunities also showing the sixth largest percentage increase across all the evaluation measures.

Improvements in confidence in leading research and understanding of the attributes of successful research leaders also demonstrated some of the largest percentage increase in scores. These changes are in line with participants' assessment of their development against 'professional and career development' (B3) as the second highest increase across all the sub-domains in the RDF self-assessment

Development against RDF domain A ('knowledge and intellectual abilities') showed the second highest increase in scores across all the domains, with the 'knowledge base' (A1) sub-domain showing the largest change.

With regards to the 'engagement, influence and impact' sub-domain it is notable that 'communication and dissemination' (D2) showed the highest overall increase in sub-domain scores in the RDF self-assessment. Related to this domain, the evaluation measure assessing participants' understanding of the policy context and drivers of research within the NWC region also showed a substantial increase in scores at 98%.

The developmental areas that showed the least change were reflective practice, self-confidence, and supporting reflection and confidence in others. However, as discussed below, increases in participants' confidence, enthusiasm and motivation,-particularly with regards to networking with others, played a pivotal role in the mechanism of change for the intervention. Furthermore, confidence specifically in relation to leading research showed the fourth highest percentage change across all the evaluation measures. In terms

of networking, engagement with principal and/or chief investigators and development against professional and career development (B3) which includes the 'networking' descriptor, showed the second highest percentage increase in scores in the evaluation measures and RDF self-assessment respectively.

The percentage change against the "networking with R&D colleagues within and/or outside my organisation" cannot be compared to the extent of change against other questionnaire items, as a baseline measure for this item was only taken mid-way through the programme.

The extent of change for the remaining evaluation measures and RDF self-assessment items can be seen in Table 8.

Table 8. Percentage change against each development area in descending order (areas highlighted in grey show percentage change in scores against the RDF sub-domains)

Development area	**% change**
Understanding of research income generation and funding	139%
Engagement with principal and/or chief investigators	133%
Communication and dissemination (D2)	127%
Knowledge of researcher/research development opportunities outside your organisation	124%
Professional and career development (B3)	117%
Confidence in leading research	115%
Research Management (C2)	114%
Finance, funding and resources (C3)	111%
Understanding of the knowledge, attributes and skills required to succeed as a research leader	110%
Engaging with researcher/research development opportunities outside your organisation	104%
Professional conduct (C1)	100%
Knowledge Base (A1)	99%
Understanding of the policy context and drivers in the North West Coast	98%
Cognitive abilities (A2)	92%
Creativity (A3)	86%
Working with others (D1)	84%
Self-management (B2)	84%
Engagement and Impact (D3)	83%
Understanding the roles and responsibilities of NHS R&D departments	82%
Understanding of the professional standards and requirements for the effective management of research	80%
Understanding of the role of the NIHR CRN in the NW	74%
Personal qualities (B1)	73%
Confidence in articulating individual research knowledge, skills and capabilities	70%
Knowledge, understanding and skills to maximise the impact of research through engaging with and influencing others	64%
Engaging with researcher/research development opportunities inside your organisation	61%
Engaging with the NHS R&D department and/or director within my trust	60%

Knowledge of how to identify and prioritise personal research development	58%
Understanding of the knowledge, attributes and skills required to succeed as a researcher	54%
Understanding of the roles and responsibilities of principal and/or chief investigators	53%
Actively working on identifying and prioritising their research development need	49%
Understanding of the policy context and drivers in the NHS	48%
Confidence in conducting research	48%
Knowledge of researcher/research development opportunities within your organisation	41%
Having people to talk to about personal researcher development needs	41%
Understanding of research information management processes	40%
Confidence in individual capabilities	17%
Encouraging self-reflection in others	15%
Developing confidence in others	12%
Networking with R&D colleagues within and/or outside your organisation[29]	12%
Practising self-reflection	11%

4.2.5. Overall feedback on programme administration and organisation

Aims, objectives and expectations

Following the residential, most participants, 'neither agreed nor disagreed' that they understood the aims and objectives of the ECR development pathway programme (see Fig. 139)

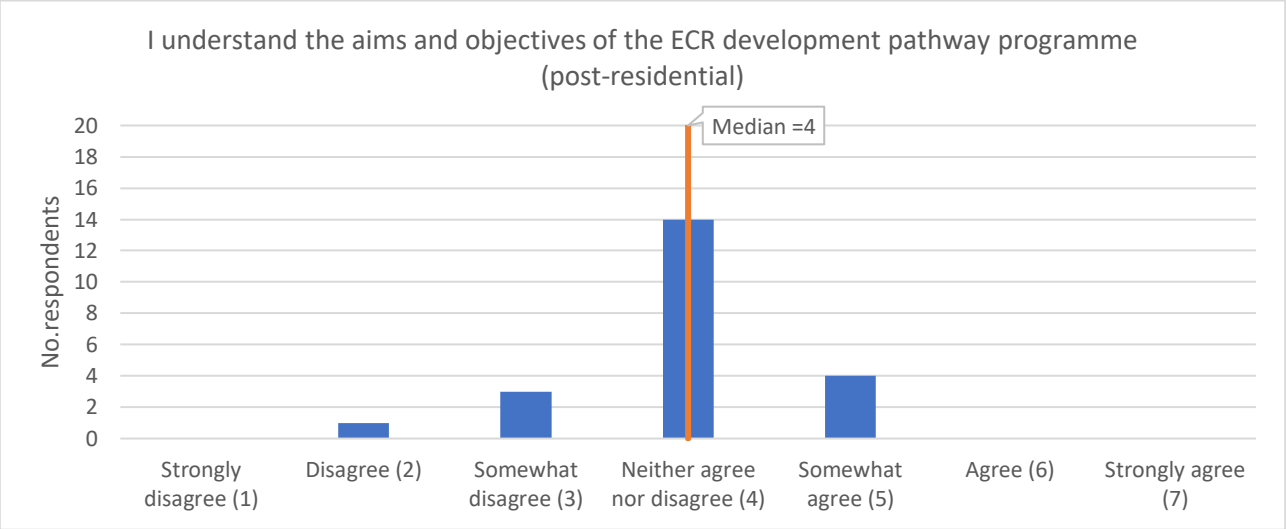


Figure 139

One of the issues raised in the evaluation of the 2020/2021 ECRDP was that participants were unclear about the aims and objectives of the course. This issue was explicitly commented on at the beginning of the residential by the facilitator who went over the aims with the group noting that they should have "already read through these with your line manager". There was also a concerted effort during the residential to

[29] It is important to note that baseline measures against this item were only taken in the mid-way evaluation, so the extent of change for this measure cannot be compared to the other items.

communicate “what’s expected of you so you can plan”. In addition, it was emphasised that the programme is “not about becoming an expert in research methodologies, but becoming more aware of what’s available and what you need to learn”. Despite this clarification, one of the post-programme respondents still requested “*a bit more information about how to go about conducting a small research project as I had very little research experience prior to the course. Sessions on how to perform qualitative/quantitative research would have been good!”*

One participant commented that they had clarity on the rest of the programme following the residential and another described how “*before attending [the residential] the aims and objectives were all very exciting but quite abstract*”. Three respondents added that the aims and objectives were clear, with one participant valuing the slides from the residential in clarifying these and another adding that they “*appreciate(d) knowing how I will be assessed*”. In contrast, some participants commented on the lack of clarity and information in relation to the accreditation and assessments (see below) and one and noted:

> *“The full purpose of the programme and the actual outcomes/how they relate to me were not fully explored […] Still not 100% clear to me”**

A few respondents noted that they were still unclear about “what is expected” of them, with one participant querying expectations in the clinical environment and the role of the mentor.

Another participant wanted to look at the aims and objectives further into the future in terms of the opportunities that might arise from the course and “*more discussion on how we can utilise the skills aimed to achieve*”. However, one of these participants recognised that the aims and objectives were likely to become clearer and another respondent commented “*as it was told to us, we will learn more about this in the future*”. Another participant added that it would be “*good to learn more about the programme and expectations down the line*”.

By the time of the mid-way evaluation, most participants agreed (somewhat agree-strongly agree) that they understood the aims and objectives of the programme, with ‘agree’ being the most common response (see Fig. 140)

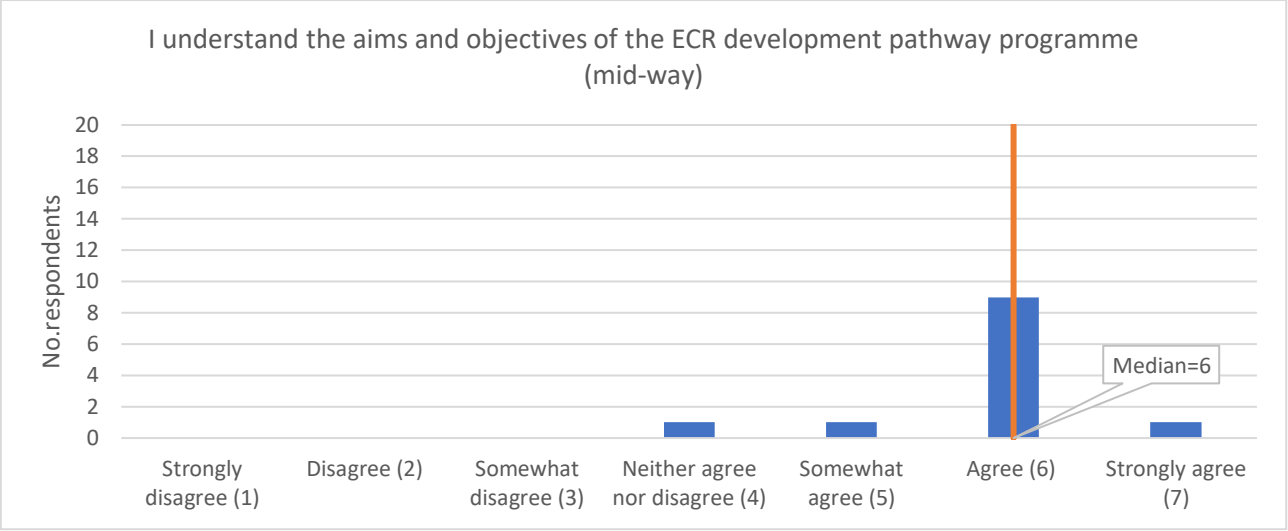


Figure 140

One participant described how the aims and objectives had become clearer over the last few months.

A number of comments in the mid-way and post-programme evaluations reflected on how more explicit connections between the RDF domains and the programme content would have helped to bring more clarity to the aims and objectives of the course:

> *"I didn't overly feel I knew the aims of the course until half way through. And only really understood how the RDF was relevant to the course until later on"*
>
> *"Outlining the domains of the RDF which each workshop pertains to would help ground the workshops in the theory. I appreciate they're linked but now only realise this half way into the programme. Explicitly stating this at the beginning will help tie things together [...] Introduce the RDF domains linking to talks earlier in the programme. I.e., when starting a session- relate it to the domain the subject is focusing on. This was only really emphasised from 2/3 of the way through"*
>
> *"Links to the RDF earlier on in the course please"*
>
> *"I liked how the content of the workshops are now linked with the RDF descriptors. This would have been useful from day one".*
>
> *"It would have been useful to have the RDF framework introduced earlier on and to be referenced throughout so that we could understand the link between the content of the workshop and why it is useful"*

More generally, one participant suggested a "*clearer structure early on to be able to know what to expect / how to organise time*".

Another participant highlighted that the expectations around networking and engagement would have been helpful in advance to manage organisational expectations around their participation:

"I hadn't appreciated the immediate action around building a network and engaging in research networks, most courses/programmes you learn content and then implement it after the event. I can see how this will really change behaviour and hopefully start to influence culture with in our teams. However, understanding this before the programme would help with planning workload, getting management teams really aware of the expectation on me over the programme to get the most out of it"

Similarly, another participant reflected that a particular challenging aspect of the course so far was the expectation "to do something tangible during and after the program".

With regards to sharing the aims and objectives of the sessions more clearly with participants, the cohort were asked whether they would prefer to be sent a more detailed programme ahead of each workshop during the mid-way evaluation. Only 3/12 (25%) of the participants responded that they would like more details in advance (see Fig. 141).

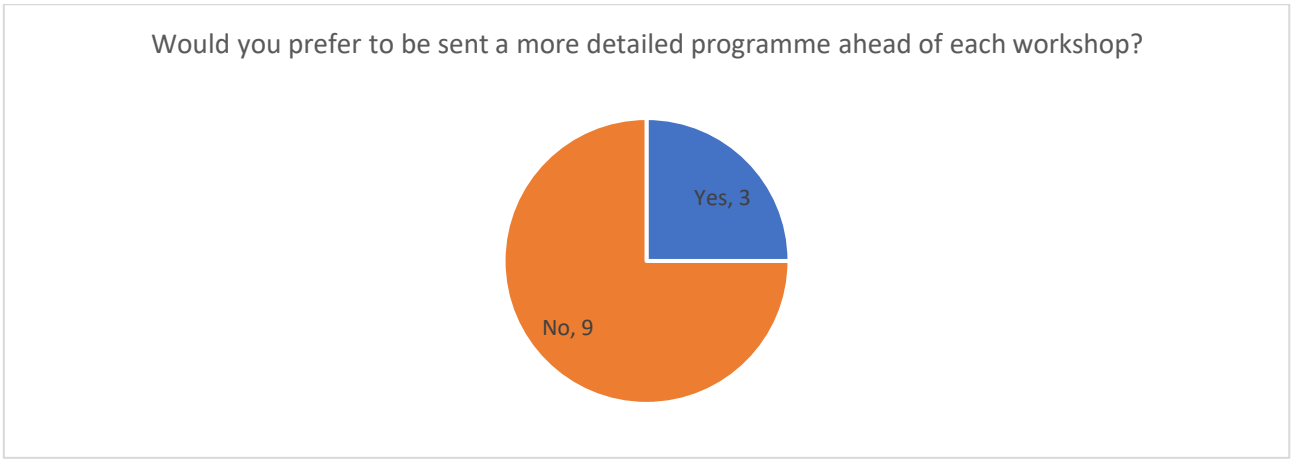


Figure 141

Expectations about the course

In some cases, the residential experience reportedly changed participants expectations about the course (see Fig, 142), although the median of 'neither agree nor disagree' reflects the even spread of responses, with the neutral response also being the most common response.

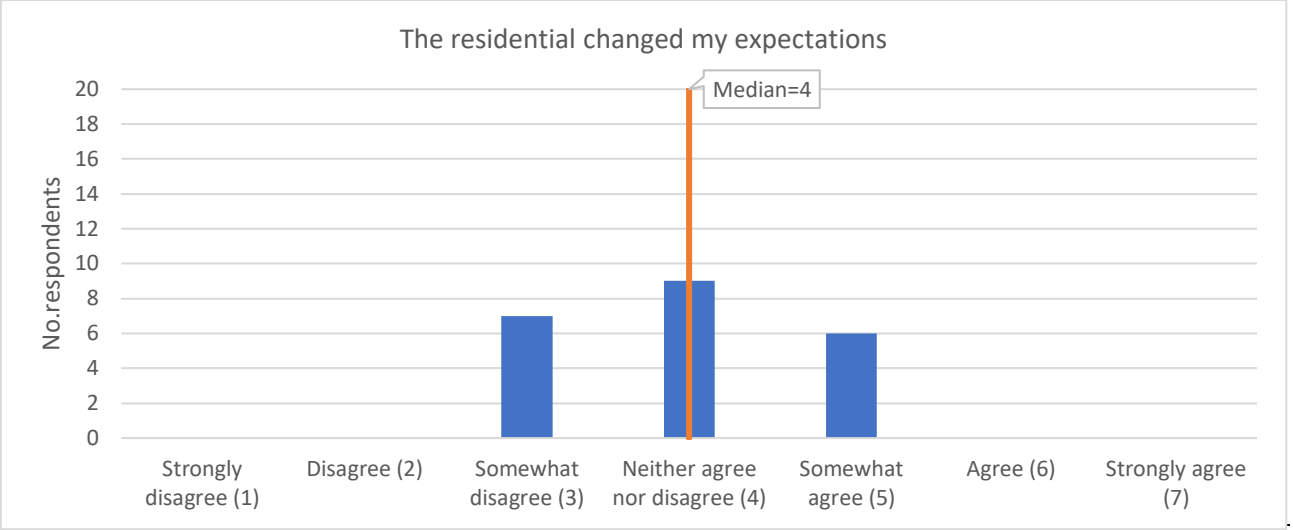


Figure 142

Of those respondents who 'somewhat agreed' that the residential had changed their expectations, some described a shift from seeing the programme as focused on academic elements of research to an emphasis on leadership, networking and more personalised development:

> *"I feel it will really help my development, but in a very personal way, rather than putting us all in the same box".*

Another reflected on their evolved understanding of the overarching aim of the programme as being to "*build confidence and inspire towards clinical academics*".

Mid-way through the programme, all participants agreed (somewhat agree-strongly agree) that the programme was meeting their expectations, with a median of 'agree' (see Fig. 143). By completion of the programme, the median had shifted to 'strongly agree', with one participant stating that the programme had "exceeded" their expectations (see Fig. 144).

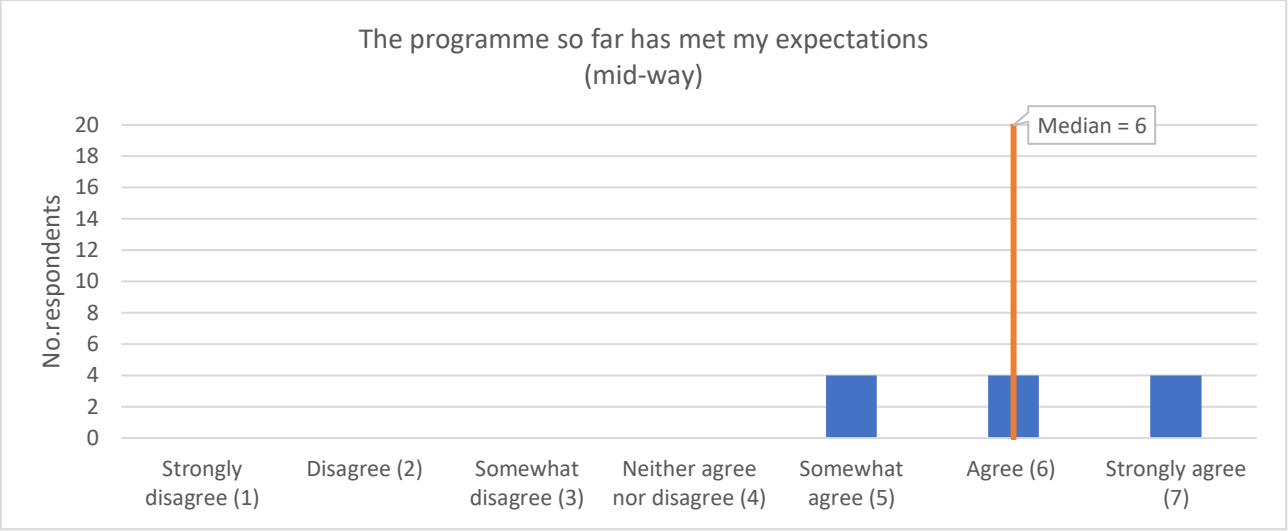


Figure 143

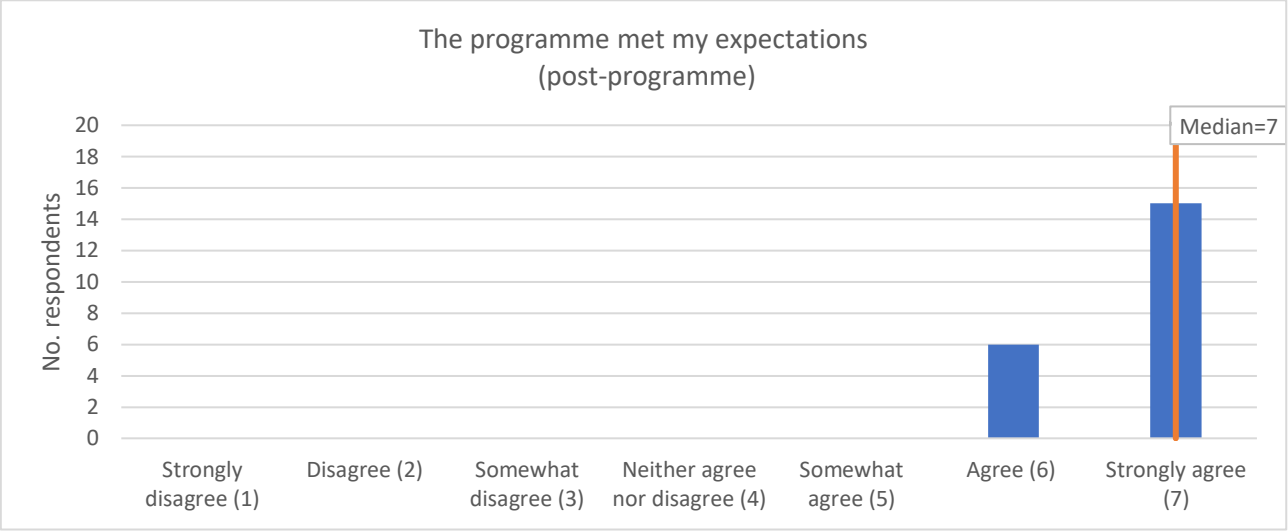


Figure 144

4.2.6. Experience of the placement

Although feedback on participants' experience of their placements was not formally collected in the evaluation, WhatsApp provided some reflections on this aspect of the course.

Some people commented on difficulties they were experiencing in finding a placement:

> *"I think it can be quite difficult to arrange a full on 2-day placement at the moment (I've had a couple of offers to get involved with/shadow research that is still in the planning stage) so it probably is more realistic to arrange a few smaller discussions opportunities"*

Other participants reflected that their placement had been made up of "smaller discussion" opportunities:

> *"An hour here and there"*

"a very cobbled together placement of bits of opportunities from multiple people/places":

"I'll be doing it as small chunks with different people"

"Was all virtual and the odd few hours here and there to make up the two days. Was a combination of attending research meetings, steering committee meetings, PPI groups etc all of which were very valuable experiences"

"Mine is same e.g., hour chats with researchers"

"I did a half a day shadowing a fellows research course and half hour meeting a professor I work with"

One participant already working within research reflected that there was "*not much point me sitting with anyone from the research office as I work with them on set up of studies so I was hoping to find a PhD student doing a project to shadow but no such luck*"

In response, another participant described contacting their university and suggested this as an alternative to shadowing busy clinical staff.

In the post-programme evaluation, one respondent mentioned that the placement had given them "*an idea of other career paths"*

4.2.7. Accreditation and assessments

During the mid-way evaluation, most participants "strongly agreed" that the accreditation of the course was important to them, although responses were widespread with a median of 'somewhat agree' (see Fig. 145)

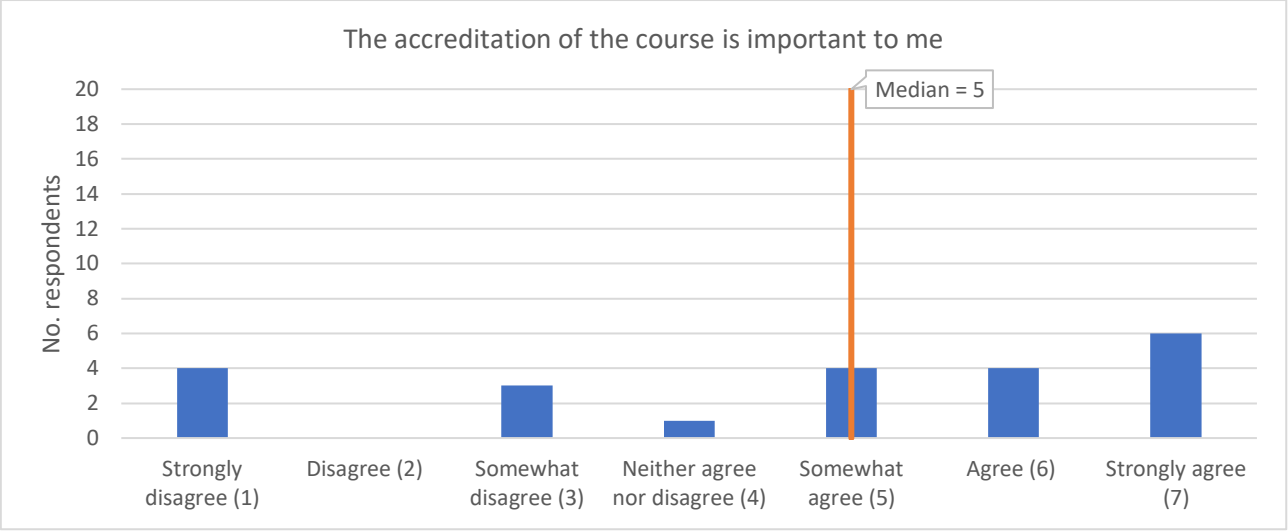


Figure 145

In the post-programme evaluation, most participants 'somewhat agreed' that the accreditation had met their expectations (see Fig. 146), although some participants disagreed or provided a neutral response.

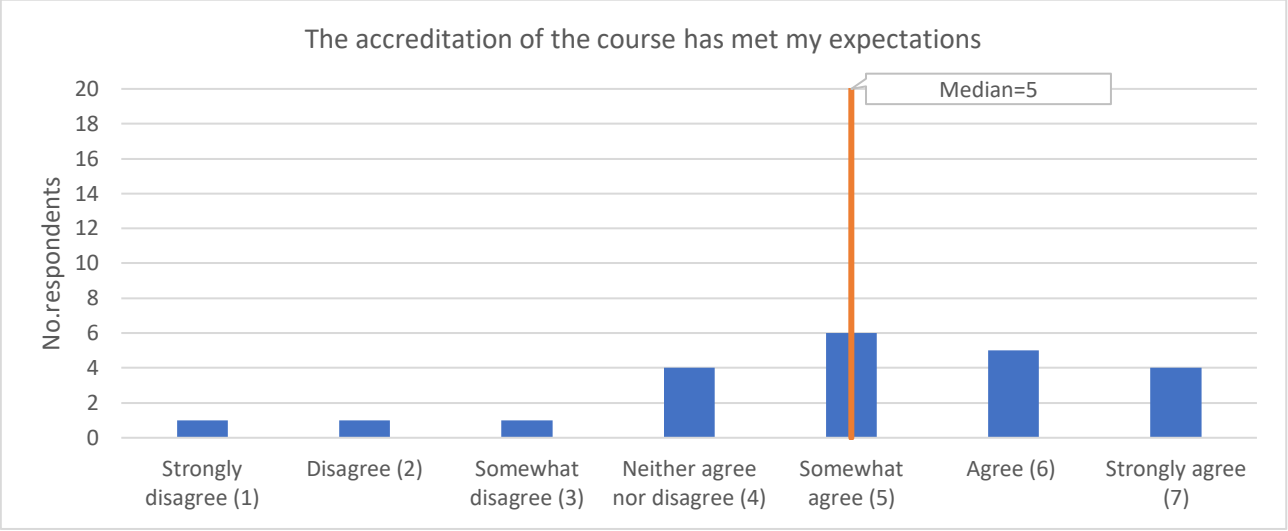


Figure 146

5/12 of the mid-way evaluation respondents were unaware of the courses and modules towards which they could use their UOL credits, whilst 3 were unsure (see Fig. 147). 4/12 of the participants were aware of the courses and modules towards which they could use their credits

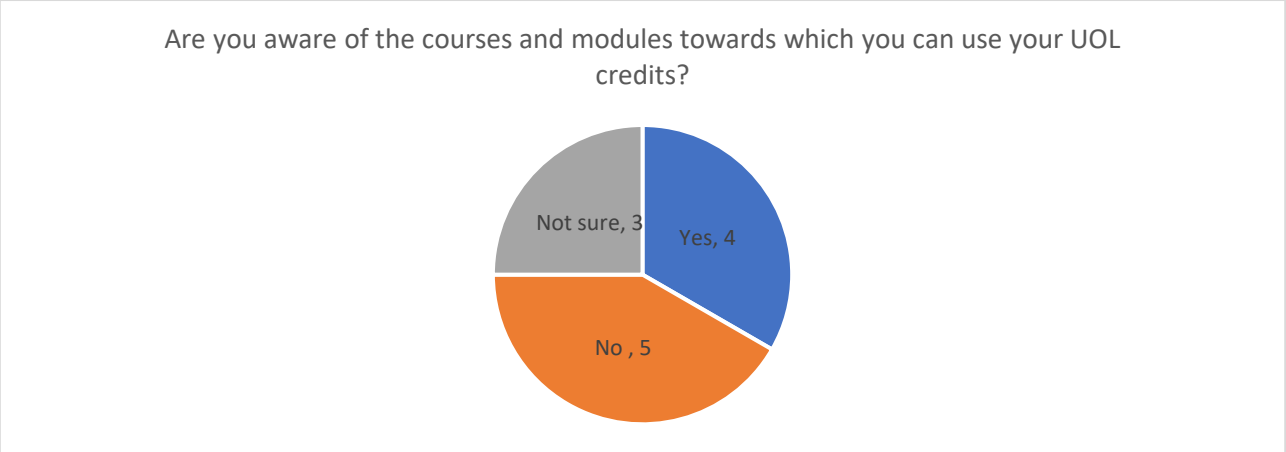


Figure 147

5/12 respondents would consider using the credits towards another course, and a further 6/12 reported that they might consider using the credits (see Fig. 148).

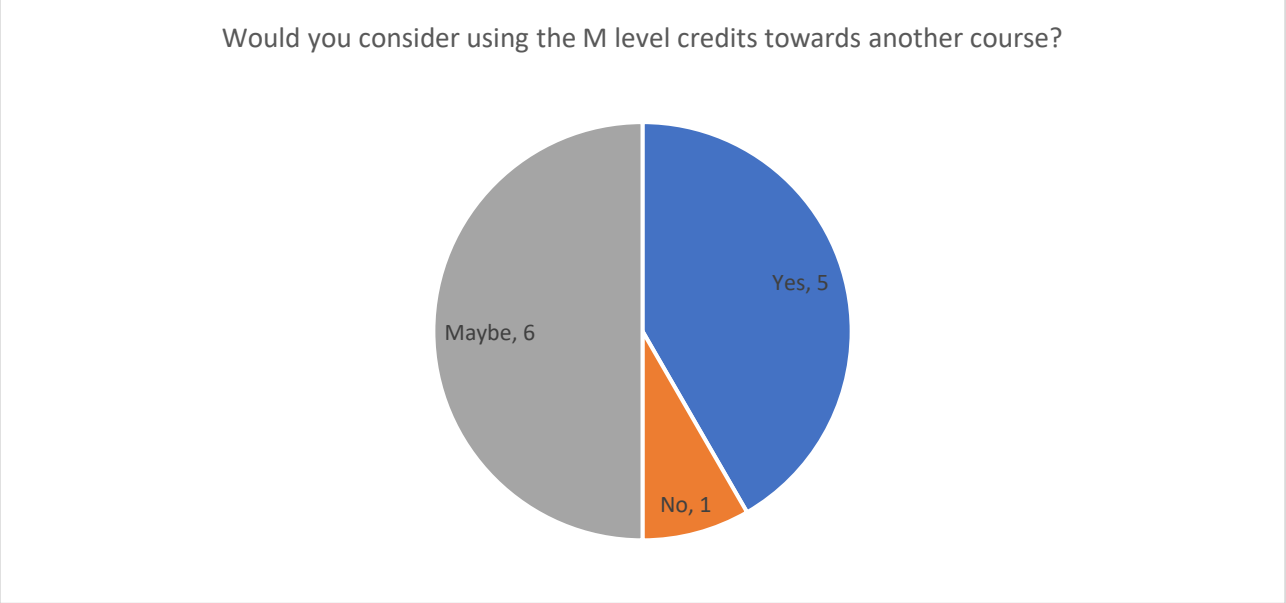


Figure 148

In the post-programme evaluation, 12/22 respondents were unsure whether they would use the credits towards another course, with only 6 intending to do so (see Fig. 149).

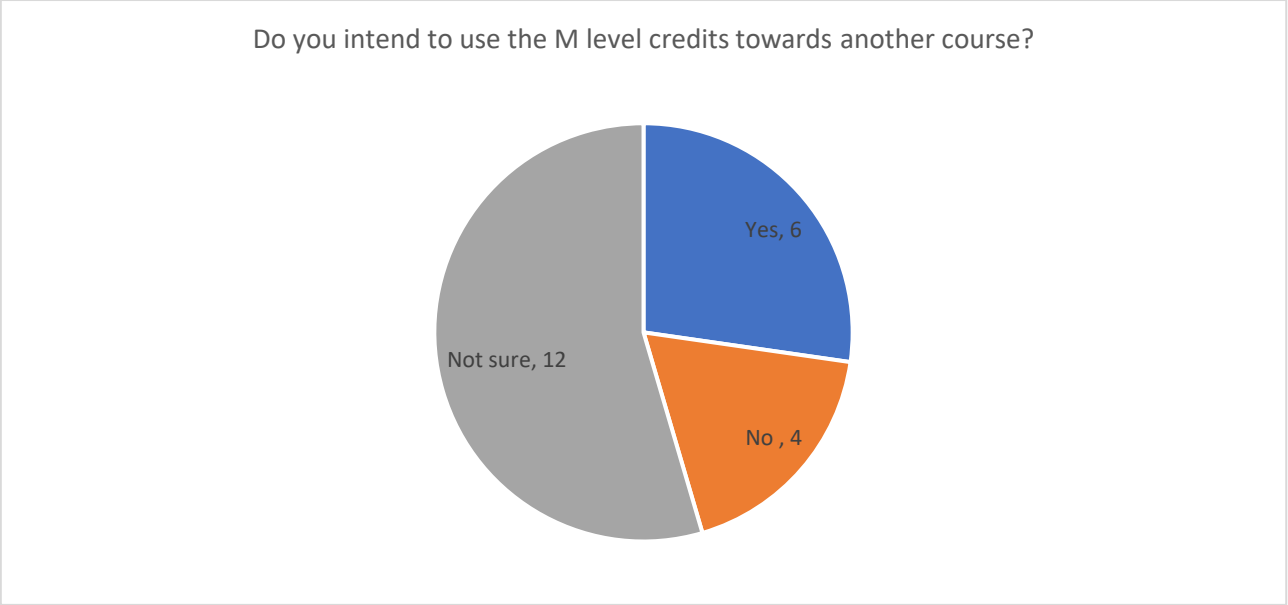


Figure 149

A key theme in people's feedback was that the accreditation of the course was not viewed as particularly 'necessary', and in some cases, was found to be an unnecessary burden:

> *"The learning is the important matter. The accreditation is a nice bonus but the work involved is a burden. I may feel differently at the end of the process but currently I don't see how it's added to what I've gained from the programme."*

> *"The assignments feel somewhat tokenistic and don't add anything to the course."*

> *"The two pieces of writing being submitted after the graduation is not helpful for me as it feels the course has finished but there's work to do"*

> *"I don't think it's necessary. I would have been happy to not have Masters credits as I may not use them"*

> *"I wasn't aware of this prior to starting the course and it did not feel like an important aspect to me. I have found that the assignments [...] have also taken up a lot of time which has taken away from being able to pursue other areas of development which I have been able to identify during the course and could have used the study to focus on"*

Three participants also highlighted that they already had a Masters level qualification and so would not need the credits.

However, some participants described the value of this aspect of the course, for example in terms of its potential utility in the future:

"Good to be able to build some masters credits from a programme like this - encourages you to carry and do more post grad modules"

"I think that the assignments are very practical in helping us to focus on our self-development and research career plans"

Another participant reflected that it perhaps *"give(s) the program credibility"* and another noted that the *"process of academic work has certainly been helping for reflection, piling all the content together and helping me focus"*.

As mentioned in the previous section, some participants described a lack of clarity and information in relation to the accreditation and assessments during the residential. One person expressed a little disquiet with the upcoming programme in the post-residential evaluation in relation to being a "little anxious about the assessments" and others suggested:

"More on what is required academically at the beginning of the course"". I feel that we should be more focused on what is actually required with the assignment and the structure of it. It would be useful to see an example of what the university is looking forward.... maybe an example essay!"

"Clearer explanation of assignment early on"

The uncertainty around the assignments remained for one participant in the mid-way evaluation where there was concern over how they would be measured against the stated objectives. WhatsApp also reflected ongoing uncertainty about assignment submission deadlines and what the content of the submissions should include.

Two participants highlighted issues with Canvas and suggested a slight rearrangement of the course content to support the assignment work:

"Access to Canvas and module information sooner into the programme would have been beneficial with a simpler breakdown of what was needed".

"Canvas access was a long wait, would have helped having all material on canvas earlier on"

"More of the self-assessment / personality types / leadership work early on as I found this useful to help plan assignments"

Two participants pointed out that they were unaware of the accreditation aspect of the course when they enrolled onto the programme

4.2.8. Programme organisation and approach

When asked if anything could have been improved in the residential, 11 respondents responded that there was nothing to improve and/or left positive comments. Amongst these comments, were compliments for the "brilliant team", the 'innovative' approach and the organisation:

> *"The residential was very well planned and organised. Looked after us very well for the 2 days".*
>
> *"It has all been so structured and fabulous that I wouldn't change anything so far! Thanks!!"*
>
> *"Good balance of info provision and self-directed work"*
>
> *"well-resourced and innovative".*
>
> *"I really enjoyed the whole experience as is clear from my feedback. I truly believe the programme is an inspirational and novel way to deliver such material and is a beacon of hope during what has been some very dark times. Thank you all"*
>
> *"The team are amazing and the taught content is delivered in a unique, innovative way[30]"*

One participant also complimented the "adaptability" of the residential programme in allowing people to join remotely and remain "involved" in the experience.

There were very few suggestions for improvement in terms of the organisation and administration of the programme. As aforementioned earlier in the report, negative comments were primarily made regarding participants' issues with selecting and accessing a mentor and delayed access to information regarding the accreditation and assessments. Following the residential, one participant requested 'fewer handouts', whilst another wanted 'slide print outs […] to enable note taking'.

One participant also queried the application process given that they felt one individual on the course was not suited to the programme:

[30] https://local.nihr.ac.uk/news/greater-manchester-health-professionals-reflect-on-invaluable-crn-funded-development-programme/30283

“I appreciate you cannot determine how someone feels and they may have just applied for the wrong course if it is truly below their level of experience. I'd only perhaps reflect was this evident from the individuals experience in their application? Is it so evident that they are more advanced in their professional development and would their place on the course have been better used by someone who would appreciate the amazing opportunities it offers? That said, the individual may just be arrogant and may have applied for a research development pathway that is not suited to them”

5. Conclusions

The following section looks at the extent to which the ECRDP has been successful in achieving its aims and outcomes and uses the evaluation results to refine the TOC for the programme.

5.1. Did the ECRDP achieve the expected outcomes and to what extent?

- *To understand the drivers, policy context and value of research in the NHS and across the NWC Region*

The evaluation provides evidence that participants increased their understanding of the policy context and drivers of research in the NHS and the NWC region over the course of the ECRDP. All evaluation respondents (bar one) agreed that they understood the policy context and drivers of research within the NHS and across the NWC following completion of the programme. However, the results suggest that there is still a degree of uncertainty amongst a sub-set of participants with regards to their understanding of the drivers and policy context of research in the NHS.

- *To understand the role of the NIHR CRN NWC and how to involve patients and organisations in research*

The evaluation results suggest that participants improved their understanding of the role of the NIHR CRN over the course of the ECRDP, with all respondents (bar one) reporting that they understood the role of the NIHR CRN following completion of the programme. The 'introduction to the NIHR NWC CRN' ranked as the second most valuable element of the residential, with participants benefiting from a better sense of the support available through the CRN for progressing their research careers.

No specific evaluation measures were used to assess participants' understanding of how to involve patients and organisations in research, however, overall scores against the 'engagement, influence and impact' RDF domain increased over the duration of the programme (see below).

- *To understand how to engage and influence others to ensure the wider impact of research*

There is evidence that participants increased their knowledge, understanding and skills to maximise the impact of research through engaging and influencing others. Upon completion of the programme, all respondents agreed that they had the requisite knowledge, understanding and skills in this area following completion of the programme.

As noted above, overall scores against the 'engagement, influence and impact' RDF domain also increased. Of additional relevance to this outcome, is the increase in scores against the 'communication and

dissemination' RDF sub-domain, which showed the highest percentage increase across all the RDF sub-domains.

- *To ensure the development of the knowledge, intellectual abilities and methodologies to do and lead research.*

Evidence of development in this area is reflected in the overall increase in self-assessment scores against the 'knowledge and intellectual abilities' RDF domain, which showed the second largest percentage increase across all the RDF domains.

Development of the knowledge, intellectual abilities and methodologies to do research might also be partially reflected in the results demonstrating an overall increase in participants' confidence in conducting research.

- *Have both theoretical knowledge and some practical application of research methods*

Within the 'knowledge and intellectual abilities' RDF domain, the 'knowledge base' sub-domain contains descriptors related to theoretical knowledge and practical application of research methods. An increase in scores against this sub-domain provides evidence that participants have increased their knowledge and experience in this area over the course of the programme. It is, however, important to note that the ECRDP facilitators underlined that this was not a focus of the programme. Theoretical knowledge and practical application of research methods remain a key development priority for a number of participants following completion of the programme.

- *To understand the factors/dimensions that create and enable leadership in research.*

There is evidence that participants improved their understanding of the factors that create and enable leadership in research in the overall increase in scores against the questionnaire item measuring participants' understanding of the knowledge, attributes and skills required to succeed as a research leader. The extent of change against this item was one of the most pronounced across all the evaluation measures. By the end of the programme all respondents agreed that they now understood the attributes required to succeed as a research leader.

Some of the comments made in the mid-way and post-programme evaluations reflected how some participants' understanding of the key attributes of a successful research leader had changed during the course of the programme. A common theme in these comments was a sense that many participants now recognised a broader range of characteristics integral to being a research leader, with a focus on the importance of "personal qualities" and social skills for working with and 'inspiring' others.

- *Have increased skills and confidence in their abilities to lead*

Evidence of increased skills and confidence in participants' abilities to lead can be found in the marked increase in participants' overall self-assessment of their confidence in leading research. However, the results suggest that a sub-set of participants are uncertain of or do not yet have sufficient confidence in their abilities to lead research. This result may partially reflect that leading research is not a significant part of many participants' current roles, limiting the opportunities for participants to develop their knowledge, skills and confidence in this area.

Evidence of increased skills and confidence in their abilities to lead might also be found in the increase in scores against the RDF sub-domain 'working with others', which includes the 'influence and leadership' descriptor.

Interestingly, development priorities related to 'influence and leadership' were the third most frequently cited by participants in the pre-programme evaluation, but there were no development priorities aligned to this descriptor in the post-programme evaluation. This result might suggest that some participants felt that their understanding in relation to this area had improved sufficiently during the programme to prioritise other areas of development.

- *An understanding of information literacy and management, research income and funding generation*

There is evidence for improved understanding of research information management processes in the increase in overall scores against this item, although the results suggest that some participants still do not have sufficient understanding of this area. A focus on participants' understanding of information literacy was not assessed in this evaluation. Additional evidence for improved understanding in this area may be reflected in the overall increase in scores against the 'knowledge base' subdomain which contains an 'information literacy and management' descriptor.

Participants' understanding of research income generation and funding processes showed the largest increase across all the evaluation measures over the duration of the programme, with scores in relation to the finance, funding and resources' RDF sub-domain also showing the fourth largest percentage change across all RDF sub-domains. However, the results from the evaluation questionnaires suggest that a sub-set of participants require further development in this area.

- *Have knowledge of the standards, requirements and professionalism to do research*

Evidence demonstrating that participants increased their knowledge of the standard, requirements and professionalism to do research is found in the increase in overall scores against this item in the evaluation, with the majority of participants reporting that had this knowledge following completion of the programme. Furthermore, the domain associated with this developmental area ('research governance and organisation') showed the largest overall percentage increase across all the RDF domains.

- *To identify and fulfil personal development needs/learning outcomes*

Overall, there was evidence to suggest that participants had increased their understanding of how to identify and prioritise their research development needs. Similarly, the evaluation results suggest that participants are increasingly active in working on identifying and prioritising these needs. Following completion of the programme, all respondents (bar one) agreed that they had the knowledge to identify and prioritise their research development needs and were actively doing so. Of relevance to this outcome, there is also evidence of an increase in participants' confidence to articulate their research knowledge, skills and capabilities, although the results suggest that further development in this area might be needed.

The RDF sub-domain of relevance to this outcome, 'professional and career development', also showed the second largest percentage increase across all the RDF sub-domains.

In addition, participants were asked to identify their development priorities as part of the evaluation prior to and following completion of the ECRDP. At the end of the course, there was an increased emphasis on prioritising development in relation to networking, career management, and communication methods as well as a continuing focus on theoretical knowledge of research methods. With regards to 'career management', participants identified next steps in their career development in terms of accessing further development opportunities and/or qualification such as internships, PhDs, fellowships or post-doctoral programmes.

The majority of respondents agreed that their development priorities had changed since the start of the programme, with comments pointing to a greater awareness of the attributes of being a successful researcher and/or research leader being used to inform development plans.

Although it is too early to assess whether participants' have fulfilled their development needs (see below), some of the development priorities specified by participants prior to the programme decreased in frequency over the course of the ECRDP, which might suggest that some of these initial development needs had been, at least, partially addressed. The starkest example in this regard is that none of the respondents identified development priorities in relation to 'influence and leadership' following the programme compared to this being one of the most cited development areas prior to the start of the course.

- *To develop aspirational goals and an initial 3-year career plan to achieve leadership potential.*

Prior to the programme, a number of participants described their research career aspirations in terms of specific qualifications, training programmes and/or specific research roles. Others articulated more general ambitions to contribute to and/or promote research within their current roles. Following completion of the programme, there was a noticeable increase in the number of respondents describing becoming a 'clinical academic' and/or aspiring to complete a PhD.

There is no evidence that participants completed a 3-year plan, although a 5-year career plan was completed as one of the assignments for the course (see below).

- *Have developed a personal career plan with set short-term goals (to be achieved in one year or less) and long-term goals (to be achieved in one to five years).*

Participants were asked to develop a 5-year career plan rather than a 3-year plan as one of the assignments for the programme. Analysis of the assignments was outside the scope of this evaluation, with any assessment of whether participants have achieved their leadership potential in three years' time requiring additional long-term evaluation.

- *To engage with current Principal and Chief Investigators in the NWC region and understand their role and its impact*

Evidence supporting this outcome can be found in the increase in scores against participants' self-reported engagement with principal and/or chief investigators in their region, with this questionnaire item showing the second highest increase across all the evaluation measures. Although most participants 'strongly agreed' that they now engaged with PI and/or CIs within their region following completion of the programme, there was a wide distribution of responses suggesting that some participants are not yet engaging with these individuals.

Following completion of the programme, all respondents agreed (bar one) agreed that they now understood the roles and responsibilities of PIs and CIs in the post-programme evaluation, with an overall increase in participants' self-reported understanding of this area.

- *Have developed links with the R&D director and department in their employing Trust*

There is evidence to suggest that participants have developed links with the R&D director and department in their trusts. Most participants 'strongly agreed' that they engaged with these departments following

completion of the programme, although there was substantial variation in responses suggesting some participants had still not developed adequate links to their R&D departments and directors.

There was also an increase in overall scores measuring participants' understanding of the roles and responsibilities of NHS R&D departments, with all respondents reporting that they understood these roles and responsibilities following completion of the programme.

- *To create a personal network that will progress and promote the research leadership journey*

Networking with others on the course ranked as the most valuable aspect of the residential for participants. All respondents reported feeling part of a community of practice following completion of the programme, with many people reflecting on how much they valued this aspect of the programme in terms of peer support from 'likeminded' people with a shared interest in research and developing a research career. Coaching groups, including the coaches, also served a similar role, with all respondents (bar one) reporting that coaching had helped with their overall development.

All respondents reported having people to talk to about their researcher development needs following completion of the programme, with an overall increase in scores against this item.

- *Have a foundation network of key people and organisations to support and enable their career plan*

In addition to the community of practice at the core of the ECRDP (including participants, coaches and facilitators), the programme also enabled participants to build a network with a wider group of people and organisations, for example, through introducing a range of external speakers throughout the duration of the course. All respondents agreed that the external speakers had been useful in their development.

Comments from the evaluation reflected the value placed by participants on the programme's focus on networking. Participants described how networking had helped open up opportunities for shaping and enabling their research career trajectories. Access to mentors also played a similar role, with participants describing how their mentors had helped to widen their contacts, open up new opportunities and/or supported them in taking the 'next step' in their research careers. The majority of respondents agreed that mentoring had helped in their overall development.

- *Be more responsive and alert to opportunities for networking and developing reputation and esteem*

There is evidence that participants are more responsive and alert to opportunities for networking and developing reputation and esteem, for example in participants' reflections of their experience of the ECRDP,

in particular in relation to the workshop on 'social media and building your personal network', Overall, there is evidence from participants' comments that the programme encouraged, inspired and gave them confidence to start networking both on social media and in person.

As described above, 'networking' also gained in prominence in terms of participants' development priorities following completion of the programme. In addition, participants comments on how their understanding of the key attributes of a successful research leader and researcher had changed often reflected a heightened recognition of the importance of networking.

Although there was only a small increase in participants scoring against the questionnaire item relating to networking with R&D colleagues within and/or outside their organisations, the majority of respondents agreed that they were actively networking in the post-programme evaluation. Furthermore, a baseline measure for this item prior to the start of the programme was not included in the evaluation. Networking is also included as one of the descriptors within the 'professional and career development' RDF sub-domain, which, as aforementioned, showed the second largest percentage increase across all the RDF sub-domains.

Although not specific to networking, the evaluation also provides evidence of an increase in participants' self-assessment of their knowledge of and engagement in researcher/research development opportunities available in and outside their organisations. Participants' knowledge of opportunities available through other organisations showed the third highest increase of all the evaluation measures. The results suggest, however, that some participants would benefit from more information regarding potential opportunities in other organisations. Accessing these opportunities also showed a marked increase in overall scores, although following completion of the programme, the results suggest that some participants may have had little to no engagement with development opportunities in other organisations over the time period of the course. Given participants' clinical commitments and work on the ECRDP, this is perhaps unsurprising.

Evidence of increased knowledge of and access to opportunities within their own organisations was also reflected in an increase in overall scores against the relevant questionnaire items. However, following completion of the programme, the results suggest that a subset of participant have had little engagement with these opportunities, which may also reflect participants' existing work commitments and participation in the ECRDP. Although most participants now know what development opportunities are available within their organisation. there may be limited opportunities in some participants' employing organisations.

- *To develop reflective practice skills*

There was some evidence that participants had developed their reflective practice skills during the residential, with all participants reporting that they practised self-reflection following completion of the programme.

However, scores against this questionnaire item showed the lowest percentage increase across all the evaluation measures.

The results also suggest a slight increase in respondents' encouragement of self-reflection in others.

- *Have a completed reflective diary*

Completing a reflective diary was a requirement of the course. There is no data available to evidence whether all participants produced a reflective diary, however all participants had to produce a 2500-word reflective summary on their experiences, learning and development based on the RDF framework for one of the course assignments. As noted above, an analysis of the assignments is outside the scope of this evaluation.

- *Develop the personal qualities and approach to be an effective researcher.*

Evidence for participants developing the personal qualities and approach to be an effective researcher is reflected in the increase in self-assessment scores against the RDF sub-domain of 'personal qualities', although this was the lowest percentage increase across all sub-domains.

'Self-confidence' is included in the sub-domain of 'personal qualities' and, as described above, there is evidence that, overall, participants increased their confidence in relation to conducting and leading research as well as articulating their research knowledge, skills and capabilities, although some responses were still quite tentative in these areas.

All participants agreed that they had confidence in their capabilities and developed confidence in others (bar one), and there was an overall increase against both these questionnaire items.

5.2. How does the programme work? A refined theory of change

There is evidence in this evaluation to support the theory that the residential weekend acts as a catalyst within the overall mechanism of change for the programme. The evaluation findings suggest that the residential environment (in tandem with WhatsApp, 'fun and games' and, at a smaller group level, the coaching) created the conditions for people to participate in a shared experience, in which many people felt 'outside their comfort zone'. With the aid of supportive facilitation, participants used this shared experience as a foundation to start getting to know each other, networking and developing bonds based on shared interests in research and developing a research career. As relationships began to form within the group, participants learnt from others' experiences and perspectives and were able to offer peer support as they embarked on their learning together. This process contributed to an emerging community of practice within

the group, which consolidated over time. In this way, the ECDRP works in a similar way to the approach used in the NHS R&D NW's 'Leading Cultures of Research and Innovation' Programme, the evaluation of which includes a more theoretically-informed description of the mechanisms of change at work in building a nascent community of practice in this context.

The residential and the CoP also play a key role in sparking the motivation, excitement, inspiration, reassurance and confidence to drive participants to pursue research careers through building professional networks and accessing available opportunities. In particular, there is a sense that the residential helps participants to think more positively about the possibilities and potential for developing a research career, which become seen as something "more achievable". Relatedly, there is a widening of perspective on the kinds of skills and qualities needed to be a researcher and research leader.

As the programme progresses, access to coaching, mentoring and a range of external speakers are an important part of maintaining this 'spark', aided by peer support and shared learning within the community of practice. Through these programme interventions, the ECRDP also supports development of 'personal qualities' through improving confidence, self-reflection and self-awareness.

Starting with the residential and continuing throughout the programme of workshops, development against the 'professional and career development' RDF sub-domain is thus a key mechanism through which this programme effects change by increasing:

- understanding of the attributes of successful researchers and, in particular, research leaders, with an emphasis on the development of 'personal qualities', networking and the factors that create and enable leadership.
- knowledge of and access to developmental opportunities
- understanding of and engagement with PIs, CIs and/or R&D directors and departments
- networking and the widening of participants' personal and professional networks, including people to talk to about their researcher development needs
- working on and understanding how to identify and prioritise development needs

Progress against the 'professional and career development' sub-domain was central to participants expanding their professional networks and clarifying their development priorities and career aspirations, ultimately contributing to the refinement of their personal career plans. In combination with the 10 workshops, participants also developed knowledge, skills and personal qualities to do and lead research aligned to the remaining three RDF domains, which also informed the trajectory of their professional and career development. In addition, an emerging outcome from the coaching for some participants was the development of coaching skills in line with the 'career management' descriptor in the professional and career development sub-domain.

The outcomes from the ECRDP programme are now contributing towards increased participation in and/or promotion of research and applications for further development opportunities such as the HEE/NIHR Integrated Clinical Academic Internship with longer-term ambitions for many of the participants to become clinical academics.

Overall, the evaluation results provide strong evidence from multiple data sources to support the overarching causal chains outlined in the initial theory of change as well as providing additional insight into the mechanisms of change to further refine the programme theory.

See Annex 4 for overview of the revised theory of change.

6. Recommendations and lessons learnt

Overall, the ECRDP programme was very well-received, with all respondents to the post-programme evaluation agreeing that the programme had met their expectations. Attrition from the course was due to personal circumstances rather than any issues with the programme. There were very few suggestions for improvement, with the overall organisation, structure, approach and facilitation of the course praised throughout. Some of the comments left by participants point to this being an exceptional course in terms of its ability to inspire, support and motivate participants to develop their research careers, with evidence that all the stated objectives have been met.

The residential and its component parts (the 'fun and games', the speakers, the 'away from it all' environment in an undisclosed location, supportive facilitation and the WhatsApp introductions) form an essential part of the overall functioning of the programme and should remain in any future iterations. In particular, the residential plays a pivotal role in creating the conditions under which the cohort coheres as a community of practice and generates the motivation, inspiration, excitement, reassurance and confidence needed to drive participants to develop their research careers through building professional networks and accessing available opportunities. The community of practice provides an important source of peer support and shared learning as the programme progresses, with participants that fully engage with and participate in the community appearing to get the most out of the programme.

Coaching and mentoring also forms an essential part of the ECRDP experience, with participants often highlighting these elements as some of the most valuable parts of the course. Mentoring was found to be especially helpful in terms of supporting participants to identify and prioritise their development needs. In terms of improvements, some participants appeared to struggle to identify a mentor, partly due to being unsure about their 'direction'. In addition, four participants highlighted difficulties in terms of their mentor's availability. Further support and advice with regards to choosing a mentor, the mentor's role and managing the mentoring relationship may be beneficial during the residential. Comments describing logistical difficulties and limited personal benefit from the coaching might be usefully followed up in the impact evaluation to explore what further improvements could be made to this aspect of the course.

The RDF self-assessment was also a valued part of the residential experience and a number of comments described the benefits of this framework in helping people to identify and prioritise their development needs. However, there was very little time for participants to get to grips with this unfamiliar and complex tool and complete their self-assessments during the residential. Some participants also queried the applicability of this HE-based framework to clinical research, which is likely to have affected the accuracy of participants' scoring. A review of the Vitae RDF through the lens of clinical research may help to make this framework more closely tailored to the developmental needs of health professionals.

Participants' understanding of the RDF may also have been supported by a clearer explanation of how the course content linked to the RDF domains. A number of comments in the evaluation suggested that a more explicit connection between the RDF and the workshops sessions would have been useful from the outset, particularly in terms of providing a clearer understanding of the aims and objectives of the programme (see below). In terms of completing the RDF self-assessment, it may be helpful for this exercise to be completed in a separate session outside the residential, for example, through a virtual workshop. This would allow more time to be dedicated to the self- assessment process and this very personal and individual activity would not then take time away from the critical social components of the residential.

The introduction to the NIHR NWC CRN was highly valued by many of the participants on the course in terms of getting a better sense of the wider research landscape and the opportunities available, particularly given that there was a lack of familiarity with the role of the NIHR prior to the start of the programme. However, given the unfamiliarity, complexity and importance of this subject for participants, some recommended that this session would have been useful as one of the opening workshops on the first day of the residential. Another participant requested the use of additional visual aids or other tools to help the cohort grapple with the complexity of the structure and function of this organisation. A more upfront and extended session on the NIHR NWC CRN on the first day of the residential may help to support participants' understanding of this area. To allow more time to be dedicated to this topic during the residential, the 'learning styles' session could perhaps be run outside the residential weekend.

Given the value placed on the external speakers by participants, it is recommended that this continues to be an integral part of the programme, perhaps expanding the variety of speakers to include more AHPs involved in research.

It appears that there was still some uncertainty with regards to the aims and objectives of the programme following the residential, although a number of evaluation respondents noted that they felt that these were much clearer following the residential weekend. As noted above, more explicit connections between the content and the RDF domains may help in this regard. There was also a suggestion that more upfront information regarding expectations to network and implement their learning throughout the duration of the programme would help participants to manage their workload as well as colleagues' expectations of what they would be required to do within the workplace.

There was also a lack of clarity for some participants with regards to the assessments and accreditation requirements. Earlier access to Canvas was also requested. To allay some of the uncertainty, and a certain degree of anxiety around the assessment, it would perhaps be helpful to provide more information about this aspect of the course in the initial stages of the programme. There also appears to be some uncertainty

about the courses and modules towards which the participants could use their UofL credits, which might be helpfully clarified during the programme.

For many participants, there was a sense from the feedback that the assignments associated with the accreditation of the course were an unnecessary burden, particularly for those who already had Masters level qualifications. Although some people did value this aspect of the course, it is worth considering what additional benefits the accreditation offers to the success of the ECRDP in terms of the stated aims and objectives.

Lastly, despite all evaluation measures demonstrating an increase over the duration of the programme, some of the post-programme responses suggest that some participants would benefit from further support in some key areas (including for those items that demonstrated considerable change overall). These areas include;

- Understanding of research income generation and funding processes
- Understanding of research information management processes
- Understanding of the policy context and drivers of research within the NHS
- Engaging with principal and/or chief investigators, R&D departments and directors and R&D colleagues outside their employing organisation
- Knowledge of and engagement with development opportunities available through other organisations
- Confidence in conducting and leading research, and articulating individual research knowledge, skills and capabilities

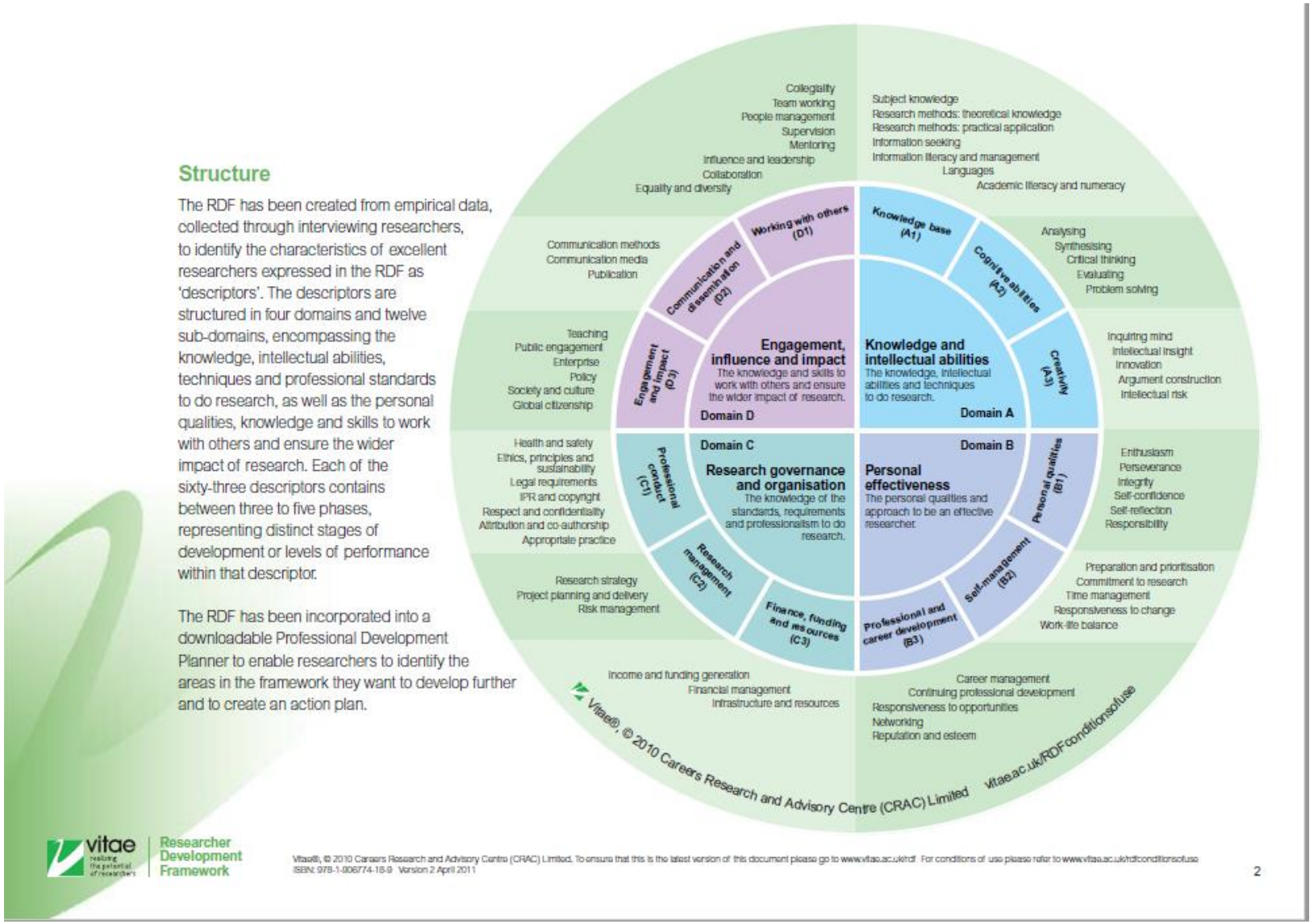
6.1. Longer-term impact

Insufficient time has passed to assess the longer-term impact of this programme, although follow up with participants in 6-12 months offers the opportunity to assess participants' progress against the short-term goals within their career plans. There is also potential at this stage to explore the extent to which differences in participant' organisational support (see section 4.1.2) has enabled and/or hindered their ongoing career development and capacity to take up further development opportunities. Exploration of how prior research experience and professional roles might influence how participants progress might also be explored further. In addition, targeted interviews with participants who did not report marked improvements against particular evaluation measures (e.g., those who 'disagreed' with statements in the post-programme evaluation) might help to elucidate why the programme did not work as well for these individuals in relation to these specific aspects.

Follow up with participants further into the future would be able to identify whether the programme contributed to increased applications from NMAHPs onto the CRN NWC Research Scholars' programme

and increased uptake of roles as PIs and/or CIs. A longer-term evaluation would also be able to start exploring whether individual research careers had impacted on building organisational research capacity and opportunities for people to participate in high quality clinical research, ultimately contributing to improved patient outcomes and population health.

Annex 1: Vitae RDF Framework



Taken from Vitae® (2010) Careers Research and Advisory Centre (CRAC) Limited.

Annex 2: Questionnaires

Pre-programme questionnaire

The pre programme questionnaire consisted of the following sections:

1. Research experience, understanding and confidence
    a. Participants' self-reported agreement with statements addressing:
        i. Confidence and current experience in conducting and leading research
        ii. Understanding of the knowledge, attributes and skills required to succeed as a researcher and research leader
        iii. Confidence to articulate individual research knowledge, skills and capabilities
    b. Qualitative questions asking participants to identify:
        i. The key attributes of a successful researcher and research leader
2. Research processes and practices
    a. Participants' self-reported agreement with statements addressing:
        i. Understanding of research income generation and funding, and information management processes
        ii. Understanding of the professional standards and requirements for the effective management of research
        iii. Having the knowledge, understanding and skills to maximise the impact of research through engaging with and influencing others
3. Policy context and research networks
    a. Participants' self-reported agreement with statements addressing:
        i. Understanding policy context and drivers of research in the NHS and the North West Coast
        ii. Understanding of the role of the NIHR Clinical Research Network in the North West Coast
        iii. Understanding of the roles and responsibilities of principal and chief investigators, and NHS research and development departments
        iv. Engagement with principal and/or chief investigators, and NHS research and development departments and/or directors
4. Individual attributes
    a. Participants' self-reported agreement with statements addressing:
        i. Confidence in their capabilities and development of confidence in others
        ii. Practising self-reflection and supporting self-reflection in others
5. Researcher development
    a. Participants' self-reported agreement with statements addressing:

        i. Knowledge of how to and actively working to identify and prioritise their research development needs
        ii. Having people to talk to about their researcher development needs
        iii. Knowledge of and engagement with researcher/research development opportunities available through their and other organisation/s
    b. Qualitative questions asking participants to identify:
        i. Their top 3 development priorities in conducting and/or leading research and research career aspirations
6. Organisational support
    a. Participants' self-reported agreement with statements addressing:
        i. Organisational support for staff to build skills and confidence in research, to develop appropriate methods for disseminating research to maximise impact, to conduct research that is relevant to service user and practice concerns, and maintain and extend newly acquired research skills and experience
        ii. Organisational infrastructure to support research

Post-residential questionnaire

The post-residential questionnaire consisted of the following sections:

1. Their experience of the residential
    a. Selection of up to 6 aspects of the residential programme from a pre-defined list that they found most valuable and enjoyable and qualitative questions asking for further detail on why they chose these elements.
    b. Qualitative questions asking participants to identify and explain:
        i. Elements of the residential that inspired, surprised and/or challenged them.
        ii. What they learnt about themselves
        iii. How they felt during the residential and whether these feelings changed over time
        iv. Any improvements to the residential
2. Emerging outcomes/researcher development
    a. Participants' self-reported agreement with statements addressing whether the residential:
        i. Developed their understanding of the key attributes of a successful researcher and/or research leader
        ii. Changed their development priorities
        iii. Opened them up to new ideas and perspectives
    b. Qualitative questions asked participants to provide further detail on the above scores.
3. Moving onto the rest of the course/programme feedback
    a. Participants' self-reported agreement with statements addressing:
        i. Understanding of the aims and objectives of the ECRDP

ii. Whether the residential had changed their expectations about the rest of the course
iii. Looking forward to the rest of the programme
iv. Feeling part of a community of practice with other participants on the course

b. Qualitative questions asked participants to provide further detail on the above scores and any further reflections on their experience of the residential and/or general comments.

A mid-way evaluation questionnaire

The mid-way evaluation questionnaire consisted of a repetition of the following questions from the pre-programme and post-residential questionnaires together with some additional questions (in italics)

1. Research understanding and confidence
    a. Participants' self-reported agreement with statements addressing:
        i. Confidence in conducting and leading research
        ii. Understanding of the knowledge, attributes and skills required to succeed as a researcher and research leader (*qualitative questions also asked participants to describe how their understanding had changed (if at all) since the residential*).
        iii. Confidence to articulate individual research knowledge, skills and capabilities
2. Policy context and research networks
    a. Participants' self-reported agreement with statements addressing:
        i. Understanding policy context and drivers of research in the NHS and the North West Coast
        ii. Understanding of the role of the NIHR Clinical Research Network in the North West Coast
        iii. Understanding of the roles and responsibilities of principal and chief investigators, and NHS research and development departments
        iv. Engagement with principal and/or chief investigators, and NHS research and development departments and/or directors
        v. *Networking with research and development colleagues within and/or outside my organisation (aside from the other participants on this course)*
3. Individual attributes
    a. Participants' self-reported agreement with statements addressing:
        i. Confidence in their capabilities and development of confidence in others
        ii. Practising self-reflection and supporting self-reflection in others
        iii. Self-belief in their capabilities
        iv. Their resilience
        v. Self-awareness
        vi. Understanding of their conflict style and different conflict styles
4. Researcher development

a. Participants' self-reported agreement with statements addressing:
    i. Knowledge of how to and actively working to identify and prioritise their research development needs
    ii. Having people to talk to about their researcher development needs
    iii. Knowledge of researcher/research development opportunities available through their and other organisation/s
    iv. Whether their development priorities have changed since the residential
b. Qualitative questions asking participants to identify:
    i. How their development priorities have changed (if at all)

5. *Programme feedback*
    a. Participants' self-reported agreement with statements addressing:
        i. Understanding of the aims and objectives of the ECRDP
        ii. Whether the programme so far has met their expectations
        iii. Whether the content, external speakers, mentoring and coaching has been useful to their development
        iv. Feeling part of a community of practice with other participants on the course
    b. Qualitative questions asking participants to:
        i. Provide further detail on the above scores and any suggestions for improvements
        ii. Identity and explain what has been the most valuable aspect of the course so far
    c. *Multiple-choice quantitative questions to assess:*
        i. Awareness of the courses and modules towards which they can use the University of Liverpool M level credits.
        ii. Whether they might use the credits towards another course
        iii. Preference for a more detailed programme ahead of each workshop

A post-programme questionnaire

The post-programme evaluation questionnaire consisted of a repetition of the following questions from the pre-and mid-way evaluations together with some additional questions (in italics)

1. Research understanding and confidence
    a. Participants' self-reported agreement with statements addressing:
        i. Confidence in conducting and leading research
        ii. Understanding of the knowledge, attributes and skills required to succeed as a researcher and research leader (qualitative questions also asked participants to describe how their understanding had changed (if at all) since the beginning of the programme).
        iii. Confidence to articulate individual research knowledge, skills and capabilities
2. Research processes and practices

a. Participants' self-reported agreement with statements addressing:
    i. Understanding of research income generation and funding, and information management processes
    ii. Understanding of the professional standards and requirements for the effective management of research
    iii. Having the knowledge, understanding and skills to maximise the impact of research through engaging with and influencing others

3. Policy context and research networks
    a. Participants' self-reported agreement with statements addressing:
        i. Understanding policy context and drivers of research in the NHS and the North West Coast
        ii. Understanding of the role of the NIHR Clinical Research Network in the North West Coast
        iii. Understanding of the roles and responsibilities of principal and chief investigators, and NHS research and development departments
        iv. Engagement with principal and/or chief investigators, and NHS research and development departments and/or directors
        v. Networking with research and development colleagues within and/or outside my organisation (aside from the other participants on this course)
4. Individual attributes
    a. Participants' self-reported agreement with statements addressing:
        i. Confidence in their capabilities and development of confidence in others
        ii. Practising self-reflection and supporting self-reflection in others
5. Researcher development
    a. Participants' self-reported agreement with statements addressing:
        i. Knowledge of how to and actively working to identify and prioritise their research development needs
        ii. Having people to talk to about their researcher development needs
        iii. Knowledge of and engagement with researcher/research development opportunities available through their and other organisation/s
        iv. Whether their development priorities have changed since the residential
    b. Qualitative questions asking participants to identify:
        i. Their top 3 development priorities in conducting and/or leading research and research career aspirations
6. Programme feedback
    a. Participants' self-reported agreement with statements addressing:
        i. Whether the programme so has met their expectations

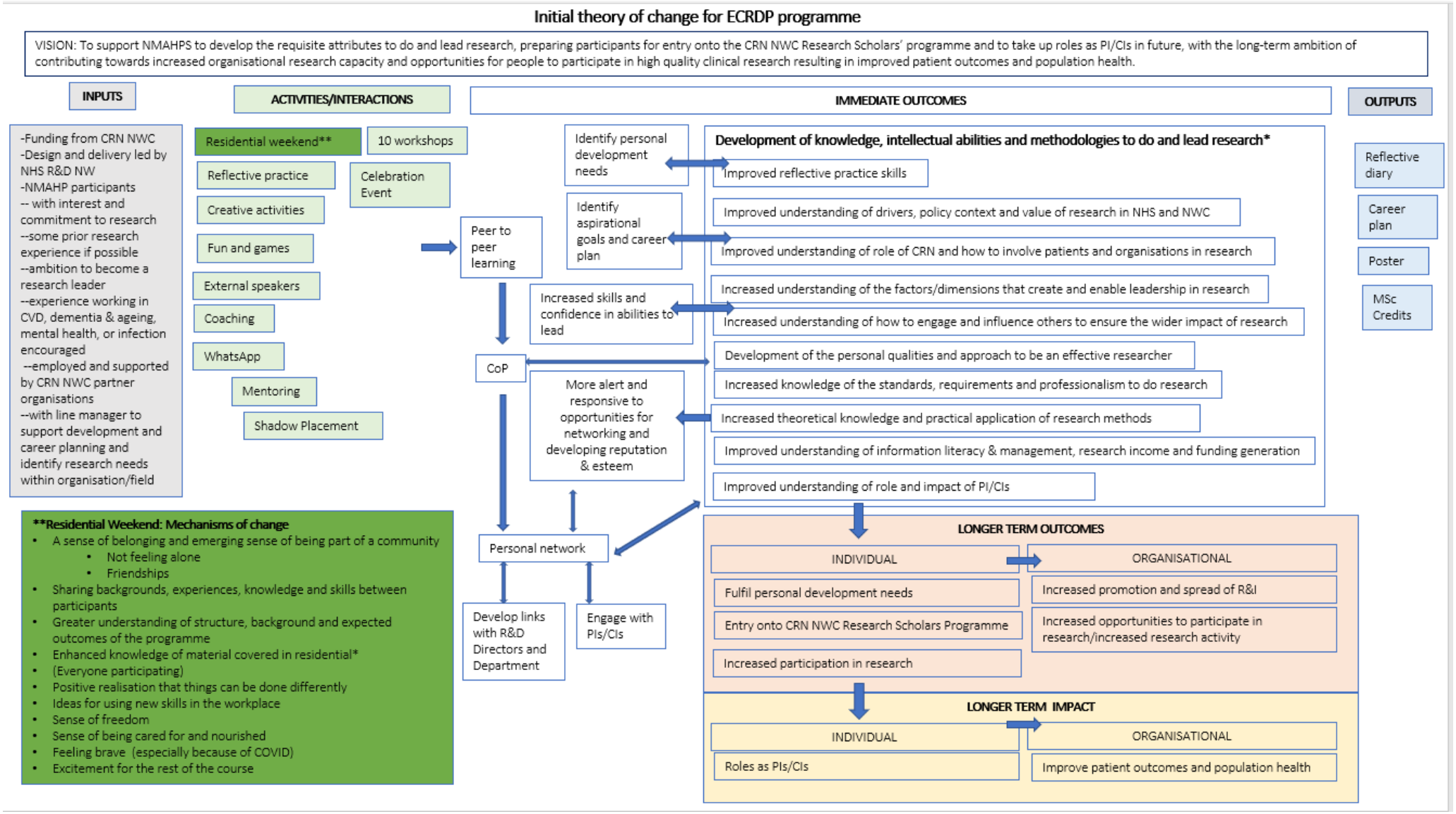
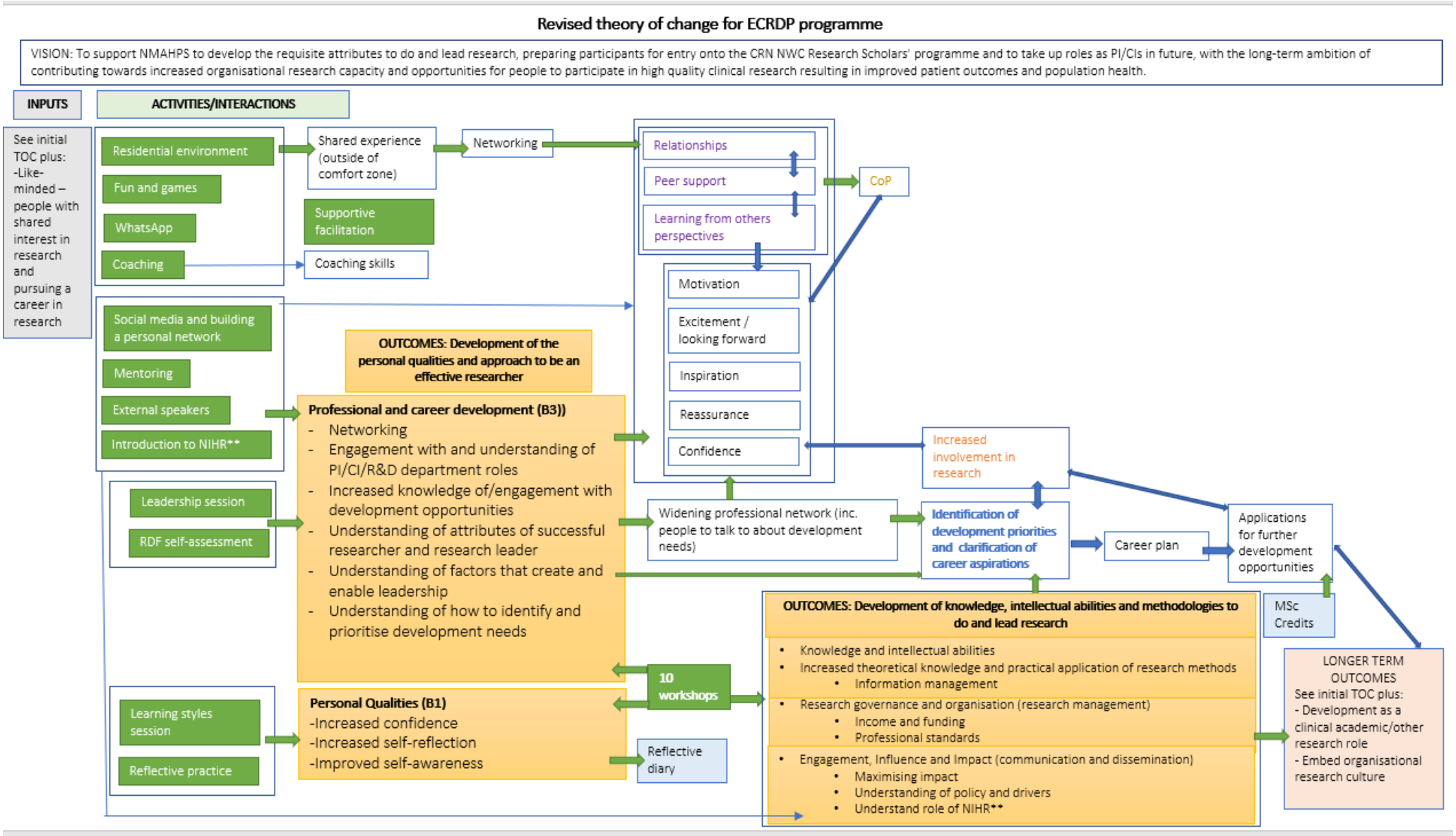
ii. Whether the content, external speakers, mentoring and coaching has been useful to their development
iii. Feeling part of a community of practice with other participants on the course

b. Qualitative questions asking participants to:
    i. Provide further detail on the above scores and any suggestions for improvements
    ii. Identity and explain what has been the most valuable aspect of the course

c. Multiple-choice quantitative questions to assess whether:
    i. The accreditation of the course is important to them and has met their expectations
    ii. They intend to use the credits towards another course

d. Qualitative question inviting any further feedback on their experience of the course accreditation.

Annex 3: Initial theory of change



Annex 4: Refined theory of change