

Evaluation of the Academy of Medical Sciences' Mentoring Programme

Final report

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1. Introduction

This report summarises the findings from an independent evaluation of the effectiveness and impact of the Academy of Medical Sciences' mentoring programme. It draws on the perceptions and experiences of mentors and mentees who have engaged with the programme over the last 10 years.

Background

Founded in 1998, the Academy of Medical Sciences is the independent voice of biomedical and health research in the UK. Its mission is to “help create an open and progressive research sector to improve the health of people everywhere”. The Academy's latest 10-year strategy, *Making medical science work for everyone*,¹ sets out five strategic priorities for achieving this mission, which include supporting the next generation of researchers to reach their full potential. The Academy is working to achieve this objective through the provision of research grants, training, networking opportunities and career development programmes, such as FLIER,² SUSTAIN³ and its main mentoring programme. In addition, by supporting the development and retention of talented researchers, these programmes are contributing to the Academy's wider objectives to influence policy and practice and strengthen the sector's global competitiveness and reputation, priorities which are also reflected in the Government's R&D People and Culture Strategy.⁴

The mentoring programme

The Academy's mentoring programme was first established in 2002/3. It is funded by the Academy's grant scheme and programme funders along with individual contracts with organisations. In the past, these funders included the National Institute for Health and Care Research (NIHR) but are currently, the Medical Research Council (MRC), Medical Research Foundation, Diabetes UK and Versus Arthritis. The mentoring programme is open to specific grant awardees supported by these funders and Academy-funded Newton International Fellows, AMS Professors, and successful and unsuccessful applicants to its Springboard and Starter Grants for Clinical Lecturers schemes. Mentees are paired with Academy Fellows working in a range of biomedical and health disciplines who draw on their expert knowledge and experience to provide one-to-one advice, guidance and support. The purpose of the mentoring is to help early career researchers (ECRs) to overcome work-related challenges, successfully navigate the research landscape and make informed decisions about suitable career pathways. All mentees and

¹ The strategy for 2022-2032 is published online: <https://acmedsci.ac.uk/about/ourwork/strategy-2022-2032> .

² Future Leaders in Innovation, Enterprise and Research (FLIER) programme

³ SUSTAIN is designed to enable female researchers to thrive in independent research careers

⁴ BEIS (2021) R&D People and Culture Strategy: People at the heart of R&D published online https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1004685/r_d-people-culture-strategy.pdf

mentors have access to training and support from the Academy designed to develop their skills and ensure they get the most out of the mentoring relationship.

Evaluation aims and objectives

As it is now 20 years since mentoring programme was first launched, and over a decade since the last evaluation, it is timely to review its effectiveness and impacts. The insight from the evaluation will help to ensure the programme remains fit for purpose in an evolving research and policy landscape, where demand for interdisciplinary research, and collaboration between the public and private sector and academia, is increasing.

The Academy commissioned CFE Research to undertake an independent evaluation of the mentoring programme to help it understand:

- what impact the programme has had over the last decade on mentees, mentors and their organisations
- how the programme has created impact and the ingredients for successful mentoring relationships
- how well the programme is operating compared to other similar schemes and how it could be improved, and
- how best to evaluate the programme in the future.

Approach

To address the evaluation aims, we completed a desk-based review of programme documentation and existing evaluation evidence on the mentoring and associated programmes. We also undertook a series of interviews with key stakeholders involved in its design and delivery, a survey of mentors and mentees who have engaged in the programme since 2012, and follow-up interviews with a sub-sample of survey respondents.

A single online questionnaire was developed to enable those who had participated as a mentee and a mentor to share their experiences of both roles.⁵ The Academy distributed unique survey links created by CFE to 1110 mentees and 511 mentors with valid email addresses on its CRM system.⁶ A total of 465 responses were received, representing a response rate of 28% overall.

- The sample of mentors comprises 91 current mentors (54%) and 78 (46%) who have mentored in the past. Most mentors (87%) have mentored between 1 and 3 mentees.
- Of the 289 mentees who had expressed interest in the programme, 271 had engaged with a mentor at least once (94%). Of those, just under half were still being mentored (48%). Most mentees were Academy grant applicants (53%);

⁵ Three respondents had undertaken both roles.

⁶ The survey was sent to 1145 mentees and 520 mentors. 35 mentees and nine mentors could not be contacted and so were removed from the sample for the purposes of calculating the response rate.

the remainder met a range of criteria, most commonly MRC fellow / award holder (19%) and NIHR funded fellow (12%).

The survey responses were linked anonymously to data on mentors' and mentees' characteristics collected by the Academy.⁷ The demographic characteristics of the samples of mentors and mentees are summarised in Table 1.

Table 1: Respondent characteristics

	Mentors		Mentees	
Gender	No.	%	No.	%
Male	106	68.8	97	49.2
Female	48	31.2	100	50.8
Ethnicity				
White background	116	87.9	71	80.7
Black, Asian and minority ethnic (BAME) backgrounds	16	12.1	17	19.3
Nationality				
British	80	81.6	38	55.9
European	10	10.2	21	30.9
International	8	8.2	9	13.2
Clinical status				
Clinical	80	49.1	91	56.2
Non-clinical	83	50.9	71	43.8

The characteristics of the survey respondents selected to participate in the follow-up interviews reflected the range of characteristics within the sample. A total of six mentors and 14 mentees were interviewed to explore their experience of the programme in more depth. Both samples had equal numbers of males and females. The mentees had participated in the programme between 2014 and 2022, and nine were still being mentored. Four interviewees were from a clinical background and 10 were from a non-clinical background. Of the six mentors, half were from a clinical and half were from a non-clinical background. Most had supported 1–3 mentees (n = 4), one had supported 4–6 mentees and one had supported more than 7 mentees.

⁷ A proportion of the demographic data for both groups is missing. Insufficient age data for mentees was available for inclusion in the analysis.

2. The mentoring process

This chapter explores the reasons why mentors and mentees get involved in the Academy's mentoring programme, the effectiveness of the pairing process, the mentoring training and the nature of mentor/mentee relationships.

Motivations

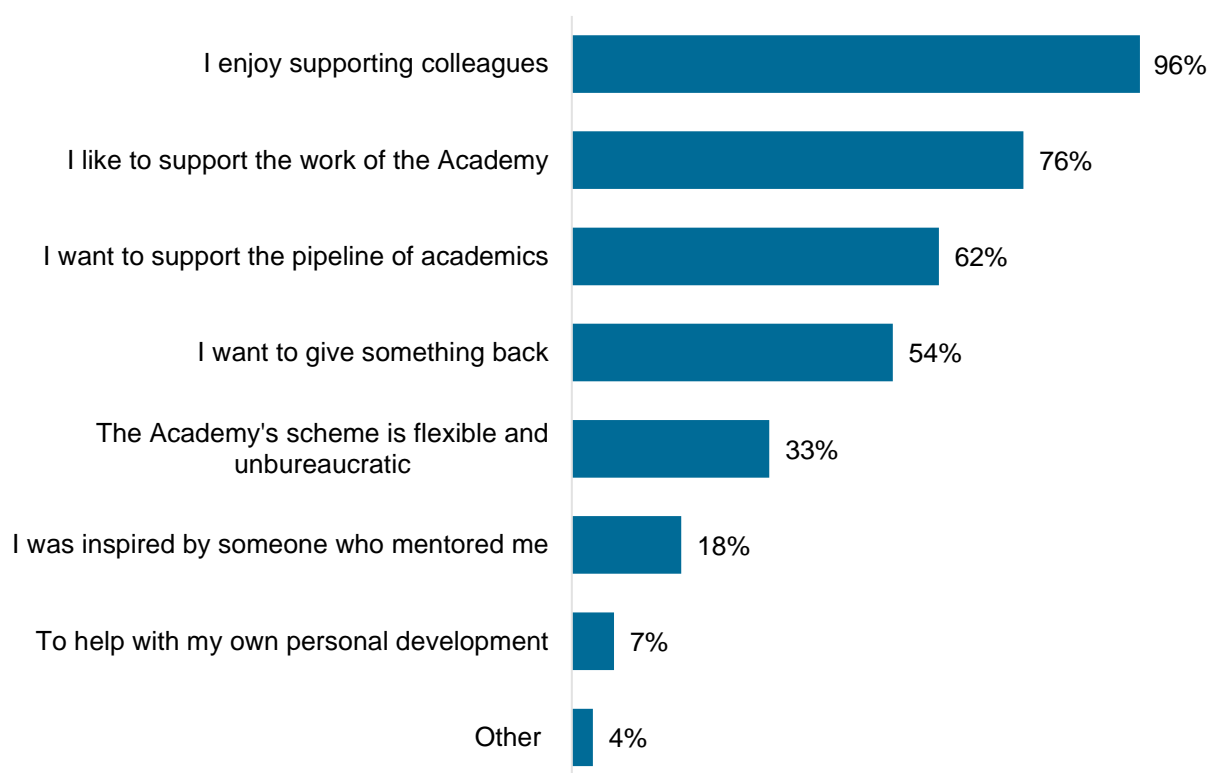
Mentors' motivations

Mentors primarily support the programme for altruistic reasons. Almost all (96%) do the role because they enjoy supporting colleagues at an earlier stage in their career (Figure 1), and for most (66%), this is the main reason why they do it, as one mentor explained:

I've always taken an interest in my junior colleagues. I saw that there was a need for some to have independent, non-judgmental and non-involved support, and I think mentoring is a very good way of providing that, in a professional way.

Mentor

Figure 1: Mentors' motivations for taking part in the Academy's mentoring programme (Base = 168)



Mentors are in the later stages of their careers and are recognised as experts in their fields. Many are also driven to 'give something back' (54%) by sharing their wealth of knowledge and experience and supporting the development of the pipeline of academics (62%).

I wish I had had the benefit of a mentor in my early career, which is why I wanted to participate in supporting young academics.

Mentor (Non-Clinical)

Nurturing and inspiring talented researchers so they are retained and thrive in the sector is a key aim of the programme and critical to the achievement of both the Academy's and the Government's strategic objectives. Encouragingly, mentees often report feeling inspired by their mentor, and as we discuss in more detail later, for some, this has encouraged them to continue on the research pathway.

Very inspirational, a great opportunity...to reflect and bounce ideas with someone who is extremely insightful about the field and whose expertise I greatly respect.

Mentee (Clinical)

Although not the main reason, approximately three-quarters of mentors (76%) are motivated, at least in part, by a desire to support the work of the Academy. Mentors regard their involvement as an integral part of their role as a Fellow and recognise the contribution that the programme makes to the Academy's strategic priorities and the advancement of science more broadly.

Similarly, mentors are not primarily motivated by the benefits they derive from being a mentor, but most agree that being a mentor is a positive experience that gives them a sense of fulfilment (85%).

I find it fulfilling to help more junior academics consider ways to improve their performance. It is also interesting to learn about different disciplines.

Mentor (Non-Clinical)

In addition, they also value the opportunities mentoring affords them to develop a better understanding of the realities and challenges facing ECRs (72%) and other institutional cultures and approaches (64%). Almost three-fifths (58%) also recognise that the programme has supported them to develop networks and skills that can help them in other aspects of their work.

I developed personal relationships and widened my network, became more aware of other institutions' criteria for progression...

Mentor⁸

I have learned to listen and provide advice in a useful way by asking questions rather than telling mentees what they need to do.

Mentor (Non-Clinical)

⁸ If not stated, the clinical status is unknown

I have mentored many individuals over the last 20 years...Their strategies to overcome barriers and to exploit opportunities have helped inform my approach to developing the next generation of academics.

Mentor (Clinical)

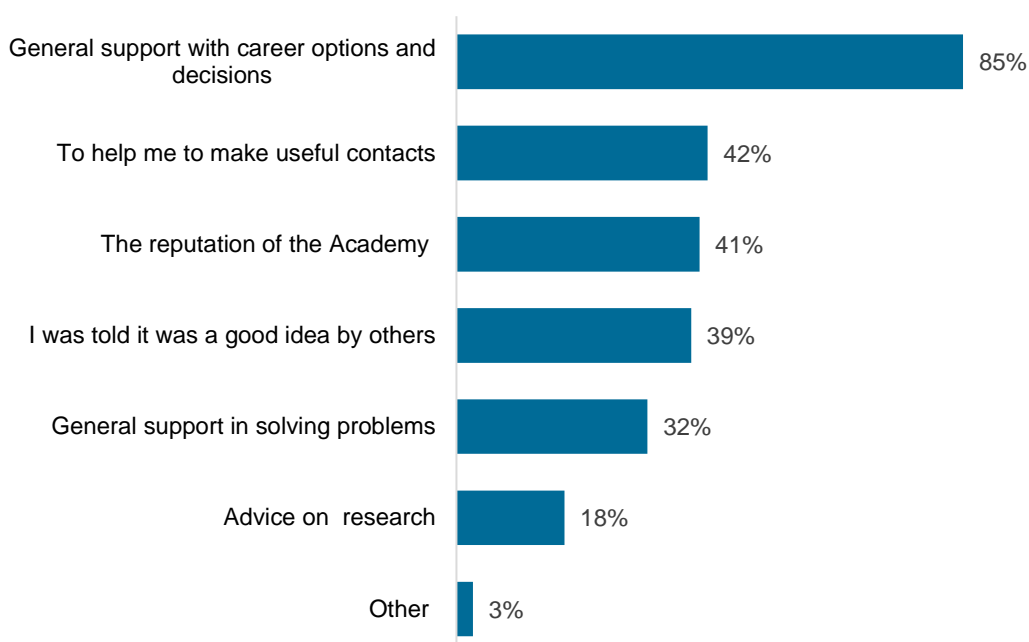
Mentees' motivations

Mentees motivations for engaging with the programme are more varied (Figure 2), although the main reason for most is a need for support with their career options and decisions (85%), as the following mentee explained:

I wanted someone who could look at my career and provide guidance about the next steps...in academia, there's a lot of options!

Mentee (Non-Clinical)

Figure 2: Mentees' motivations for joining the Academy's mentoring programme



Similar proportions of respondents – around two-fifths – joined the programme because they thought it would help them make useful contacts (42%), based on the reputation of the Academy and its mentoring programmes (41%), and on the recommendation of others (39%). The opportunity to connect with a mentor is perceived to deliver tangible benefits, which may explain why mentees recommend the programme to their peers. For example, some mentees perceive that being mentored by a prestigious researcher helps to strengthen grant applications and increase the chances of securing funding. As such, this could act as a strong motivator for researchers considering joining the mentoring programme in the future, in addition to the opportunity for support with career planning.

The pairing process

Once mentees have expressed interest in joining the programme and their eligibility has been verified, they are invited to access an online directory containing information on the Fellows which they can use to identify a shortlist of potential mentors. Mentees can discuss their needs with the Academy to help them narrow down their shortlist. Mentees then complete a nomination form in which they name up to three mentors and provide further details on their own research and career. The Academy approaches the Fellows in order of preference to formally invite them to act as a mentor on behalf of the mentee. If a mentor accepts, the mentee is notified by the Academy; in the event the mentee cannot be matched to one of their preferred mentors, the Academy supports them to select an alternative list.

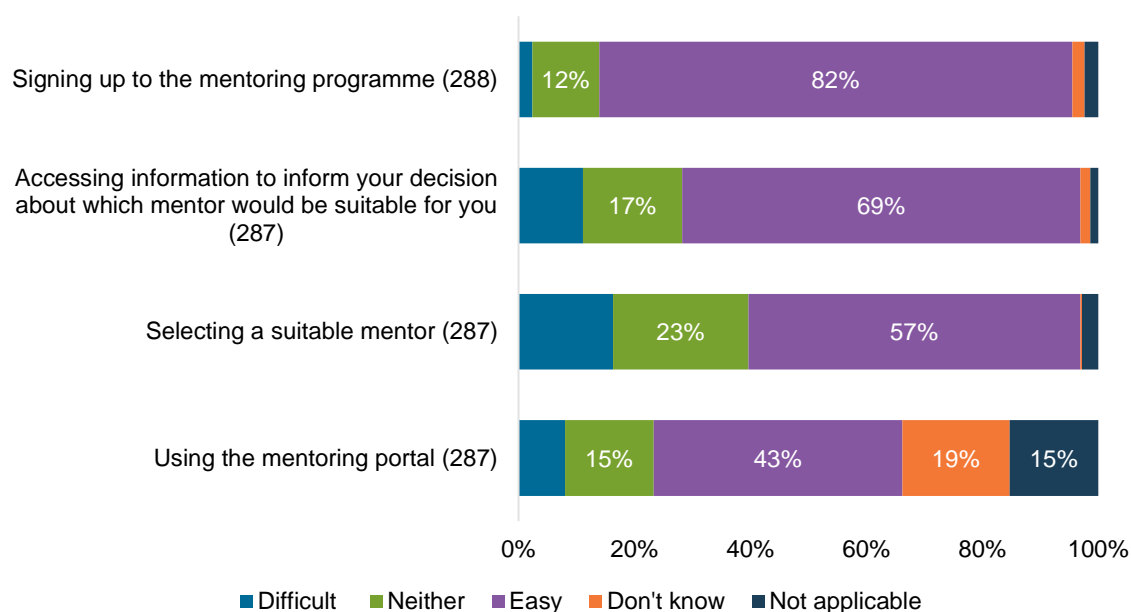
Once paired, the mentee is required to reach out to their mentor and arrange an initial meeting to discuss their needs and expectations for the mentoring. The Academy provides mentees with information to help them make the most of this first meeting and the mentoring relationship. Mentees and their mentors are also encouraged to attend training to help them develop their skills and get the most out of the mentoring process (see [‘Preparation for mentoring’](#)).

Effectiveness of the pairing process

Overall, 71% of mentors and mentees are satisfied with the current pairing process. Further analysis and insight from the interviews with mentees highlights the elements which they perceive work most effectively and which could be further enhanced.

Most mentees (82%) found it easy to sign up to mentoring programme. The ‘mentoring portal’ was introduced in 2021, after two-thirds of mentees who responded to the survey began the programme. Of those who had accessed the portal, around two-thirds (65%) found it easy to use. While most also found it easy to access the information they needed to decide which mentor would be suitable for them (69%), one in ten (11%) found it difficult and 17 per cent were equivocal. Approximately two-fifths (41%) appear to subsequently find it difficult to select a mentor (Figure 3).

Figure 3: Mentees’ perceptions of the pairing process (variables bases)



Half of the mentees interviewed report that they found the pairing process difficult, with some describing the process of shortlisting mentors from the list of over 1000 overwhelming:

I thought the pairing process was quite overwhelming to be honest, because you were given a huge list of potential mentors and you were basically told, 'Oh, shortlist 3 or 4 or 5.' I was... 'well how do I find somebody from this list?' ...I hadn't got a clue.

Mentee (Non-Clinical)

The Academy encourages mentees to make their selection within three to four weeks of signing up. However, some mentees felt they needed extra time to reflect on what they wanted from a mentor, and in some cases conduct extra research, before choosing a final shortlist. It, therefore, appears that despite the support on offer, those with no or limited prior experience would benefit from further help.

Suitability of the matches

Although once paired, most relationships appear successful – 92% of survey respondents had just one mentor – in a small number of instances, pairings have failed. The reasons for this are varied and include lack of rapport between the mentee and the mentor. There is wider evidence that mentoring is most effective when the mentee develops a personal connection with their mentor.⁹ This rapport is often built when the mentor and mentee share (actual or perceived) similar backgrounds and characteristics.¹⁰ Although a proportion of the demographic

⁹ Straus, S.E., Johnson, M.O., Marquez, C., & Feldman, M.D. (2013) 'Characteristics of Success and Failed Mentoring Relationships: A qualitative study across two academic health centers'. *Academic Medicine*, Vol. 88, No. 1, pp.82-89

¹⁰ See for example Hernandez, P.R., Estrada, M., Woodcock, A. & Schultz, P. W. (2016) 'Mentor qualities that matter: The importance of perceived (not demographic) similarity'. *Journal of Experimental Education*. Vol. 85, No. 3, pp. 450-468; Ensher,

information for both mentors and mentees is missing, analysis suggests that there are disparities between the characteristics of mentors and mentees engaged with the Academy. Approximately two-thirds (66%) of mentors are male and the majority (90%) describe themselves as White. However, more than half of mentees are female (54%) and over a fifth (22%) are from a BAME group.

Two of the interviewees explicitly attributed the lack of rapport between them and their mentor to the mentor's characteristics:

I don't think he was very interested in general in [challenges] ...in this sense, I think that a woman would have been bit more helpful.

Mentee (Non-Clinical)

I think maybe it wasn't the best match. I think a lot of it has to do with personality, doesn't it?

Mentee (Non-Clinical)

In addition, two survey respondents who participated in the programme some years ago, indicated that the reason the programme did not meet their expectations was because they were not able to be matched with someone who shared their characteristics and experiences:

The AMS mentoring programme didn't have role models for women from an ethnic minority in the clinical sciences when I went to seek mentorship.

Mentee (Clinical)

I was not matched very well as many of the mentoring options were not suitable for my needs. Challenges of academic careers in centres in north are far different from centres in 'golden triangle' and at the time there were few mentors from other areas, few females and few with similar goals.

Mentee

The importance of shared characteristics for building rapport was further reinforced in instances where common experiences were attributed to the success of the relationship:

I was able to connect with my mentor about our shared lived experience of being neurodivergent and how this has been challenging to developing an academic career and successfully winning grants. My mentor declared being neurodivergent on their profile, this is what attracted me to them, as well as their research interests.

Mentor

There is wider evidence that fewer women act as mentors and that female mentees find it more difficult to get a mentor – whether male or female, which can be detrimental to their career development.¹¹ Encouraging more females to act as mentors is therefore important to ensure female researchers' needs are met and to help support the development of a more diverse research workforce in the longer term. At the Academy, proportionately more women than men currently offer mentorship.¹² The proportion of female Fellows is also increasing - women comprise 39% of newly elected Fellows – so this offers further scope to expand the diversity of the network of mentors.

The Academy does not currently capture data on mentors' and mentees' socio-economic status (such as eligibility for free school meals as a young person or family history of higher education) or disabilities and health conditions. Capturing this data and encouraging Fellows to provide information in the directory that they feel comfortable sharing and that was pertinent in their journey to their current position, could help mentees to identify those they feel they are most likely to have a personal as well as a professional connection with.

According to one of the stakeholders who had also acted as a mentor in the past, it is common for mentees to seek a mentor in their own field of research. However, in this stakeholder's experience, what mentees often need, and can potentially benefit most from, is a mentor from an alternative field who can challenge them and offer alternative perspectives. A desire for a mentor working in a different field of research was a further reason some pairings failed and/or led mentees to seek an alternative, along with a lack of time and/or lack of availability for meetings and a change of circumstances (e.g., retirement, maternity leave or overseas travel). Further information may, therefore, be needed to ensure mentees recognise the value of a mentor in an alternative field, as well as the time commitment involved for both mentor and mentees.

A quarter of mentees (25%) were not satisfied¹³ with the choice of mentors. The available data on the mentors' clinical status suggests there is a good balance between clinical and non-clinical researchers in the current pool. The insight from the interviews suggests that disparities in personal characteristics and fields of expertise could be possible explanations.

Preparation for mentoring

The Academy produces a range of information to help prepare mentors and mentees for the programme and provides ongoing guidance and support. Just over two-thirds (68%) of participants report that they are satisfied with the support and guidance, suggesting a third may not be getting the level and/or type of help they need. It was evident from the interviews that some mentees as well as mentors

¹¹ Henry-Noel et al. (2018) 'Mentoring in Medicine and Other Health Professions'. *Journal of Cancer Education*, Vol. 34, pp 629-637

¹² 20% of Fellows and 32% of mentors are female. See <https://acmedsci.ac.uk/file-download/12969204>,

¹³ 13% were dissatisfied and 12% were neither dissatisfied nor satisfied with the choice of mentors.

were engaging with mentoring for the first time, while others had prior experience and a clearer idea about the process and what it could achieve. Some mentors and mentees report that in their view, the information provided by the Academy does not sufficiently take account of prior knowledge and experience and would, therefore, be enhanced if it was more tailored.

I personally found the information for mentorship a bit confusing. Some of the information was common knowledge, very generic, which I thought doesn't help me. Perhaps if it was a bit more structured towards new lecturers, towards people at an earlier stage of their career, let's say, post-docs, senior post-docs, new investigators, which would have been more helpful in my opinion.

Mentee (Non-Clinical)

I think they do provide quite a lot of information and helpful guidance for both the mentee and the mentor. What I would say going forward is, they just give you the same package whether you've mentored nobody before or you've mentored 10 people. So, it's not really very personal...It's almost saying, 'Here's your guide to mentoring,' like you've never done it before.

Mentor (Clinical)

Mentoring masterclasses

In addition to information and guidance, the Academy encourages mentors and mentees to take advantage of free masterclasses designed to ensure they are adequately prepared and get the most out of the programme. These masterclasses are delivered regularly throughout the year. The external facilitator helps participants to develop skills in forming mutually beneficial relationships, establishing and managing expectations, and dealing with challenges if they arise.

Just under half (47%) of mentees and two-fifths (41%) of mentors who responded to the survey could recall taking part in the mentoring training. Of those who had not taken part, lack of awareness (31%), particularly among mentees, and lack of time (18%) were the most common reasons. Encouragingly, just over 1 in 10 (mostly mentees) who had not attended the training, plan to go when they get the opportunity (12%). The same proportion (of mostly mentors) had received training from another source and did not, therefore, perceive it was necessary to attend.

Almost all of those who participated in the training found it of some use, just 3% said it was not useful at all. The interviews further highlight that the training is perceived to effectively prepare mentees by providing practical advice, such as the best ways to structure meetings, and helping to clarify the purpose of mentoring and the role of the mentor:

I really liked the theory behind mentoring that they went through, and the differences between mentoring and coaching.

Mentee (Clinical)

It also provided an opportunity for mentees to network with their peers and Academy staff:

It was beneficial to see that there are other people who are going through the same things. Secondly, it was beneficial because we met the coordinators, so we knew who our point of contact was in case something didn't work out, or we lost contact with the mentor, or if there was anything we wanted to discuss.

Mentee (Non-Clinical)

Engagement with mentors

As noted previously (see '[Suitability of the matches](#)'), once paired, the majority of mentoring relationships are successful, and some last for many years after the formal engagement period. According to survey respondents, Academy mentoring relationships can last up to 5 years (and beyond in a small number of cases) but most commonly endure for up to 6 months (31%) or 1 to 2 years (28%). Other mentoring programmes, such as those operated by the European Academy of Neurology (EAN), the NIHR, and the Royal College of Radiologists, last for a defined period of 12 months, with the option for mentees to extend the mentoring formally (for up to 24 months in the case of EAN) or informally, depending on their needs and their mentor's willingness and availability to offer ongoing support.

The number and frequency of meetings, as well as the mode of contact (in person or virtual), is determined by the mentor and the mentee on the Academy's programme. Others appear to be more prescriptive and suggest 6 to 8 hour-long meetings over the course of a year. In other contexts, according to one interviewee, mentoring is often more structured:

the mentor-mentee relationships that I've had in academia and in pharma, are more long-term, structured and organised relationships, rather than a once, twice or maybe 3 times, kind of, ask for advice [relationship]

Mentor (Non-Clinical)

Contact between mentees and mentors participating in the Academy's programme appears to be more variable than the information on other programmes suggests. Most survey respondents (72%) report that they are in touch with their mentor between 2 and 6 times per year, most commonly by phone/video call (52%) and/or in person (40%). Insights from the interviews suggest that the frequency and meeting format works well for most mentees:

We agreed...we could meet every couple of months depending on my need for guidance, for example, about the sort of grant schemes I could apply, or if I needed to have a chat and just bounce ideas.

Mentee (Non-Clinical)

I think that it fit really well within my timetable and my ability to commit to it, whilst also giving me enough back that it was worth it.

Mentee (Non-Clinical)

Most communication moved online during Covid-19 when movement and contact between people was limited. However, many individuals and organisations continued to communicate virtually even after the Government lifted the restrictions. Interestingly, one mentee perceives that the reason their relationship with their mentor failed is because it was too far to travel to meet in person. This suggests there is still a desire for at least some face-to-face interaction. One mentor highlighted that they take the opportunity to meet their mentees in person whenever possible:

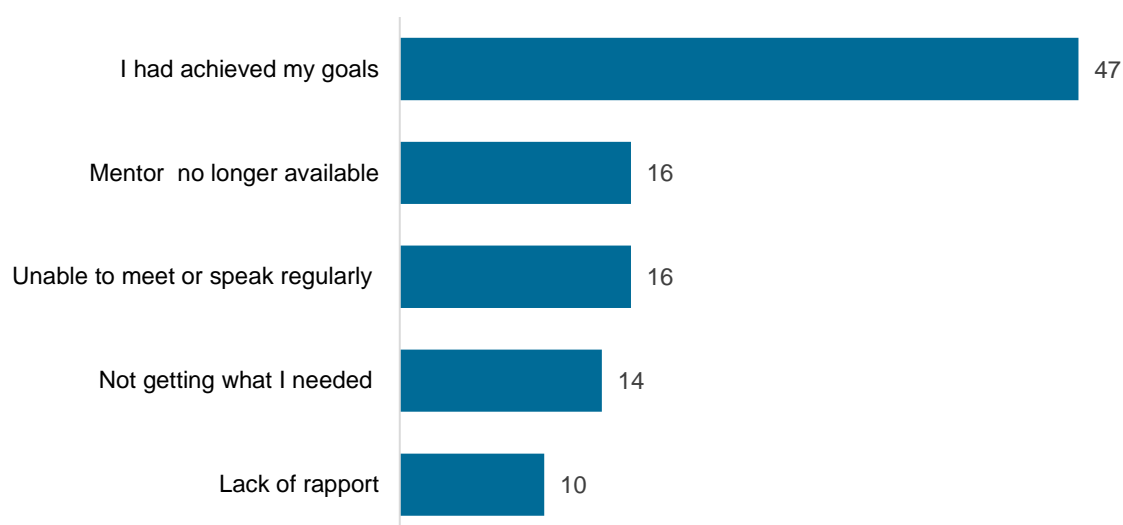
The people I've mentored have not been in my organisation or in my location, so sometimes we plan to meet up when we're both at a meeting.

Mentor (Non-Clinical)

Reasons mentoring relationships end

The sample of survey respondents includes mentees who participated in the programme some years ago, so it is not surprising that half report that their mentoring relationships have now ended. Many of these relationships ended for positive reasons, primarily because the mentee had achieved their goals and no longer needed mentoring (33% of all mentees whose relationships had ended). However, the other reasons relationships ended mirror those that resulted in failed pairings, including a lack of access to or availability of the mentor and a lack of rapport (Figure 4).

Figure 4: Five most common reasons why mentoring relationships ended (Number of respondents, Base = 141)

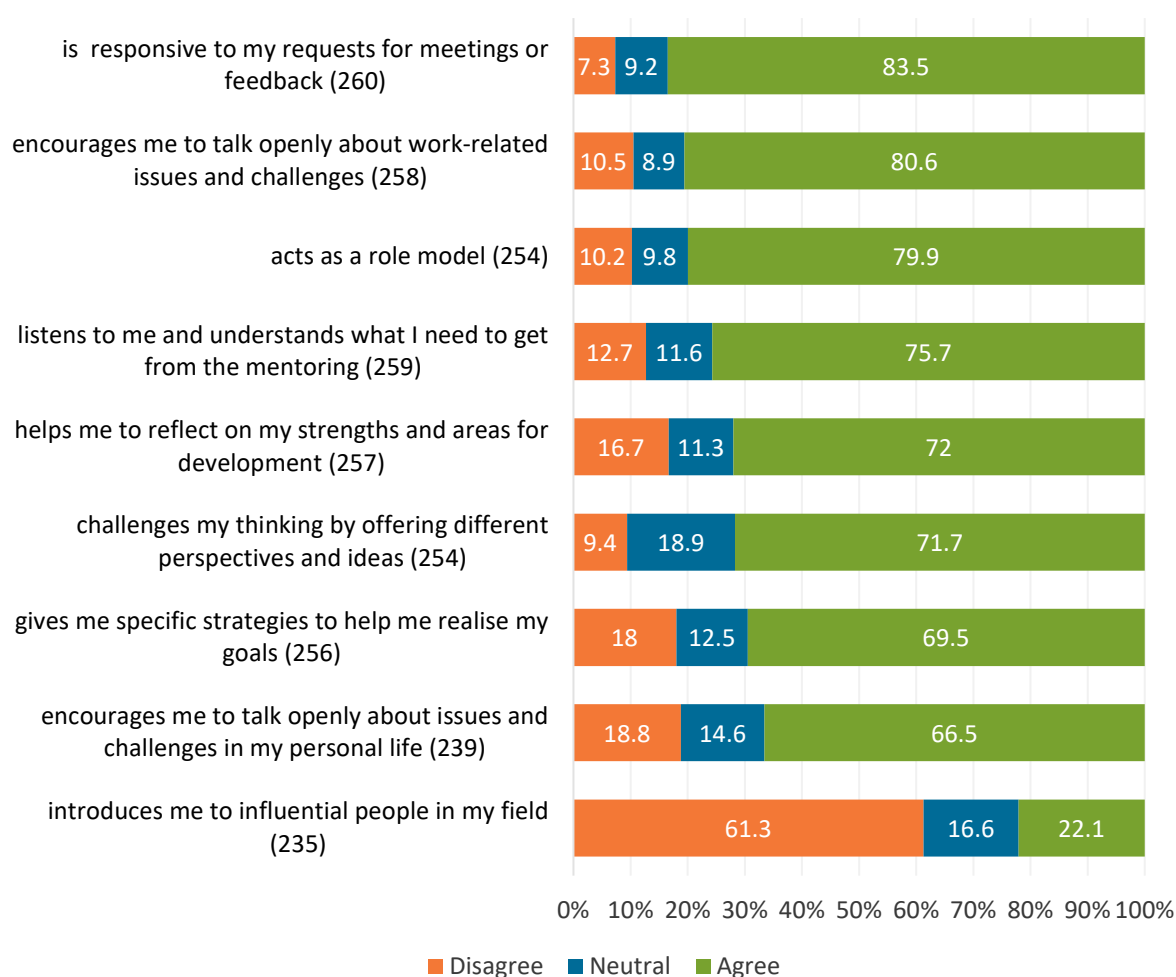


Support provided by mentors

The characteristics of effective mentoring are well documented.^{9, 10, 11} Mentees are largely in agreement that the support they receive from their mentor reflects existing

good practice and more than three-quarters (77%) are satisfied with the quality of mentoring. Figure 5 (overleaf) demonstrates that approximately four-fifths of survey respondents agree that their mentor acted as a role model, encouraged them to talk openly about the work-related issues and challenges they were experiencing, and was responsive to their requests for meetings and feedback. Furthermore, approximately three-quarters agree that their mentor listened to them and understood their needs, helped them reflect on their strengths as well as areas for development, and challenged their thinking.

Figure 5: Level of agreement with statements about the support provided by mentors (Mentees who had engaged with a mentor; bases in parentheses)



Interviewees further reflected on the ingredients of a successful mentoring relationship. They suggest a 'good' mentor should be 'flexible and 'supportive', 'encouraging and empowering', and 'impartial and objective'. The most effective mentors share insights from their own experiences without 'taking over', listen and ask insightful questions. Mentees appreciate mentors who provide constructive feedback, challenge their perceptions and offer alternative perspectives. Providing mentees with the space and time to reflect on their career and the challenges they are experiencing, and offering advice and guidance, rather than direct instructions on what to do, are also regarded as the hallmarks of an effective mentor.

It should be a sounding board... A lot of my experience of mentoring is, you don't do anything....you allow the other person to say out loud what they're thinking, and by the time they've said it all out loud, they've often answered their own questions.

Mentor (Clinical)

Part of having a mentor for me, is feeling as though there is somebody who is rooting for you. Somebody who's on your team.

Mentee (Non-Clinical)

The Academy's mentoring programme is underpinned by the developmental model which allows mentees to drive the relationship with their mentor, who acts as a sounding board in order to support their mentee to learn more about themselves and assess their options. It is not, therefore, the role of the mentor to directly intervene in their mentees career development, for example by introducing them to influential people. Although the survey findings suggest that a minority of mentors help their mentees to expand their networks, most mentees disagree that their mentor introduced them to influential people in their field (61%). In addition, relatively few mentees were encouraged to talk about personal issues and challenges (67%) (Figure 5). However, insight from the interviews demonstrates that the two are often related.

My mentor has listened to my experiences, validated them and given me permission to take care of myself and family, even at the expense of progressing right now...

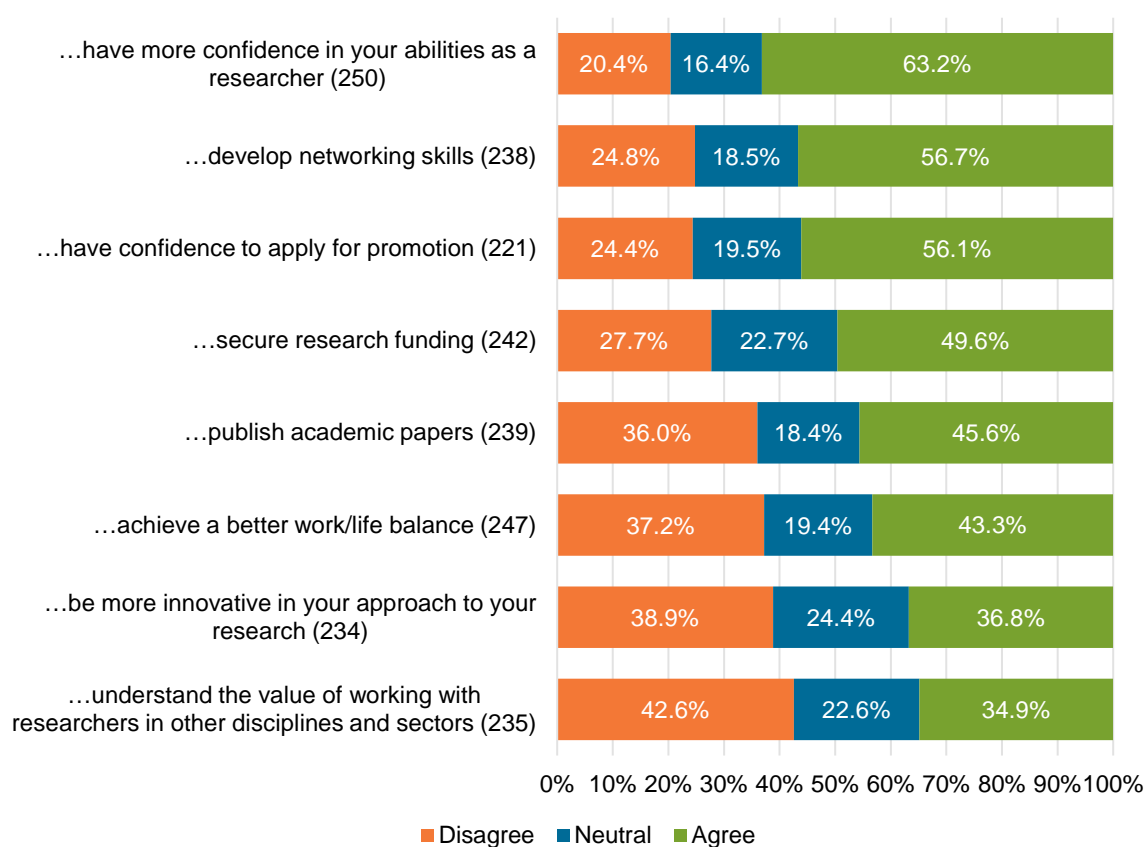
Mentee (Clinical)

3. The impacts of mentoring

This chapter explores the ways in which the Academy's mentoring programme is perceived to support mentees' personal and career development, the strengths of the programme and areas for further development.

Skills and confidence

Figure 6: Level of agreement with statements about the outcomes of mentoring (Mentees who had engaged with a mentor, variable bases)



Mentoring is perceived to benefit mentees personally. Over half report that the process developed their confidence in their ability as a researcher (63.2%) and to apply for promotion (56%). A similar proportion also report it improved their networking skills (57%) (Figure 6).

Being mentored by an eminent scientist has provided support, given me confidence and encouragement.

Mentee (Non-Clinical)

I see my mentor relationships as being very much signposting and cheerleading and network and connection-making.

Mentee (Non-Clinical)

Interviewees also highlight that some mentors provide practical help, including with securing funding and publishing research, and this is reflected in the survey findings.

They had incredible knowledge of the field, gave me advice on individual experiments, technique, strategy for grant funding, management, and many other things...It was fabulous!

Mentee (Non-Clinical)

The majority of mentees do not agree that their mentor encouraged them to be more innovative in their approach to their research or helped them to understand the value of multi-disciplinary working. Nevertheless, there is qualitative evidence that mentees learn from the perspective of mentors working in other fields.

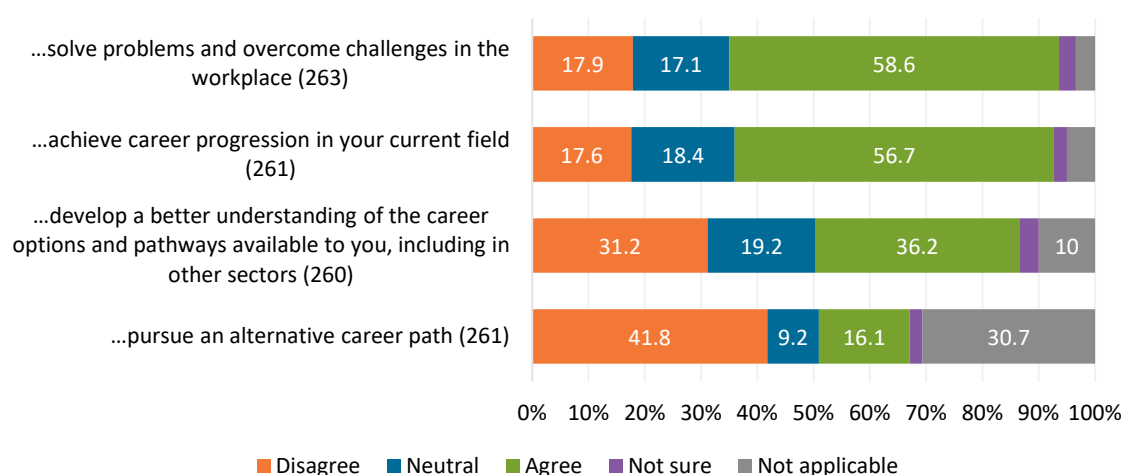
The mentor assigned to me was excellent. She did not work in my field and had a good outsider's view of many of the issues I was facing. She was happy to challenge me in a constructive way and provided a lot of support when I needed it. I felt she modelled what a good mentor should be, and I have used her example in developing my own mentoring practice.

Mentee

Career development

The mentoring programme aims to help ECRs overcome workplace challenges and develop a plan for their career progression. While over half tend to agree that their mentor supported them to overcome challenges and with their career progression in their field, just under a fifth disagree (Figure 7). Furthermore, most do not agree that their mentor helped them to develop a better understanding of the options and pathways available to them, including in other sectors.

Figure 7: Level of agreement with statements about the outcomes of mentoring (Mentees who had engaged with a mentor, variable bases)



It is important to note, however, that the nature of the support provided by a mentor is determined by mentees and their existing needs and circumstances. A proportion of respondents may not have wanted support to overcome workplace challenges or to pursue an alternative career path (reflected in the high proportion that reported 'I don't know and 'not applicable'). Disagreement is not, therefore, an indication of dissatisfaction with the programme – indeed most are satisfied and report that it met or exceeded their expectations (see '[Overall satisfaction](#)' below). Furthermore, insights from the open survey responses and interviews demonstrate that many mentees have achieved tangible career outcomes which they attribute to the programme, including securing a new job role or promotion to a more senior position or a change of career direction.

My mentor was amazing, supportive and encouraging while still able to clearly identify areas I could improve to reach my goals. She gave a lot of feedback and invaluable advice and suggestions for an interview I was preparing for, for a promotion - which I successfully got!

Mentee

My mentor has changed my career for the better and enabled me to get a permanent position where I enjoy my work.

Mentee

My mentor gave me the confidence to pursue something different... I met him at a conference last year and was so pleased to update him on the wonderful news that I had been promoted to associate professor.

Mentee (Clinical)

The mentoring has also indirectly supported some mentees in their career by facilitating access to further training and professional development opportunities (e.g., leadership), increasing their success when applying for grant funding and getting published. It has also enabled mentees to expand their professional networks, which in some cases has connected them with researchers with whom they have subsequently collaborated.

My mentor actively supported me in building a research network that led to several good publications.

Mentee

My mentee now holds a Wellcome Trust personal fellowship. I hope I helped them gain the confidence to apply and not be put off by the first rejection.

Mentor (Clinical)

Although based on anecdotal evidence, mentors' perceptions of the ways in which the programme benefits mentees largely reflect the benefits identified by the mentees themselves. According to mentors, the key benefits for mentees are:

- the opportunity to tackle work-related issues and work through problems in confidence with someone who is independent of the mentee's employer
- the opportunity to reflect on or formulate career goals and develop strategies
- practical advice on applying for grant funding and getting published as well as on wider issues such as managing in a lab and achieving a better work/life balance
- improved confidence and self-efficacy to deal with situations and achieve career goals
- access to specialist knowledge in specific fields, and
- new networks and contacts.

Impact on future plans

Most mentees (68%) report that they were likely to pursue a research career before they took part in the programme. However, more than a quarter (26%) are now more likely to pursue this path as a result of the mentoring, compared with just 3% who now are less likely and 4% who are still unsure.

I don't know anyone else personally in academia, so the reassurance I could progress at a different pace...has been really impactful for me and has actually allowed me to continue to work in clinical academia, otherwise I think I would have thought I needed to leave... A truly exceptional experience for me.

Mentee (Clinical)

Overall satisfaction

As noted previously, the majority of mentees and mentors (81%) are largely satisfied with the programme overall and it fully met or exceeded the expectations of more than three-fifths (63%) of mentees.

It was more valuable than expected. It resulted in collaboration which I believe helped me get funding, supported my promotion, and facilitated links with a new Learned Society which has developed my network.

Mentee

Strengths of the programme

The key strengths of the programme identified by mentees and their mentors largely reflect the benefits. However, there are some features that are specific to the Academy's programme that are regarded as particular strengths compared with other programmes:

- The opportunity to access mentoring, even if a grant applicant has been unsuccessful.

I like the fact that the academy offers the opportunity to anyone...regardless of whether they're successful or not... It shows they're open and inclusive, and they don't keep it to a certain 'club' of successful people.

Mentee (Non-Clinical)

- Privileged access to inspirational role models who help mentees to reflect on career options, including by broadening their horizons.

My mentor was a very senior leader within the life sciences sector, and it was an amazing privilege and very helpful to gain her insights of leading across different organisations and into my own leadership challenges.

Mentee (Clinical)

- A safe, confidential space to discuss work-related issues and challenges and develop practical solutions. Other schemes, such as at the Institute of Cancer Research, bring mentors and mentees together for internal reviews which are attended by other internal and external staff. As such, the process does not provide the same degree of independence or confidentiality as the Academy's programme.

Further strengths of the programme are:

- The ability for mentees able to select a mentor that they perceive best meets their needs from a large pool of experts offering specialist knowledge (in same field) or different perspective (from a different field).
- Training and guidance help to ensure both mentors and mentees are effectively prepared and get the most out of the process.
- A framework that defines the scope and purpose of the mentor/mentee relationship while also offering the flexibility to adapt the programme according to the needs of the mentee.

Areas for development

The mentoring did not meet the expectations of 1 in 10 mentees, and 6% (of mainly mentees) are dissatisfied with the programme. Survey respondents identify a range of reasons why the mentoring did not meet their expectations, including lack of rapport, as discussed previously. Additional barriers identified by survey respondents include the level and type of support offered.

Level of contact

In a number of cases, the level of contact between the mentor and the mentee was perceived to be insufficient. Mentees report that they found it difficult to contact their mentor and/or set up meetings around their busy schedules. Consequently, some mentees had just one or two meetings with their mentor which were perceived to be of limited benefit. There are only one or two instances where mentees expected the mentor to be more proactive – e.g., “I expected mentors to check-up on mentees”. A similar number recognise that, on reflection, the onus was on them to drive the relationship but, in some cases, not wanting to be ‘a burden’ prevented them from doing so.

Type of support

As noted in the previous chapter, some less experienced mentees identified that they needed further preparation to enable them to get the most out of the

mentorship. Their limited ability to identify their needs and articulate what they wanted from the relationship is a further reason some mentees were disappointed by their experience:

I probably I didn't have a clear enough idea about what I wanted to get out of it. I was looking for general guidance of what aspects of my career I should focus on more but in retrospect that is hard because everyone's career is different.

Mentee (Non-Clinical)

Others were clear on the type of support they wanted but did not get from their mentor and, as a result, the programme did not meet their expectations. The analysis of the available demographic data on mentors suggests that all the mentors are over the age of 45. While this is expected given mentors are in a later stage of their career relative to mentees, it is striking that 79% of those who provided data on their age are 60 or older, and a good proportion of these are over the age of retirement. Some mentees perceived that the 'generational gap' was too large and, as a consequence, the advice they received was outdated and not in line with current climate.

My mentor...is certainly putting in the effort to meet with me. However, being a very senior academic, she seems unaware of how the sector has changed over recent years and the challenges that early career researchers face in the current context. She seems to have a limited understanding of interdisciplinary research approaches, which has caused some challenges as my work is rather interdisciplinary...Further, I think we come from very different research cultures, which makes communication challenging at times.

Mentee

I believe the mentors needed to listen to our aspirations and help us to build our personalised pathways. My mentor has been excellent in showing how to progress by standards pathways to traditional goals, but these do not fully fit with my goals.

Mentee

There are also some mentees who perceive that the mentoring adds little value beyond the support they already receive from their line manager or other people in a senior position in their organisation.

Either we are not a good match, or I do not know how to get the best of it. It is nothing more than a regular chat with senior people. I am not getting anything more that I would get from another chat with other senior people.

Mentee

Drawing on this feedback and further insights from the interviews, the evaluation findings suggest that the programme could be further enhanced by:

- More tailored information and guidance that takes account of mentors' and mentees' prior experience.
- Further support to navigate the information and select a suitable mentor.
- The opportunity to meet mentors during the pairing process to inform the mentees' decision-making.
- Additional support for mentees who are completely new to mentoring to enable them to identify and articulate their needs prior to engaging with their mentor.
- Formalised check points and feedback on how the relationship is working, including opportunities to raise concerns confidentially with the Academy.
- Further clarity on duration of mentoring, frequency of contact and how and when the mentoring should conclude.
- Options for the transition to a post-mentoring relationship.
- A more diverse pool of mentors that reflect a broader range of mentees' characteristics and experience
- A greater focus on the value, importance and growing demand for multi-disciplinary research and links with industry.

Future engagement

Although the programme did not fully meet the expectations of some mentees, the majority (83%) would recommend it. A small proportion (3%) of mentees have already gone on to become mentors. Of the remainder, 69% report that they would be willing to act as a mentor on any of the Academy's programmes in the future, should the opportunity arise. Encouragingly, given the current under-representation of female mentors and mentors from BAME groups, a similar proportion of males and females, as well as mentees from all ethnicities, express an interest in becoming a mentor with the Academy.

I didn't realise I needed a mentor and at the time thought it was ironic that I was offered one due to securing an NIHR clinician scientist fellowship and being an NHS consultant. However, I found the whole process incredibly valuable and only wish I'd had this sort of external support earlier in my career. I will take the lessons learnt to the end of my career. I am a formal mentor for others now.

Mentee (Clinical)

4. Conclusions

The Academy's mentoring programme has been running successfully for 20 years and, to date, has supported over 1,400 pairings. Its key aims are to help ECRs work through the challenges they are experiencing at work, broaden their understanding of the opportunities available to them, and provide support and encouragement to progress towards their career goals. Insight from the evaluation suggests that the programme is largely achieving its aims and delivering tangible benefits for mentees, including grant funding, new job roles and career trajectories, and promotion which are attributed, at least in part, to the mentoring. The evaluation findings also indicate that the programme is helping to maintain the talent pipeline by increasing the likelihood that those in the early stages of their career will continue on a research pathway. All these outcomes are contributing to the achievement of the Academy's strategic priority to support the next generation of researchers to reach their full potential, as well as wider objectives to influence policy and practice and strengthen the UK sector's reputation on the global stage.

There is a high degree of satisfaction with the Academy's programme among mentors and mentees overall, and most would recommend it to others. The programme is also perceived to compare very favourably with similar programmes, some of which model their approach on the Academy's. The accessibility of the programme, the flexibility to tailor it according to mentees' needs, the provision of independent, confidential advice and guidance, and the calibre of the mentors are key strengths. Mentees are largely in agreement that the approach adopted by most mentors reflects good practice and that the mentoring is of high quality.

A minority of pairings do not work out, some mentoring relationships end prematurely, and the programme does not meet the expectations of a small proportion of mentees. The reasons for this are varied but are commonly associated with the extent and nature of the engagement between mentor and mentee, including lack of time or availability. Other programmes appear to be more prescriptive in terms of the expected duration and level of engagement between mentors and mentees. Further clarity for mentors and mentees participating in the Academy's programme could help to address this issue, although there is a risk that this could be perceived to increase the burden on mentors who volunteer their time and deter some from taking part.

Lack of rapport is a further barrier to engagement. Rapport is often built on shared experiences, yet there is an apparent disconnect between the characteristics of the current pool of mentors and the mentees. Women, people from minoritised ethnic groups, and those with a disability value the opportunity to be mentored by someone 'like them'. The current pool of mentees is diverse, and most may be willing to become a mentor in the future, if the opportunity arises. This would help to address the under-representation of certain demographics. Developing the pipeline of mentors is also important given the older age profile of the existing pool and the sizeable proportion who are nearing retirement or retired. A balance needs to be struck between the level and relevance of mentors' experience to ensure the

guidance and support they offer takes account of the current context, including the issues and challenges researchers experience at the start of their career and the growing need for collaborative and interdisciplinary research.

Although the programme is effectively supporting mentees with their career development, the extent to which it is extending mentees' networks is more limited and this could also be a source of dissatisfaction with the programme. The role of the mentors in the developmental model is not to introduce mentees to influential people in their field. Furthermore, opportunities for mentors to introduce their mentees to other experts are likely to be limited, given the average number of sessions and duration of the programme, as well as mode of delivery (primarily virtual). Therefore, managing mentees' expectations is important to prevent disappointment.

Mentors are primarily motivated by an altruistic desire to give something back and to support the work of the Academy, rather than by any personal benefits. However, the programme is perceived to have a positive impact on their skills as well as their understanding of the challenges facing ECRs and institutional cultures and approaches. As previously noted, it is important for mentors to stay connected with these issues to ensure their support remains relevant and has impact. Further tailoring the information and guidance and encouraging experienced mentors - who may perceive the masterclasses to be less relevant - to engage in 'refresher training', could help them remain up to date.

Recommendations

Based on the evidence from the evaluation it is recommended that the Academy considers the following to enhance the delivery and impact of the programme:

- Explore how mentees who are new to the process can be further supported to navigate the information and select a suitable mentor (including by creating opportunities for mentors and mentees to meet to inform the decision-making) and to identify and articulate their needs.
- Provide further clarity on the scope and aims of the programme, to manage mentees expectations on the outcomes that can be achieved, particularly in relation to potential contact with wider influential experts in the field.
- Seek to tailor the information and guidance so it takes account of mentors' prior experience, including 'refresher training' for more experienced mentors to ensure their skills as well as their knowledge of the challenges ECRs face, remain up to date.
- Create a more diverse pool of mentors that reflects a broader range of mentees' characteristics and experience by proactively seeking to recruit mentors from under-represented groups, including by 'converting' mentees to mentors as they progress in their careers. Place a greater focus on mentors with experience of multi-disciplinary research and links with industry.
- Maintain the current strengths of the programme, including the flexibility to tailor the mentoring according to need, but consider providing further clarity on the duration and the expected minimum level of engagement between mentors and mentees.

- Introduce formalised check-ins on how the mentoring is working (e.g. after three-months) and feedback on benefits and impacts (on completion). This will also help to strengthen the evaluation of the programme in the future (see below).

In order to evaluate the effectiveness and impact of the programme in the future, it is recommended that the Academy considers the following:

- Implement a new framework for the monitoring and evaluation of the programme, underpinned by a Theory of Change ([Appendix 1](#)), and informed by existing approaches for assessing the impact of training and development (e.g. Kirkpatrick¹⁴).
- Enhance the data on mentors' and mentees' characteristics by addressing gaps in existing data and extending the range of data collected.
- Implement baseline measures to capture mentees' expectations of the mentoring process.
- Collect formative feedback on how the mentoring relationship is progressing after three months from mentors and mentees.
- Collect outcome measures on completion of the programme to understand the benefits and what mentees achieved, including the extent to which their initial expectations have been met.
- Continue to capture qualitative insight through interviews and case studies to ensure the evaluation captures why and how impact has been achieved and how the programme could be further improved.

¹⁴ See <https://kirkpatrickpartners.com/the-kirkpatrick-model/>

Appendix 1: Draft Theory of Change

Programme objectives

- To provide ECRs in the field of biomedical and health sciences with mentorship to support their career development.
- To encourage and enable more talented biomedical and health researchers from diverse backgrounds to be retained in the sector.

Underpinning assumptions

- The biomedical and health sciences sector needs to retain more researchers from a range of backgrounds to ensure it maintains its reputation and global competitiveness. Mentoring can fulfil a role in securing the pipeline of future talent.
- Researchers in the early stages of their career often face challenges which can negatively impact on their career development and deter them from continuing on a research pathway. Mentorship by experienced researchers in the later stages of their career can help ECRs to develop the skills and confidence to overcome these challenges so they are retained in the sector.
- The developmental approach provides a framework to empower ECRs to drive the mentoring relationship and enable them to articulate their career goals and develop effective strategies for achieving them.
- A good rapport between the mentor and the mentee is integral to the success of the developmental approach, which affords the flexibility to tailor the mentorship around the needs of the mentee to maximise impact.

Logic model

