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Identifying the barriers to undertaking research by junior doctors; an Observational study

T Heggie[1], I Offiah[2] PhD MRCOG, A Parr[4], A Dua[2] MD MRCOG, R Freeman[2] MD FRCOG.

[1]Department of Obstetrics and Gynaecology, Northumbria Healthcare NHS Foundation Trust
[2]Department of Urogynaecology, University Hospital Plymouth NHS Trust, Plymouth.
[3]Department of Obstetrics and Gynaecology, Liverpool Hospital, SWSLHD, NSW Australia

Abstract

Background: This study aims to identify barriers experienced by junior doctors (JDs) to undertaking research within University Hospitals Plymouth NHS Trust (UHP-NHST).

Methods: 582 JDs within UHP-NHST received a survey on past and future research; focusing on demographic data and barriers and enablers to research.

Findings: 33% of UHP-NHST (190) JDs responded. Registrars (ST3+) were the largest group of respondents.

58% of respondents were involved in research during medical school, 76% of these continued during training. The desire to participate in future research was high: 72%; 62% would prefer to 'create...own study'. Radiology trainees, Foundation doctors and Surgical trainees had the highest desire to undertake research (75%, 74% and 74%) whereas Paediatric and GP trainees had lowest desire (50%, 58%). 11/190 were O&G trainees; 55% had research experience and 73% expressed a desire for future research. In assessing drivers, 'portfolio requirement' and/or 'tick box exercise' were primary drivers: 46%. Genuine interest was secondary: 39%.

64% reported experiencing barriers to research, most commonly lack of time (45%), lack of knowledge of research methodology (34%) and resource scarcity (31%). These themes showed no significant correlation to the medical school, career stage, and specialty. 'More time for research' and 'support from supervisors and R&D department' were the most significant enablers (39%; 27%).

Conclusion: This study demonstrates a desire to undertake research, but barriers preventing research were faced in 64%. Permitting JDs time for research, providing engaged supervisors and education on research methodology is recommended to optimise research opportunities for doctors.

Background: Research is a crucial pillar of evidence-based medicine. Research enables new treatments and underpins National and local policy creation. An individual junior doctor benefits from expanding personal understanding of a specific field of medicine and adhering to the General Medical Council's (GMC) specifications of continual personal development(1,2). Whilst most research will not be career-defining, at a basic level partaking in research provides junior doctors the skills to understand and appraise research and involvement is assessed every year as part of a junior doctor's Annual Competency Review of Progression (ARCP)(3,4).

As indicated above, the societal and personal benefits of research are irrefutable. Unfortunately, the practicalities of undertaking research are often different from the ideal. "Junior doctors" - a term that encompasses all non-consultant doctors – experience exceptionally heavy workloads. This being the case the doctor's personal development and training are often overlooked and opportunities to perform research are forgone in order to prioritise patient care and service provision.

The GMC 2019 Report(5) testifies to this, stating that 'over one third' of trainees were unable to use their allocated time for training. These pressures faced by junior doctors are well-documented, but the effect of this on doctors' motivation and ability to undertake research is under investigated.

Aim: This study aims to identify the barriers to engagement in research experienced by junior doctors within University Hospitals Plymouth NHS Trust (UHP-NHST) alongside identifying ways of promoting research participation by identifying barriers.

Methods: Approval to undertake this study was granted by the UHPNT Clinical Audit and Service Evaluation department. An online questionnaire was designed, and its applicability first trialled on the doctors in the Obstetrics and Gynaecology department. Changes were made as necessary. The questionnaire contained 3 domains: firstly assessing respondent demographics, including career level, specialty, medical school attended, and research experience to date - at medical school and during training. The second domain examined barriers to research faced by the respondents: both actual barriers experienced in the past, or perceived barriers. The third domain focussed on positive factors which could drive the respondents to consider research in the future. Participants were encouraged to state all potential barriers via a tick-box of potential barriers alongside a free-text box for comments and suggestions.

Results:

Population demographics

190 responses accounted for 33% of all junior doctors at UHPNT. Junior doctors in our study attended 61 different medical schools - 34 UK-based medical schools (n= 156) and 27 non-UK

based medical schools. The medical schools were divided into 6 groups by geography (Figure 1): South West (n = 42), London (n=31), Southern England (n = 33), Northern England (n = 26), other UK schools (Scotland, Wales, and Northern Ireland) (n = 24) and non-UK based medical schools (n = 31).

Previous research experience

58% (111/190) of responders were involved in research during medical school. 76% (n = 84) of these responders had continued involvement in research during training.

Radiology trainees (11/12) followed by surgical trainees (21/27) then anaesthetists (8/11) were the most likely to have been involved with research during training.

Barriers to research

The primary drivers to involvement in research were 'portfolio requirement' and/or 'tick box exercise': 46% of responders. Genuine interest was secondary: 39% of responders.

64% reported experiencing barriers to research. The most common barriers to research, both previously experienced and anticipated barriers, were lack of time (45%), lack of knowledge of research methodology (34%) and resource scarcity (31%). Other barriers mentioned included perceived difficulty of 'red tape' in relation to research governance, lack of senior support, lack of interest and previous bad experiences.

Figure 3: Barriers by medical school. Trainees who had attended medical schools in the South West had the highest percentage of responders not knowing how to start a research project.

Future desire to partake in research

The desire to participate in future research was high: 72% (136/190) of responders; 62% (84/136) would prefer to 'create my own study'. Radiology Trainees showed the most willingness to undertake future research: 9/12 responders (75%). This was closely followed by foundation doctors and Surgical trainees (both 74% with 32/43 and 20/27 respectively). The paediatric and GP trainees had the lowest desire (50% and 58%). The desire to undertake research in the future was correlated to the Medical School attended (Figure 4) and more importantly if a responder undertook research at Medical school, they were significantly more likely to wish to undertake future research; 65% wish to undertake research if had experience from medical school compared to 43% (p = 0.005).

Figure 4: Desire to undertake future research by medical school attended. The trainees from the South West demonstrated the highest desire to undertake research in the future at 79%.

Suggested enablers

'More time for research' and 'support from supervisors and R&D department' were the most re-iterated enablers (39% and 27%). 116 of 190 stated that did not know about the Clinical Research Network, Research & Development department (R&D). Those who knew about these facilities were more likely to state a willingness to undertake future research: 73%. It is important to note that 82 responders (60%) would like to undertake future research but were unaware of the services offered by the R&D team. Free-text responses identified the wish for advertisements about research opportunities and direct links to potential supervisors.

Discussion

This study demonstrates that the majority of junior doctors have undertaken research and are keen to undertake more in the future. Many of them have faced barriers or are concerned about further ones they might face - preventing them from starting the process at all. By having large inclusion criteria, we suggest that these results can be extrapolated for junior doctors across the UK.

By having a supportive network with access to information on research projects and the provision of training, SWARM removes two of the main barriers highlighted by respondents. Amongst those wishing to participate in future research, there was a significant preference (62%) for original research over joining an ongoing project. A collaborative such as SWARM can provide a space to learn how to start this process. Similar collaboratives are present within other specialties. UKARCOG is a UK-wide research network for O&G trainees (9); demonstrating that both regional and country-wide organisations are present to help promote research within the junior doctor cohort

Conclusion:

This study demonstrates that the majority of junior doctors are keen to undertake research. 64% faced barriers which prevented them from future research. Permitting junior doctors time for research and providing supervisors with the resources and education on research methodology is recommended to optimise positive and encouraging research opportunities for doctors.

Future research is required with a larger cohort to determine whether there are certain demographic groups (for example certain specialties and lifestyle factors) less likely to undertake research, and thus be able to focus interventions to target these groups.