

RCPCH Trainees participation in child health research survey Report

August 2023



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1. Introduction

An online survey exploring trainee involvement in research was designed by the RCPCH Trainee Research Network and disseminated to all UK paediatric trainees between June and October 2021.

1.1 Key findings

- 588 full or partial responses were received from all training levels (including post-CCT) and regions, achieving an estimated response rate of 16% of trainees.
- Demographic details were in line with national data of the paediatric trainee population, with approximately 72.8% of respondents identifying as female and 24.3% identifying as male.
- 76.2% of respondents were UK graduates.
- Less than half of respondents (38.0%) were currently participating in any research project but 95.4% indicated a desire to be involved in research in some capacity in the future.
- Out of all respondents, 9.2% reported being in an academic training post and 14.2% stated they had protected time for research in their post.
- Almost one third of trainees (29%) committed personal time to research ranging from one to over 18 hours a month with those in academic training posts more likely to commit a higher number of hours.
- Regional variation in trainee involvement in research was apparent and two regions had no respondents in an academic training post.
- A key motivator for pursuing research was altruistic intent, with many trainees citing a desire to advance science and make a difference to patients.
- 50-54% somewhat or strongly agreed that participating in research enhanced their leadership, management and academic skills, improving understanding of research and clinical knowledge.
- Barriers to research included time for research, training structures and difficulties accessing opportunities. Over half of respondents were not aware of what type of academic support is available to them.
- Overall, trainees were keen to be involved in research and perceive many benefits but commit a significant amount personal time and struggle with accessing opportunities. These factors should be considered when developing strategies to promote trainee involvement in research.

1.2 Background

Children and young people constitute around 20% of the total population in the UK, despite this, approximately 5% of all research funding is dedicated to those under 18 years of age.¹ In addition, the number of academic paediatricians and those with academic interests has declined significantly over the past two decades.¹ In 2000, 11.3% of the consultant workforce were academic paediatricians however this had decreased to 5.9% by 2011. Less than 5% of consultant contracts support research and training which means that most newly appointed consultants have little or no research background.²

The Royal College of Paediatrics and Child Health (RCPCH) believe that child health research is an essential pillar of every paediatrician's training. The paediatric curriculum at the time of the survey, Progress, had a specific section for Research (Domain 11), embedding this as a clear need to understand the role of research and to develop these skills. The new curriculum, **Progress+**, further incorporates required research competencies including Good Clinical Practice training, which is the agreed international standard for conducting clinical research.

However, not all trainees are actively involved in research or receive research training. A survey conducted by the RCPCH in 2011¹ on the trainee workforce reported major deficiencies in all areas of research competencies with less than 10% of trainees having a higher degree at ST7 level and above, compared with 34% of consultants aged 50 years and above. Recent data is lacking on the level of research involvement in the current generation of paediatric trainees and the perceived motivators/barriers to accessing academic opportunities.

As a result of this, the RCPCH formed a Trainee Research Network (TRN) in 2019 with the aims of increasing the opportunities for trainees to carry out child health research and provide peer support and guidance as well as facilitating collaborative working and support across existing trainee research networks, regionally and nationally. In 2021, the TRN developed a survey with the aims of investigating the capacity for current paediatric training to support involvement in research, to gauge the interest of paediatric trainees to be involved in or carry out child health research, and to identify existing and perceived barriers to research opportunities.

1.3 Aims

The aim of this study was to explore the research experience of current paediatric trainees and identify how the RCPCH can better support trainees in this area. Specifically, to determine the proportion who were undertaking any research activity, the number of academic paediatric trainees, time spent undertaking research activities, regional variations and motivators/barriers to being involved in research.

¹ Modi N. Turning the Tide: increasing and strengthening child health research. 2011. *Archives of Disease in Childhood*;96:988.

² A healthy nation; strengthening child health research in the UK; Modi et al., *the Lancet* 2012

2. Methodology

A survey was designed and adapted by the TRN Task and Finish Group based on the 2011 trainee survey and a workshop was hosted to finalise additional questions. The survey was then disseminated to all UK trainees online via the RCPCH, regional networks and social media across all four constituent nations (England, Wales, Scotland and Northern Ireland) between 15 June to 1 October 2021. Forms of distribution included the RCPCH eBulletins, Twitter and letters sent to deaneries and Heads of Schools via email. Participation was voluntary and open to all UK paediatric trainees.

Anonymised responses were analysed using Microsoft Excel. Descriptive statistics of the responses are presented in this report. The proportion of trainees in formal academic posts and actively participating in research were examined in predetermined subgroup analyses: by specialist training (ST) level, training region, devolved nation, graduate status (UK versus International Medical Graduate (IMG)), and gender. Responses were analysed descriptively by these demographic variables. Thematic analysis of free-text responses was performed. Independent, double coding of textual data was carried out to ensure reliability of findings, with responses compared and discussed to develop the final themes. For a full list of the survey questions, please see Appendix A.

3. Results

There were 588 full or partial responses to the survey, representing approximately 16% of paediatric trainees. Not all questions were answered by all respondents and therefore percentages are of those answering and each question has different denominators where unanswered responses were removed. The denominator for each question is given throughout each section in the text below.

3.1 Demographics

Gender

Of 588 respondents to the survey, 114 did not answer this question and have been removed from this table. The highest proportion of responders identified as female (72.8%, 345/474), 24.3% (115/474) identified as male, and 2.9% (14/474) indicated their preference to self-describe or preferred not to say. According to the [RCPCH State of Child Health 2017 Workforce Census Overview](#), in the UK, women represent over 77% of paediatric trainees, with males representing approximately 23% of the workforce, this is in line with the responses received for this survey.

Table 1. Response by gender.

Gender	Number	Percentage
Female	345	72.8%
Male	115	24.3%
I prefer to self-describe	3	0.6%
Prefer not to say	11	2.3%

Ethnicity

Of 588 respondents to the survey, 113 did not answer this question and have been removed from this table. Of the 475 respondents who stated their ethnicity, over half (58.1%, 276/475) identified as English/Northern Irish/Scottish/Welsh with the second largest group identifying as Indian (10.1%, 48/475).

Table 2. Response by ethnicity.

Ethnicity	Number	Percentage
African	20	4.2%
Arab	14	2.9%
Asian and White	5	1.0%
Bangladeshi	3	0.6%
Black African and White	4	0.8%
Caribbean	4	0.8%
Chinese	9	1.9%
English/ Northern Irish/Scottish/Welsh	276	58.1%
Indian	48	10.1%
Irish	9	1.9%
Pakistani	9	1.9%
Any other Asian background	8	1.7%
Any other White background	14	2.9%
Other Mixed/Multiple ethnic background	3	0.6%
Other	26	5.5%
I prefer not to say	23	4.8%

Primary Medical Qualification

Of 588 respondents to the survey, 113 did not answer this question and have been removed from this table. Of the 475 who responded to this question, 76.2% (362/475) stated that they were graduates from the UK, with 22.3% (106/475) achieving their qualifications internationally.

Table 3. Response by primary medical qualification.

Primary qualification	Number	Percentage
UK graduate	362	76.2%
International graduate	106	22.3%
I prefer not to say	7	1.5%

ST Level

Of 588 respondents to the survey, 112 did not answer this question and have been removed from this table. The distribution between ST levels was equitable, with the majority of respondents currently at ST7 (16.6%, 79/476), followed by ST6 (14.9%, 71/476) and ST4 (13.9%, 66/476). For the purpose of this survey, ST levels have been banded in the following groups for data analysis, ST1-ST3 (31.7%, 151/476), ST4-ST5 (24.6%, 117/476) and ST6-ST8 (42.4%, 202/476) and post-CCT (1.3%, 6/476).

Table 4. Response by ST level.

ST level	Number	Percentage
ST1	58	12.2%
ST2	46	9.7%
ST3	47	9.9%
ST4	66	13.9%
ST5	51	10.7%
ST6	71	14.9%
ST7	79	16.6%
ST8	52	10.9%
Post CCT	6	1.3%

Region

Of 588 respondents to the survey, 112 did not answer this question and have been removed from this table. Responses were received from all regions across the UK with the highest percentage responding from the West Midlands (12.8%, 61/476), followed by Yorkshire and the Humber (9.7%, 46/476), Scotland (9.0%, 43/476) and North, Central and East London (8.6%, 42/476). For the purpose of this survey, regions have also been banded by the following countries for data analysis, England (85.1%, 405/476), Northern Ireland (2.1%, 10/476), Scotland (9.0%, 43/476) and Wales (3.8%, 18/476).

Table 5. Responses by region.

Region	Number	Percentage
East Midlands	35	7.4%
East of England	24	5.0%
Kent, Surrey and Sussex	32	6.7%
Mersey	11	2.3%
North East England	19	4.0%
North West England	20	4.2%

North West London	27	5.7%
North, Central and East London	42	8.6%
Northern Ireland and Republic of Ireland	10	2.1%
Scotland	43	9.0%
South London	26	5.5%
South West (Severn and Peninsula)	41	8.6%
Thames Valley	10	2.1%
Wales	18	3.8%
Wessex	11	2.3%
West Midlands	61	12.8%
Yorkshire and the Humber	46	9.7%

3.2 Overall involvement in research

Of the 588 respondents to this question, less than half were currently participating in any research project (38.0%, 225/588), 9.2% (54/588) indicated that they were currently in an academic training post (formal paediatric academic training or other, such as a fellowship or lectureship) and 14.2% (84/588) stated that they had protected time for research in their current post at the time of the survey (Figure 1). Of the 84 trainees with protected time for research, 64.2% (54/84) were also currently in an academic training post and 92.5% of these (50/54) were currently participating in a research project.

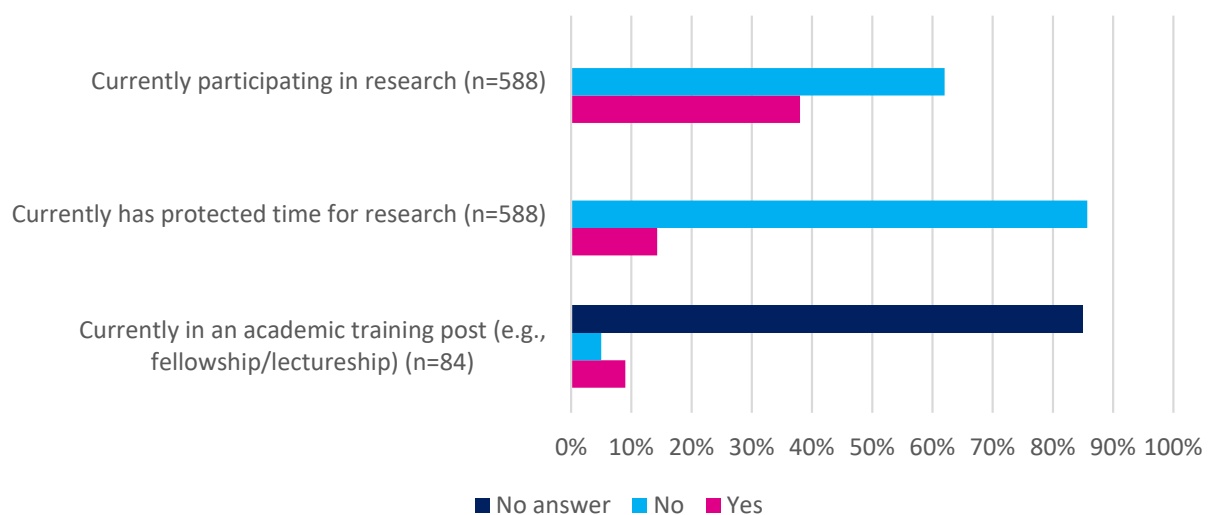


Figure 1. Current involvement in research, including those with protected time and those currently in an academic training post.

Of the 84 trainees with protected academic time, 32.1% (27/84) reported that over half their working time was protected for research; 62.9% of this subgroup (17/27) were in an academic training post. Conversely, 21.4% (18/84) of those reporting some protected academic time stated

they had only 20% or less time allocated for academic work, a quarter of these were in an academic training post (27.7%, 5/18) (Figure 2).

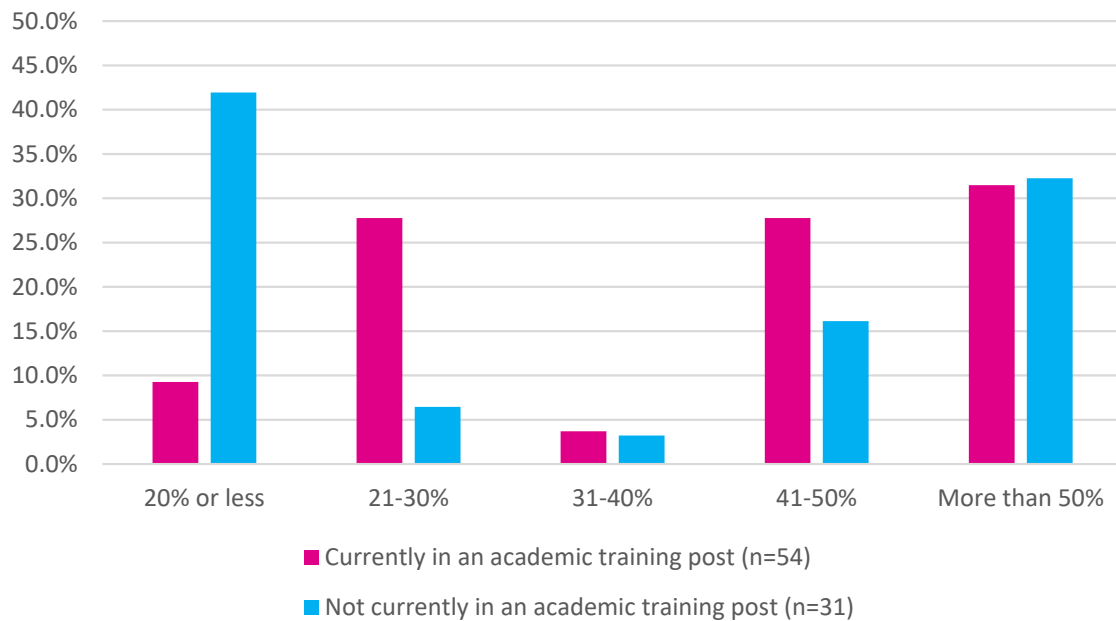


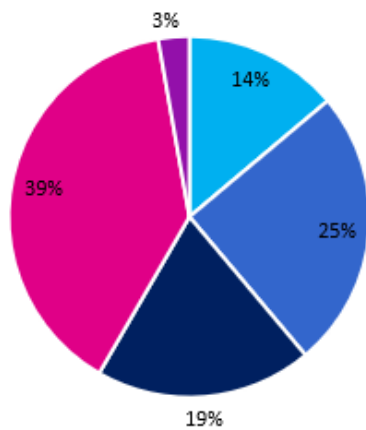
Figure 2. Comparison of percentage of time allocated for research by academic training post status for trainees reporting protected academic time (n=84).

Trainees currently participating in a research project (n=225) reported committing varying amounts of their personal time to academic work. Figure 3 compares the number of hours as percentages of personal time that is committed to research by trainees who do and do not have protected time in their total working time.

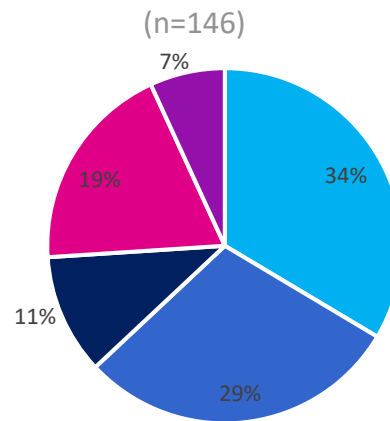
Of the 84 who currently have protected time for research, nine were not currently participating in a research project and three did not answer this question and have therefore been excluded from the analysis. Of the 72 who were participating in a research project and have protected time in their work plans, 2.8% (2/72) stated that they do not commit any of their personal time to research activities, and the majority of respondents, 38.9% (28/72), stated that they commit more than 18 hours of personal time to research activities a month.

There were 150 respondents currently involved in research with no protected time, however four did not answer this question and have been excluded from the analysis. Out of the 146 that do not have protected time in their work plans but were participating in research 6.8% (10/146) stated that they do not commit any of their personal time to research activities and 19.2% (28/146) stated that they commit more than 18 hours of personal time to research activities a month. The majority of respondents in this category, 33.6% (49/146), stated that they commit between one to six hours of personal time to research activities each month.

Commitment of personal time by trainees **with** protected time (n=72)



Commitment of personal time by trainees **without** protected time (n=146)



■ 1-6 hours ■ 6-12 hours ■ 12-18 hours ■ More than 18 hours ■ I don't commit any of my personal time

Figure 3. Percentage of personal time allocated for research per month by trainees with and without protected time for research.

Types of research involvement

Figure 4 below shows the types of research that trainees have ever been or are currently involved in, as well as the level of involvement. More than one answer could be given if the trainee had been involved in multiple projects. There were 446 individual responses to this question, with a total of 874 answers indicating their level of involvement. Out of the 446 respondents, trainees were most likely to be a first author for case reports, opinion papers and/or letters (34.5%, 161/466). Trainee respondents were least involved in randomised control trials (RCTs) with 7.8% (68/874) of all answers indicating involvement in RCTs. A further 62 answers to the survey indicated involvement in other types of research-related activity such as quality improvement projects, audits and data collection.

When looking specifically at those currently in an academic post who answered this question (n=54):

- 66.7% (36/54) had been involved in literature reviews.
- 64.8% (35/54) had been involved in case reports, opinion papers and/or letters.
- 59.3% (32/54) had been involved in cross-sectional/case-control/cohort studies.
- 53.7% (29/54) had been involved in laboratory-based studies.
- 51.9% (28/54) had been involved in a systematic review or meta-analysis.
- 20.4% (11/54) had been involved in a RCT.

Of the respondents, 68% (329/483) stated that they were interested in undertaking qualitative research, with 11.0% (53/483) indicating no interest and 20.9% (101/483) stating that they were unsure.

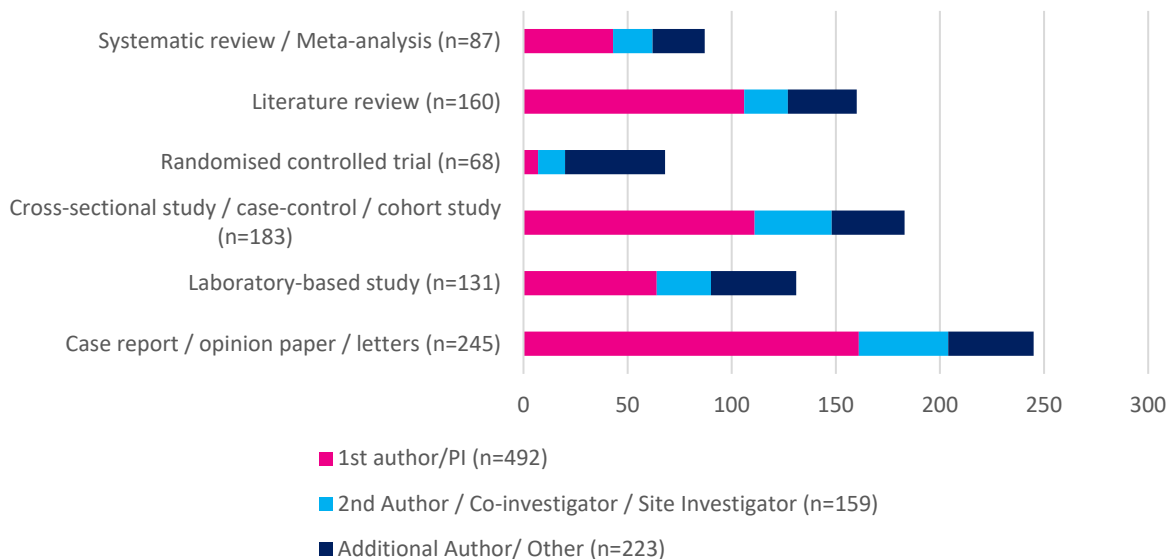


Figure 4. Types of research that trainees have been or are currently involved in and in what capacity.

Trainees were asked if they would like to be involved in research during the remainder of their training and at what level. Respondents were able to select multiple types of future involvement as well as indicating whether they do not wish to participate in research in the future. These responses were then compared against those that are currently involved in research and those that are not.

There were 772 responses from 483 respondents. The majority of trainees (95.4%, 461/483) indicated they wanted to participate in research in some capacity in the future and only 4.6% (22/483) did not wish to participate in future research, 0.4% (2/483) of these were currently participating in research.



Figure 5. Future involvement in research for those currently involved in research and those who are not currently involved in research.

3.3 Comparisons by ST level

There were 476 trainees that gave their ST level and responded to the question “Are you currently involved in research?”. The highest percentage of trainees reporting involvement in research were in ST6-ST8 (18.9%, 90/476), but there was also a large group of ST6-8 trainees who were not currently involved in research at all (23.5%, 112/476).

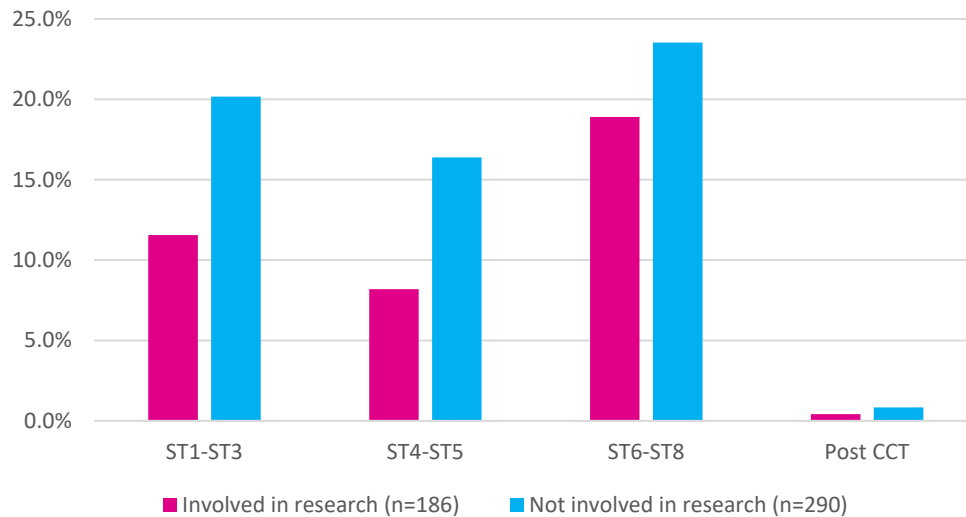


Figure 6. Percentage of trainees involved in research by ST level.

Out of the 84 respondents with protected time for research, 65 also had information on their current ST level, therefore, 19 responses have been excluded from this analysis. The percentage of trainees with protected time for research was highest in ST6-ST8 (6.1%, 29/476). The lowest levels of protected time were seen at Post CCT (0%, 0/476) and ST4-ST5 (2.9%, 14/476). The majority of respondents did not have protected time for research (86.3%, 411/476), this was seen across all ST levels.

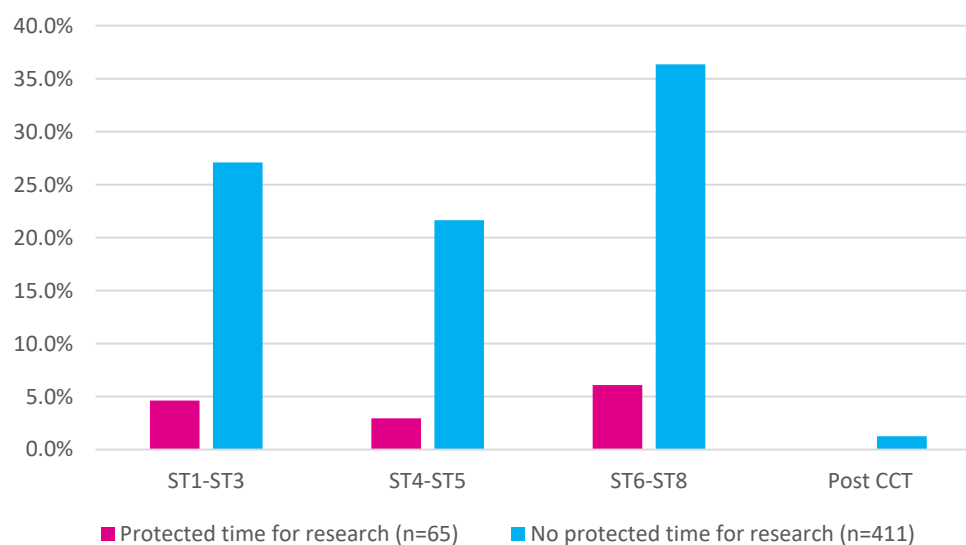


Figure 7. Percentage of trainees with protected time for research by ST level.

Out of 476 responses, 66 respondents answered whether they were currently in an academic training post or not, of these, 65.2% (43/66) were currently in an academic training post. Out of the respondents, those in ST1-ST3 (24.2%, 16/66) and ST6-ST8 (24.2%, 16/66) were more likely to be in an academic training post.

3.4 Comparisons by region

Amongst the four nations of the United Kingdom, the percentage of responses received by each country was broadly representative of the number of trainees in each nation, excluding those who did not state their nation (112/588) (see Table 6). For further information on the number of respondents per region, please see Table 5 above (page 7).

Table 6. Proportion of respondents from each of the four UK nations, compared to proportion of trainees in each region (2018 data).

	Number of respondents	Percentage of respondents	Number of trainees (2018)*	Percentage of trainees by country (2018)
England	405	85.1%	3217	86.3%
Scotland	43	9.0%	263	7.1%
Wales	18	3.8%	137	3.7%
Northern Ireland	10	2.1%	103	2.8%
Total	476	100%	3727	99.9%

*Data from RCPCH Workforce census, <https://www.rcpch.ac.uk/resources/workforce-census-2017-resources>

Out of 476 respondents, 40% (162/405) and 39.5% (17/43) of English and Scottish trainees respectively reported that they were involved in research, compared to 30% (3/10) of Northern Irish trainees and 22% (4/18) of Welsh trainees (see Figures 8 and 9). Similarly, the highest percentage of trainees with protected time for research were from England (14.3%, 58/405), followed by Scotland (11.6%, 5/43), Northern Ireland (10%, 1/10) then Wales (5.6%, 1/18); although overall numbers from the devolved nations were low.

Figure 9 demonstrates the percentage of trainees across the devolved nations involved in research and those with protected time for research. As highlighted in the maps, Wales had the lowest percentage of trainees involved in research and with protected time for research.

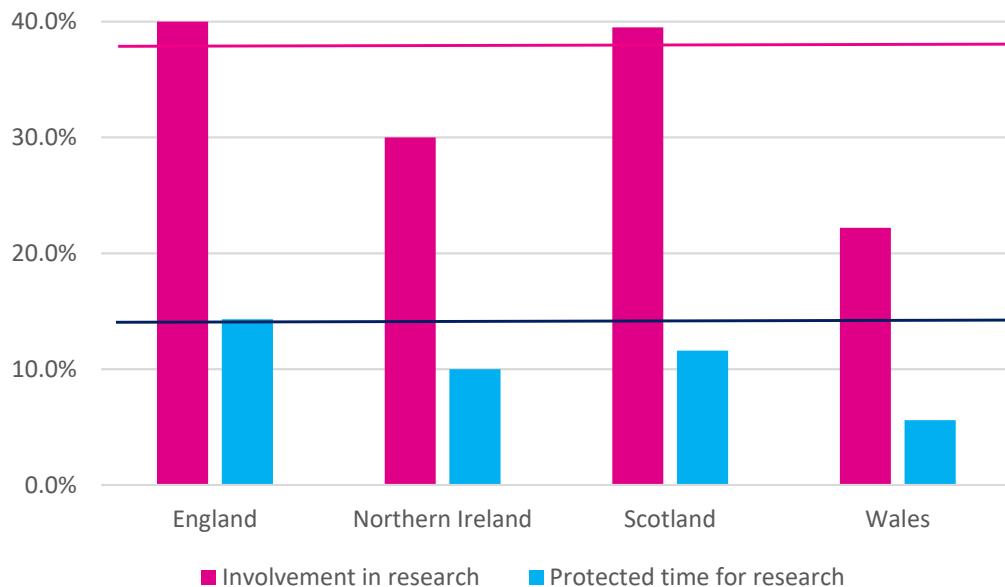


Figure 8. Percentage of trainees reporting involvement in research and protected time for research in each of the UK nations. The pink line indicates the overall percentage of respondents reporting involvement in research, the blue line indicates the overall percentage of respondents reporting protected research time.

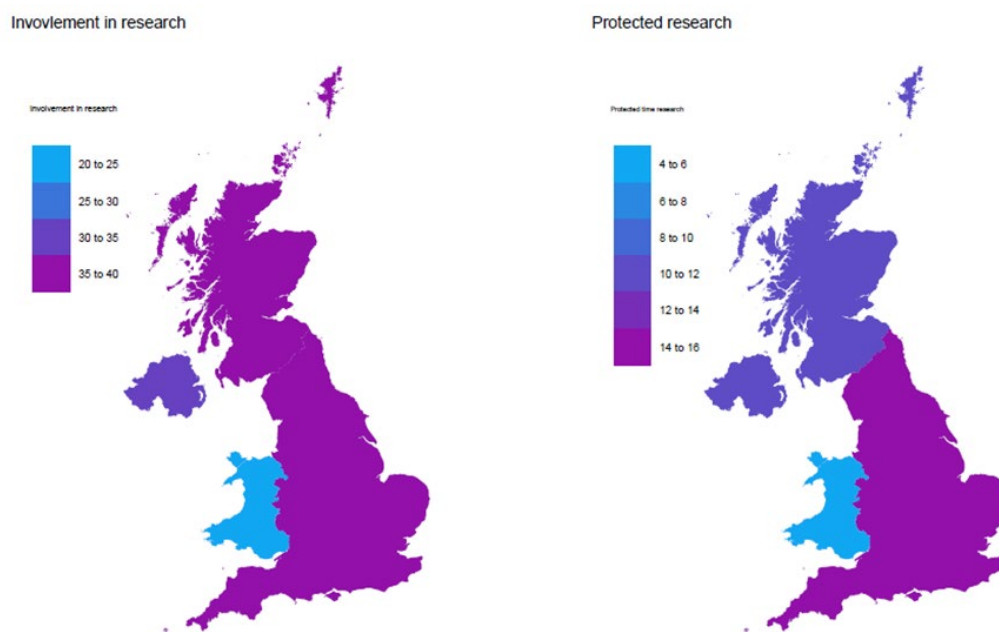


Figure 9. UK map showing the distributions of trainees involved in research and those with protected time for research.

Comparison between UK paediatric deaneries

The percentage of respondents reporting that they were involved in research varied by region and ranged from 9.1% (1/11, Mersey) to 80% (8/10, Thames valley) (Figure 10). Those reporting that they had protected time for research ranged from 3.3% (2/61) in the West Midlands to 36.4% (4/11) in Wessex (see Figure 10).

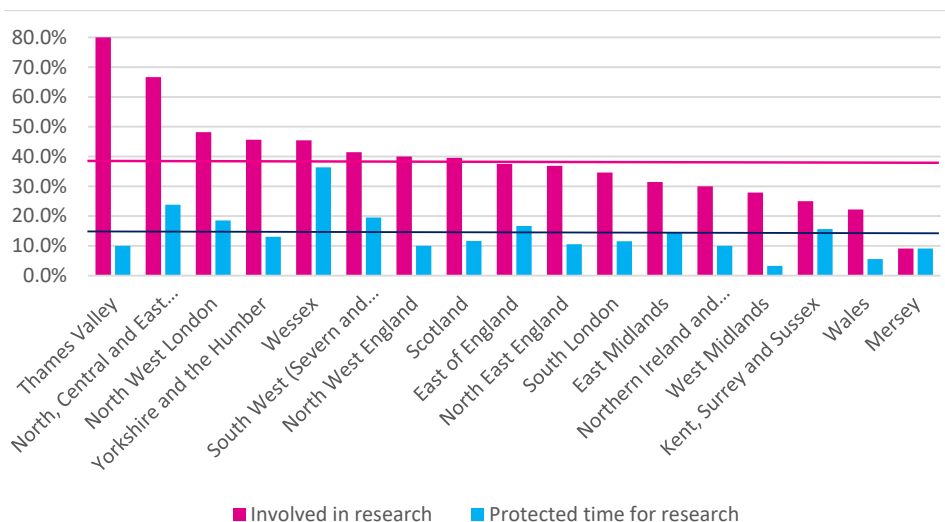


Figure 10. Unadjusted percentage of respondents reporting they were involved in research (pink bars) and percentage reporting they had protected research time (blue bars) by region. The pink line indicates the overall percentage of respondents reporting involvement in research, the blue line indicates the overall percentage of respondents reporting protected research time.

A total of 9.2% (54/588) of respondents reported that they were in an academic training post, though this varied by region. Despite 80% of Thames valley trainees reporting they were involved in research, none stated that they were in an academic post. There were also no academic trainees in those surveyed from Wales. It is unlikely that these two responses are representative of the paediatric trainee population in both Thames Valley and Wales because of the low number of responses from both. The highest percentage of trainees reporting they were in an academic post was 27% (3/11) from Wessex (see Figure 11).

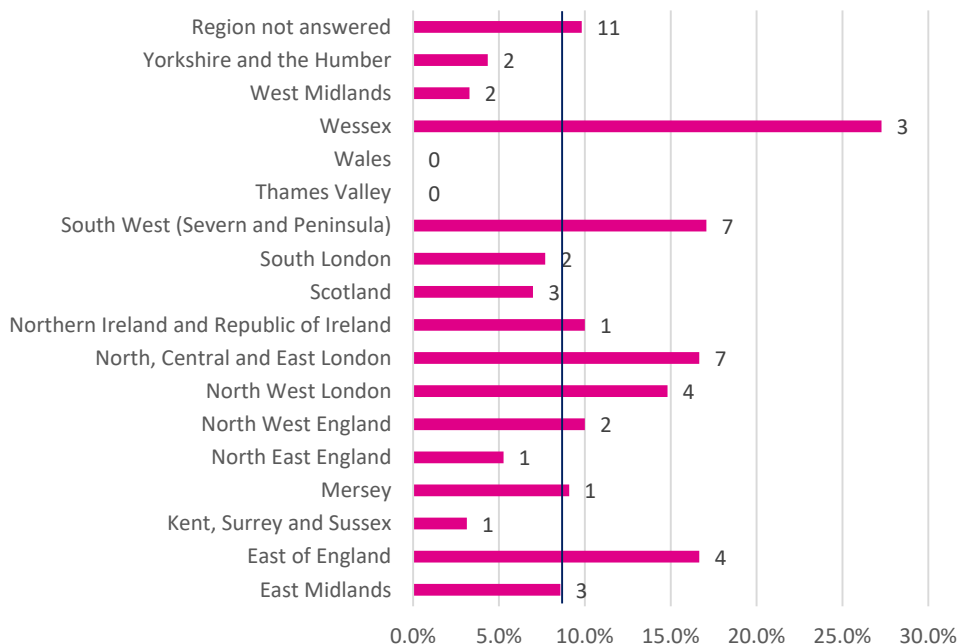


Figure 11. Percentage of trainees reporting they were in an academic post by region. Number of trainees in an academic post per region are shown alongside the bars, the blue line indicates the overall average percent of trainees reporting they were in an academic post.

Across all regions, 50-80% of respondents were unaware of any academic support services available to them (see Figure 12). There was no relationship between awareness of available support and involvement in research.

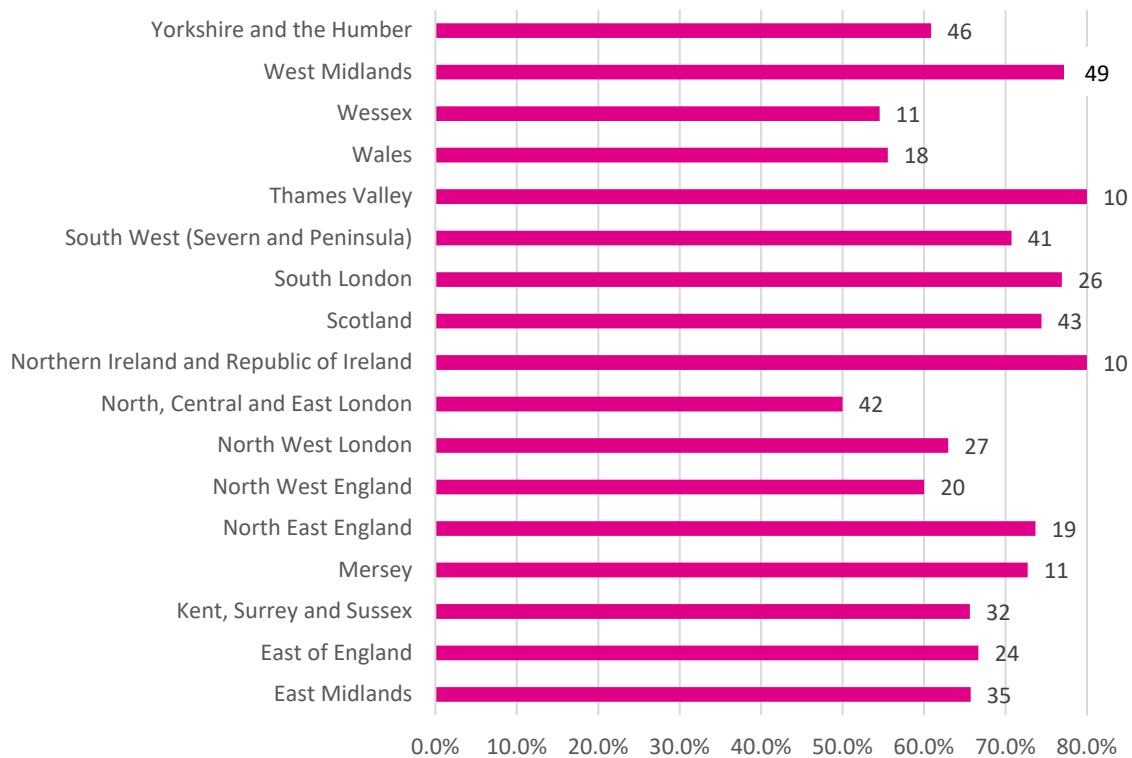


Figure 12. Percentage of respondents answering “I do not know” when asked what academic support services were available to them. Numbers of trainees are shown alongside the bars. Of note, only 4/112 of the respondents who did not state their region answered this question therefore these data are not shown.

Comparisons between UK and international graduates

Overall research involvement was compared between UK and international graduates, excluding 113 incomplete responses out of the 588 received. When looking at overall research involvement by graduation location, 42.8% of UK graduates (155/362) were currently participating in research compared with 27.4% of international graduates (29/106) and 2.0% of those who preferred to not say whether they were a UK or international graduate (2/7). Only 13.7% of all graduates (65/475) had protected time for research, of these, 14.6% were UK graduates (53/362) and 11.3% were international graduates (12/106).

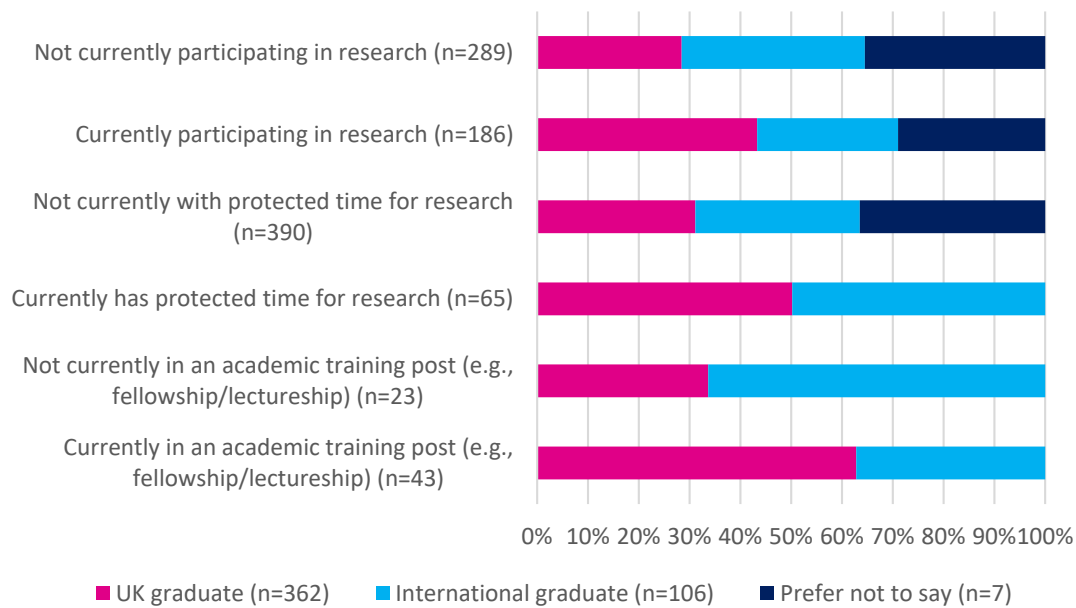


Figure 13. Overall involvement in research by graduate location.

3.5 Comparisons by gender

Out of the 588 respondents, 474 also provided data on their gender, therefore 114 have been excluded from the analysis for this section. When looking at overall research involvement by gender, 35.7% of females (123/345) were currently participating in research compared with 47.8% of males (55/115) and 50.0% of those who preferred to either self-describe or not say (7/14). Overall, only 17.7% of respondents (84/474) had protected time for research, of these, 20.0% were female (69/345), 12.2% were male (14/115) and 7.1% preferred not to state or preferred to self-describe (1/14).

There were only 52 responses with gender stated to the question regarding currently being in an academic training post such as a fellowship or lectureship. No males who responded to this question were currently in an academic training post, conversely 66.0% of females stated that they were currently in an academic training post (33/50), as well as one trainee who preferred not to state or preferred to self-describe.

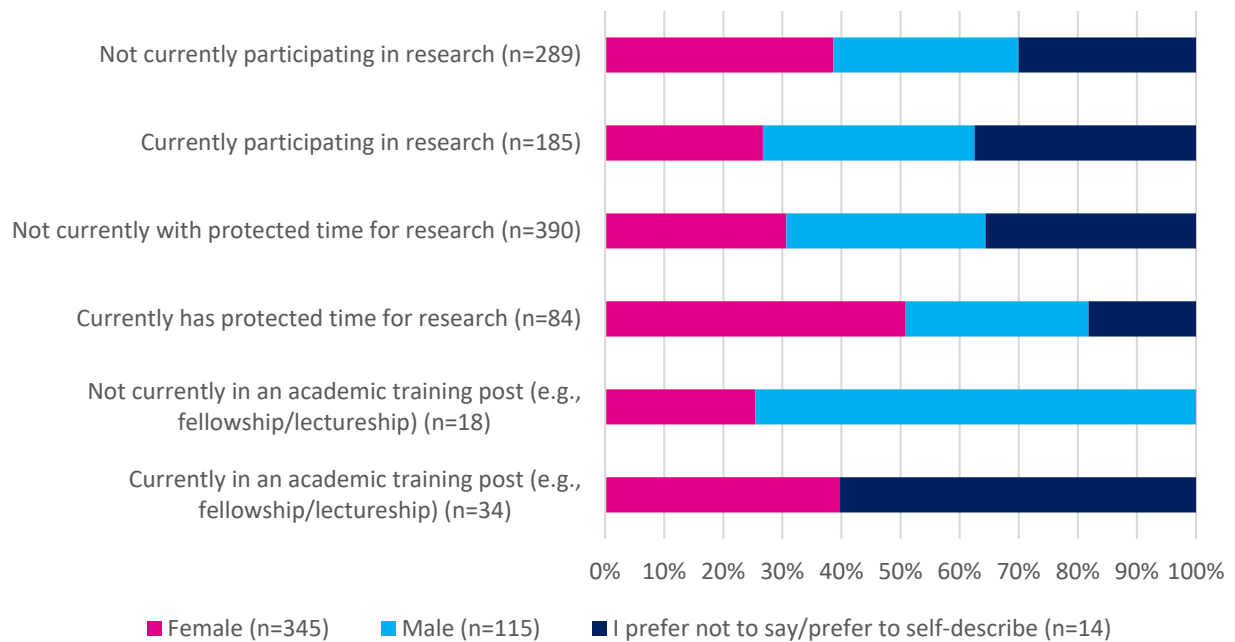


Figure 14. Overall involvement in research by gender.

3.6 Motivators and barriers

Motivators for research

Respondents were asked which of the categories shown in Figure 15 corresponded with their motivation for participating in research, 561 responders provided an answer to this question. The majority of respondents (71.3%, 400/561) stated that they participated in research in order to enhance their job prospects and CV. Other reasons with high responses include enhancing their academic skills and learning more about research methodologies (400/561) and to develop a deeper interest in a specific topic (59.2%, 332/561). The least likely motivators for research were feeling pressured or expected to participate (20.5%, 115/561) or to add more flexibility to their work schedule (10.9%, 61/561). Respondents were given the opportunity to add further reasons for their motivators for participating in research, the key themes of this as well as the key themes of the benefits to research are detailed below. Here it must be noted that several respondents indicated that they do not participate in research, have no interest in participating in research or have no motivation to participate in research (1.6%, 9/561). Further comments provided indicated that some trainees try to “actively avoid research as [they] wouldn’t know where to begin” and do not want research “imposed upon [their] career.”

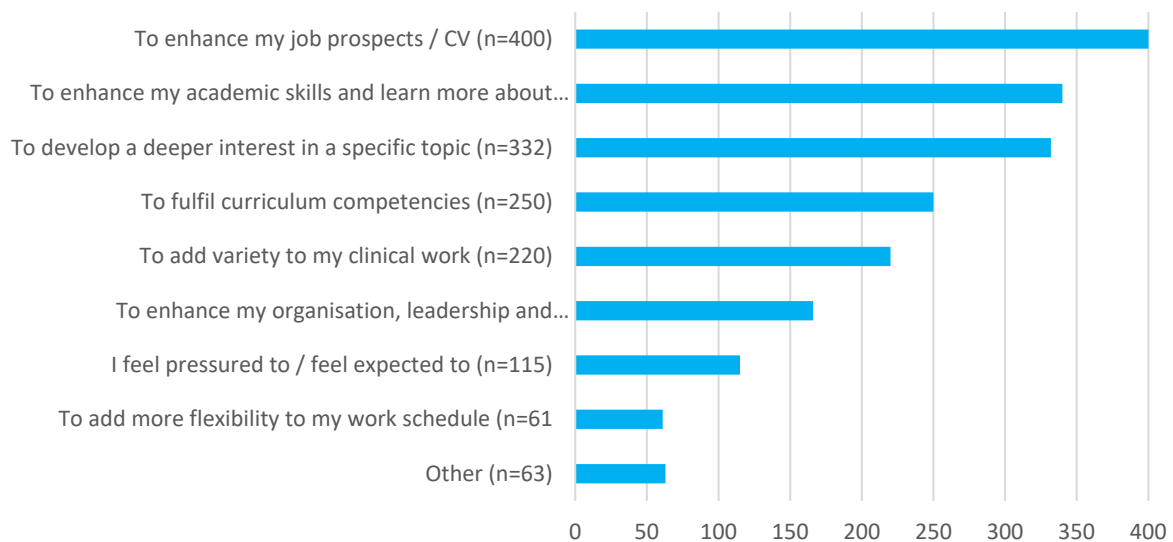


Figure 15. Key motivating factors for participating in research.

Benefits from research

Figure 16 below demonstrates the perceived benefits from research from a total of 486 respondents to the survey. The three most likely benefits from research were:

- trainees feeling that they have enhanced their clinical skills and/or knowledge with 54.1% (263/486) stating that they somewhat agree or strongly agree with this statement,
- trainees feeling that they have enhanced their organisation, leadership and management skills with 50.8% (247/486) stating that they somewhat agree or strongly agree with this statement,
- trainees feeling that they have developed a better understanding of research methodology and improved their academic skills with 49.8% (242/486) stating that they somewhat agree or strongly agree with this statement.

Respondents were least likely to somewhat agree or strongly agree that a benefit from research was an increase in flexibility to their work schedule (21.8%, 106/486).

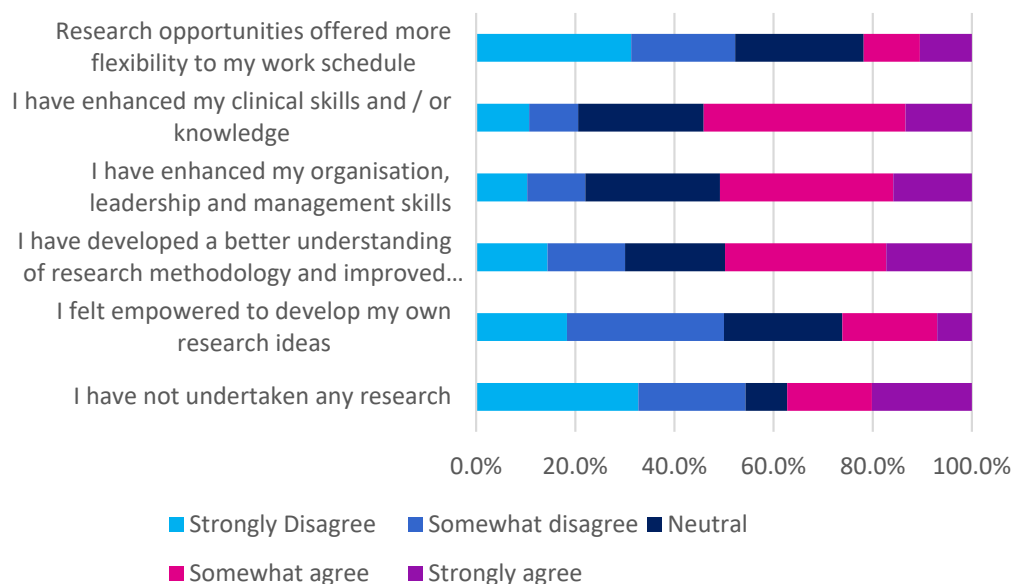


Figure 16. Key benefits from participating in research.

The key themes that arose from the perceived motivators and benefits for participating in research as stated by the respondents to the survey could be grouped into the following four categories:

- Improvements to clinical care by contributing to evidence-based practice and changing child health outcomes:

“I feel it can benefit so many more children than I am able to see clinically on an individual basis.”

“I enjoy research and am a big believer in evidence-based practice and want to contribute to that field.”

“To actually change child health outcomes rather than just to provide service delivery. To influence policy on child health.”

- Career development/requirements particularly regarding becoming a clinical academic:

“I want to become a clinical academic which will not be possible without a significant research output.”

“Career aim of [specialty] with feedback from unsuccessful first GRID application being more research was required/weakest part of application.”

- Personal development to improve on skills and increase experience and exposure:

“To feed the creative bit of my brain!”

“Qualitative research - useful to develop interview skills which are transferable to academic and clinical work.”

“It is really exciting to develop your own ideas and hypotheses and see them bear fruit.”

“Academic foundation post enabled flexible working and valuable experience of academic life.”

- Broadening horizons via collaboration, networking and gaining a deeper understanding of research:

“Opportunity to collaborate with various research organisations and be involved in meaningful patient involvement.”

Barriers

Respondents were asked about the perceived barriers they have to accessing or participating in research. The questions were divided by the topics of motivation, training time, supervision, funding and academic skills, and respondents were given the opportunity to provide more information with their answer. The results offered five key themes for barriers identified to participating in research which included:

- Time:

“I have gone part time to complete unpaid research in my off days.”

“Main barrier is time. Main enabler would be protected time and specific teaching.”

“Mainly time - never have any time during clinical rotation to be allowed to pursue research and expected to entirely devote all time to service provision.”

“This is such a shame as I am sure that others like me are drawn to the idea of doing research alongside (not in place of) their clinical career. As a PI on a national study... I managed to accommodate the data collection around work shifts, only by coming in on days off.”

- Clinical training structures:

“Being less than full-time (LTFT) and rotating every six months means engaging in research is nigh on impossible.”

“For me, the major barrier to research is the requirement to take time out of programme for it when training is long enough as it is, and I have already had time out for maternity leave and work part time.”

“Apart from specific regional teaching days on the topic, there is very little structured teaching or training offered within paediatrics regarding research.”

- Research processes:

“The process for obtaining ethical approval/IRAS was so lengthy it was simply not feasible given deadlines and full-time clinical work.”

“I think the process of seeking research approval is too complex and lengthy to be viable for the average clinical trainee, with a myriad of other work obligations.”

- Being unaware of opportunities:

“Any projects I have been involved in have been a case of lucky circumstances (just being in the right place at the right time) and I’m sure many more opportunities have passed me by as I don’t know what or who to ask about projects.”

“It is quite difficult for IMGs in training to get to be a part of research projects especially because not familiar with the system and how to access the available opportunities and projects.”

- The impact on work/life balance:

“Intense rotas make sustaining additional extra-curricular activities to the detriment of well-being.”

“The clinical rotas are so tight that already we are doing compulsory audits/e-portfolio and other leadership/management roles/study courses in our own spare time, that there doesn’t seem any opportunity to fit in any research too without sacrificing the work/life balance even more.”



Figure 17. Summary of thematic analysis: barriers to participation in research for paediatric trainees surveyed. *Out of programme for research (OOPR).

Specific support available

Trainees were asked what forms of academic support are available to them, a total of 673 responses were received from 480 respondents. The main areas of support available were academic skills workshops (100/673), statistics support (88/673) and support from clinical research/trials units (81/673). It must be noted that 325/673 responses stated that they did not know what areas of support were available to them. Types of support listed under 'other' included mentoring, tutoring, academic support, supervision and research skills and methodology training. Seven respondents who selected 'other' stated that there was no support available to them.

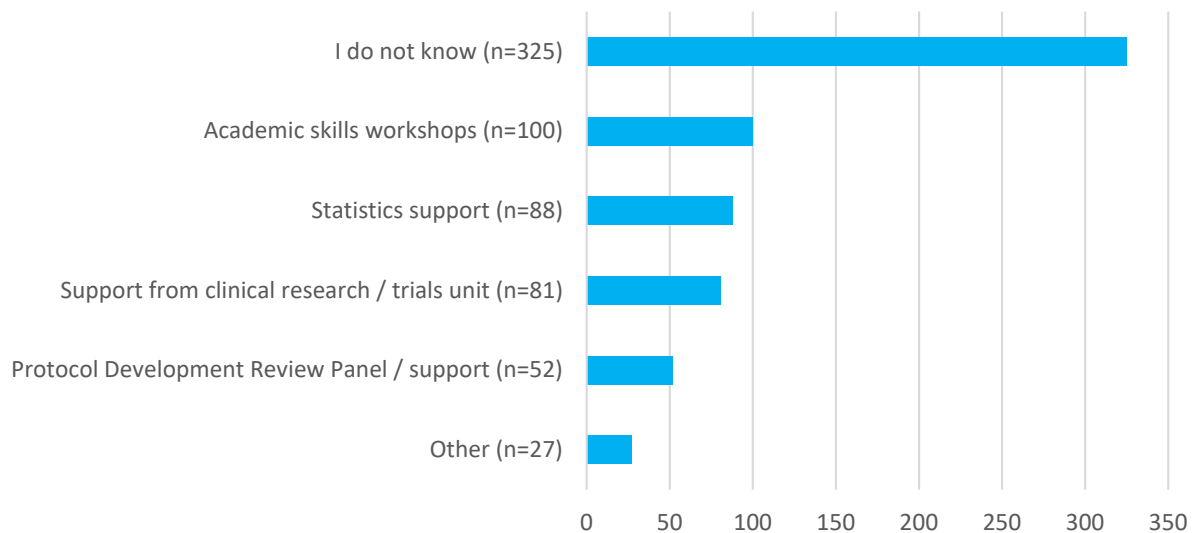


Figure 18. Types of academic support available to trainees.

RCPCH support

Respondents to the survey were asked what support the RCPCH could provide to better support trainees to participate in research. A total of 139 responses were received and a variety of opinions were shared. Many responses expressed a desire for increased funding opportunities and increased time for research in their posts. The most commonly requested support that could feasibly be provided was as follows:

- Access to research and training opportunities:
 - Such as the establishment of national, centralised forums and/or platforms for research as well as an increased amount of research workshops/days which could include information on practical aspects such as leading a research project, how to apply for funding, research methodology or skills workshops such as for statistics support.
 - Increased RCPCH member communications such as Milestones which could have a research focus including information on academic career pathways, funding opportunities and articles on how to write/read papers, develop ideas, and how to manage your career and life whilst undertaking research.
 - Creation of a 'How to guide' which could include all aspects of research and the processes involved.
 - The RCPCH advocating more for alternative research pathways, academic clinical fellowships (ACFs), academic clinical lecturers (ACLs) and other paediatric fellowships.

- More information for trainees, particularly regarding opportunities that are currently available, information could be distributed via the RCPCH website.
 - A central database of resources to support research which could include how to conduct a study, how to write a funding application, how to do a systematic review, how to use statistical software, or links to courses that teach these skills.
 - The RCPCH could embed research into the curriculum in a hope to increase the amount of time available for research in posts
- Peer and mentorship schemes:
 - Access to someone who could answer questions and help with any issues such as a peer support or mentorship scheme.
 - Research networks in each region of the UK, as well as every deanery having a point of contact for trainees to signpost to opportunities for research.
 - Practical support for regional research networks to establish themselves, for example, help with building websites.
 - Funding:
 - Increased advertising of the RCPCH funding database alongside more funding opportunities for research.

4. Discussion

This survey demonstrated that the majority of UK paediatric trainees who responded to the survey are interested in being involved in a wide variety of research activities, though just over a third were currently taking part in a research project. Trainees are highly motivated with many spending a significant amount of personal time on academic endeavours though this raises the question of whether the current training structure is supportive at allowing trainees access to research opportunities.

The results of the survey demonstrated a regional variation in the percentage of respondents reporting that they were involved in research and the percentage who have protected time for research. Across the three devolved nations, only four respondents reported being in an academic training post, with no respondents from Wales being in an academic training post, though overall numbers were small. Our results suggest there may be a discrepancy in access to formal paediatric academic training between the devolved nations and England, and therefore, there is a role for the RCPCH and stakeholder organisations to advocate for equal opportunities for academic career training across the four nations.

The survey also found that the proportion of IMGs participating in research activities is lower than UK graduates. It would be useful to explore the experiences of IMG trainees and those in deaneries at the extremes of this range in more detail to inform policies to increase trainee engagement with research.

The trainees who participated in the survey perceived a wide variety of benefits to research which cover multiple domains of the [Progress+](#) curriculum including research and leadership

and management. Aside from career development, the altruism and satisfaction of research cited by respondents could perhaps explain the high proportion of personal time dedicated to research noted for trainees both in and out of formal academic programmes. While this is encouraging, there is a broader concern for the RCPCH that such heavy reliance on personal time is unlikely to be efficient and/or effective in the long-term, for the future of our trainees or consultant academic workforce.

Barriers highly cited by trainee respondents such as time and difficulties in achieving a work-life balance highlight the need to redress this situation. Furthermore, the finding that clinical rotations and working less than full-time may preclude access to research involvement requires consideration of how training may be altered to support trainees, which may involve dedicated periods of research not necessarily linked to a formal academic training number, in addition to considering longer rotations for trainees demonstrating evidence of research involvement. A high proportion of trainees were unaware of research opportunities and academic support services available locally, demonstrating a need for close collaboration between key stakeholders involved in organisations that provide paediatric training and research to promote access to available resources. This survey highlighted that the main perceived barriers to research were time, access and support rather than interest and motivation highlighting the need for organisations to work on reducing these barriers.

Over the past four years, the RCPCH TRN has worked to promote the establishment of local trainee research networks to establish regional networks, build future research capacity and signpost trainees to academic support and opportunities. Based on this survey, we encourage the RCPCH and NHS communities to continue engaging with helping our trainee research networks develop and thrive, for the betterment of Paediatric training and child health care.

5. Limitations

Despite the response rate being average for a survey of this type, the low number of responses meant that statistical analyses, including correlational analyses, were not felt to be appropriate during the data analysis stage. Furthermore, as some questions were optional, there are questions with a large proportion of respondents having sections not answered. Proportions of trainees from each level, region, gender and ethnicity also may not be proportionate to the trainee group. All these factors may affect the generalisability of the responses.

At the four-nation level, the proportion of respondents is likely to be representative, but there was an overall low volume of responses received and as with all data within this survey, several biases may be present, such as trainees with an interest in research being more likely to respond. This may therefore influence the results, particularly in written format as those with less interest or those unsure how to get involved in research may not have completed the survey.

However, the survey still provides useful insight into the experience of paediatric trainees and the repetition of similar factors between trainees from differing backgrounds and situations should be considered.

As the survey was adapted from the 2011 survey, explanations were not given for the terms used throughout the questions, such as what is meant by 'research activity' and what protected time

for research means. Therefore, these questions could have been misinterpreted by trainees and responses may not be consistent. The questions asked also implied interest in currently held posts and not trainees who may have held academic positions in the past, and therefore, a portion of trainees who have previously been involved in research but are not currently involved may have been missed.

6. Conclusions

This online survey exploring trainee involvement in research has identified that, despite a strong enthusiasm amongst UK paediatric trainees to participate and develop skills in research, just over a third of respondents are currently involved in any research project. A small minority of trainees are currently in an academic training post or have dedicated research time, and a significant amount of personal time is dedicated to developing a research interest.

There is potentially a disparity in access to research opportunities between the four UK nations, and there is a lack of knowledge of, and access to, research support structures across most trainees. Key stakeholders, including the RCPCH, NHS postgraduate medical training organisations and research support structures, need to increase collaboration in the future. This will support the development of the next generation of child health researchers and bolster the UK's child health research capacity to benefit the health of the paediatric population.

7. Authorship and Contributions

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