UK paediatric trainee research involvement: A national mixed-methods survey to highlight opportunities and challenges

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Abstract

Child health research is essential for the ongoing development of evidence-based care; however, it is unclear how much experience Paediatric trainees currently gain in research. The RCPCH established the Trainee Research Network (TRN) to support regional research, and we conducted a national survey in 2021 to understand the provisions and barriers to research exposure faced by Paediatric trainees. The survey highlighted that trainees remain highly motivated to pursue academic endeavours in personal time, with key motivators including altruistic intent. However, ongoing barriers to research exist including time allocated and training structures. This aligns with the notable decline in research time within Paediatric consultant contracts. The RCPCH TRN therefore strongly encourages the promotion of research opportunities for trainees who are keen to access these. This will ensure the future of child health research remains a priority, with UK at the forefront of ground-breaking developments for children and young people.

Letter

Child health research is considered essential to paediatric training. However, due to service provision demands and workforce planning, research capacity within paediatric consultant contracts is declining[1]. This affects paediatric trainees who perceive lack of leadership in this domain[2]. Considering these concerns, in 2021 the Royal College of Paediatrics and Child Health (RCPCH) established the Trainee Research Network (TRN) to support regional research. To broadly evaluate trainee participation in research as a marker of future UK research capacity, we conducted a national survey of trainees' experiences to help identify the breadth of research involvement and to identify barriers and facilitators to participation.

The survey was designed by the RCPCH TRN. It was disseminated to all UK trainees electronically. Categorical data are described. Free-text responses to addressing motivators and barriers to research involvement were qualitatively analysed using line-by-line coding and thematic analysis; independent double coding was undertaken to ensure methodological rigour.

The overall response rate was 16% (n=588). 81% (474) provided demographic data: 73% (345) identified as female, 76% (362) were UK graduates and all ST levels were represented. 9% (54/588) reported being in an academic training post. There was a strong desire for trainees who are not currently involved in a research project (n=363) to publish in peer-reviewed journals (60%, (217/363)), but 6% (21/363) did not want to participate in research. There were regional variations, with two regions having no respondents in an academic training position. Of trainees who were research-active (n=225), 69% (155) were UK graduates and 13% (29) were international medical graduates. Most respondents (86%), across all ST levels, did not have protected time for research. Importantly, 51% (247/486) of respondents agreed that participating in research enhanced their leadership and management skills. Table 1 highlights key qualitative themes relating to motivators and barriers to research involvement. Lack of dedicated time for research was a key barrier, while enjoyment and satisfaction of participating in research, desire to improve patient care and advancing clinical career were cited as benefits. Specific support requested by trainees to facilitate research involvement included supervisory and methodological support.

This survey highlights concerning trends regarding allocation of time for research in paediatric training posts. Trainees remain highly motivated, however, there is ongoing uncertainty within the trainee body about the feasibility of research experience in paediatrics. There is evidence of high levels of personal time being allocated to research, particularly by academic clinical trainees. It is worthwhile considering the risk of burnout in trainees attempting to juggle clinical and academic roles. Encouragingly, many trainees recognise the benefits of research involvement for patient care as well as for their personal and professional development.

The TRN recognises the positive impact of signposting all trainees to relevant support systems when developing research or quality improvement studies[3]. Without appropriate exposure to high-quality research whilst in training, we risk compromising evidence-based care. As the RCPCH TRN, we call on child health research leaders to prioritise clinical research workforce planning to sustain the future of UK's research delivery for children and young people.

Table 1: Results from thematic analysis of responses to motivators and barriers around research.

Motivators/benefits to research	Example quotes
Clinical care	*"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/requirement	*"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 factors	*"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 - **Collaborations** - **Networking** - **Gain deeper understanding of research**	*"Opportunity to collaborate with various research organisations and be involved in meaningful patient involvement."*
Barriers to research	
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 structure	*"Being LTFT and rotating every 6 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 structed 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."*
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."*
Work and life balance	*"Intense rotas make sustaining additional extra-curricula 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."*
Specific support requested by trainees	
Methodological support	*"We did research skills and methodology during the child health diploma but I am unsure of ongoing support now that I have completed this."*
Supervision	*"Mentoring programme as I think academic development is very dependent on your academic interest."*

References

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