

Exploring the research domain of consultant practice: Experiences of consultant radiographers



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ABSTRACT

Aim: This paper reports on one part of a larger study. The aim of the overall study was to explore what the core domain of research means to consultant radiographers in clinical practice and to identify the key factors that facilitate or hinder research activity by this staff group.

Design and method: Grounded theory research methodology was employed. This second part of the study involved telephone interviews with twenty five consultant radiographers.

Results: Results indicate there are variations across clinical specialties as to the amount and level of research undertaken by consultant radiographers.

The principal barriers revealed were: lack of time; excessive clinical workload; lack of skills and confidence to undertake research; poor research culture; and lack of support.

The main facilitators noted were: dedicated time, research training and up-skilling; mutually beneficial collaborations; managerial understanding of the research domain of the role; and research focussed on clinical demand.

Conclusion: Fulfilling the clinical role is imperative and integral to the profession at consultant level; however, if it is undertaken to the detriment of the other domains then these practitioners may not be operating at 'consultant' level. Overall improvements must be made to ensure that the consultant radiographer role is delivering on current expectations and is safeguarded for the future of the next generation of radiographers.

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Introduction

In 2000, the Department of Health published 'Meeting the Challenge: a Strategy for the Allied Health Professions'¹ and 'The NHS Plan'² documents which proposed developing areas of responsibility for allied health professions (AHPs). The role of the consultant AHP practitioner was defined and in 2001 the *Advance Letter*³ noted four core domains of the role:

- Expert clinical practice;
- Professional leadership and consultancy;
- Practice and service development, research and evaluation;
- Education and professional development.

However, the results of a survey published by Harris and Paterson in 2015⁴ indicated that many consultant radiographers are not undertaking research.

The study

This paper reports on one part of a larger inductive constructivist grounded theory study⁵ (see Fig. 1).

The subjective and individual reasons why consultant radiographers engage in and respond to research were paramount to this work. The study sought to understand the individual meanings consultant radiographers gave to the term 'research', to explore what they meant by 'research'.

Twenty-five consultant radiographers participated in the telephone interview phase. Interviewees were approached with open questions; conversations flowed freely and were not forced in a direction. Each interview was audio-taped, transcribed verbatim and verified by the interviewee.

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The analysis of the interviews moved from initial descriptors to concepts, as accepted in modified grounded theory.⁶ The investigation aimed to reach saturation point on topics when no new or changing data were really exposed.^{5,6} Interviews were analysed using a framework approach, as per Fig. 2.

Ethical approval

The project was submitted for full National Research Ethics System assessment, but was classified by the Bristol Local Regional Ethics Committee as service evaluation and Chair's approval was given. Ethical approval was obtained from the University of Exeter School of Psychology Ethics Committee (ref 2010/263). At the interview stage a participant information sheet and signed consent were used, verified again prior to the start of interview.

Results

The final number interviewed was 25; approximately 38% of those in-post at the time (n = 66). The scope of practice of interviewees is outlined in Table 1.

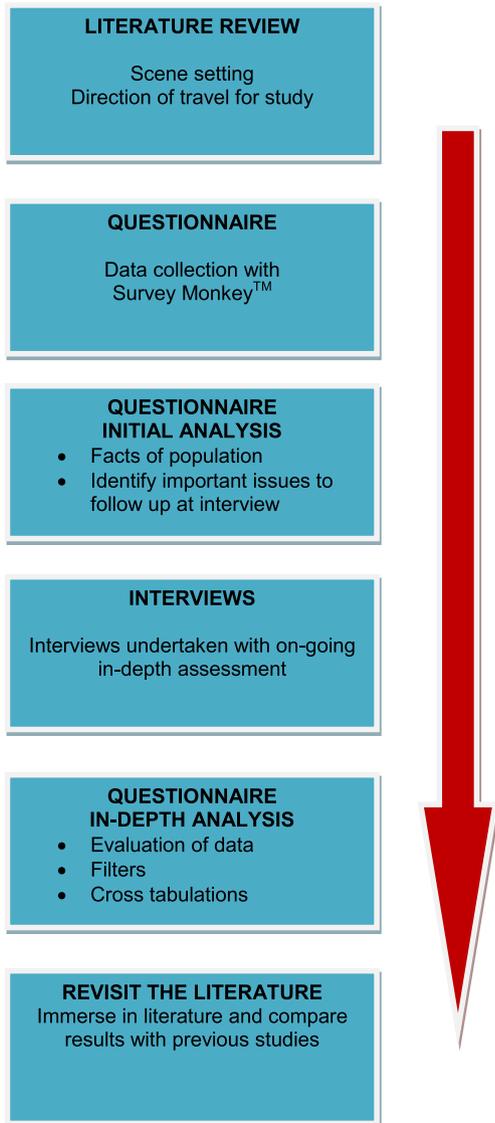


Figure 1. Study progression (illustrating the phases of the study).

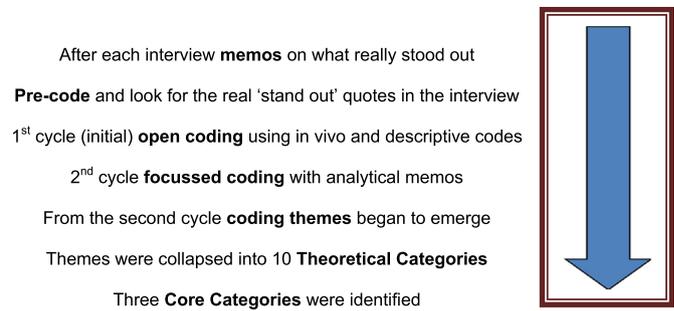


Figure 2. The framework approach (used to code and categorise the interviews).

The interview transcripts were collapsed into 34 themes and then 10 theoretical categories, as shown on Table 2.

The role

Twenty (80%) regarded the four core domains as integral to the ethos of their role. Many, however, stated that they were unable to undertake all domains. For a few, this raised personal concerns as they felt the domains should be in place and they needed to display them:

“... the clinical workload here has become ridiculous and it's impinging totally on to any time that we would have for research. In fact, I'm a little bit concerned about it, to be honest.” (Interview 04)

Three reflected that the clinical workload could be used as a barrier, but in reality it might not be and might be an 'excuse' not to do research.

“I think some people will hide a little bit behind the clinical and just say, I'm sure they'll say, I've got far too much clinical to do. I can't do research. Because you know I could do that ... You kind of just get caught up in that, focusing just on the clinical ... I could sit like a zombie, reporting all day long.” (Interview 05)

Five (20%), four of these were from breast imaging, were adamant that the clinical aspect of their role was their priority and the other domains were almost superfluous, and should be removed from their role.

“... I feel it's secondary to what you need to do ... The main role of a consultant radiographer is a clinical role ... And I feel that research for me ... is secondary. And audit is secondary ...” (Interview 12)

“... that's not why I was employed ... I don't see the point of wasting my time looking for something to research that doesn't necessarily need doing.” (Interview 19)

A rather contentious issue broached by three (12%) was the disclosure that the four domains were included in their job descriptions so that their posts could be banded at the consultant level.

Qualifications and research training

The topic of Master's level qualification as a minimum requirement or standard was raised. Twenty two (88%) had undertaken Master's level learning and felt it had developed their skills and that consultant practitioners should be educated to at least Master's

Table 1
Profile of interview participants (including scope of practice and numbers in post).

Scope of practice	Number in consultant role at time of interviews (n = 66)	Number interviewed (n = 25)
Breast Imaging (1 trainee)	29 (44%)	11 (44%)
Ultrasound (1 trainee)	11 (16%)	3 (12%)
Radiotherapy and Oncology	8 (12%)	6 (24%)
GI Imaging (1 trainee)	6 (9%)	2 (8%)
Plain film and general (1 trainee)	4 (6%)	1 (4%)
Emergency Care	3 (5%)	1 (4%)
MRI	3 (5%)	1 (4%)
Other	2 (3%)	–
Gender		
Male	5 (7%)	2 (8%)
Female	61 (93%)	23 (92%)

(GI = gastrointestinal; MRI = Magnetic Resonance Imaging).

level and only holding qualifications lower than this was “watering down” (interview 19) the credibility of the role.

An understanding of research

Nearly all remarked that research was the hardest core domain to achieve. Several seemed to be interpreting this aspect of the role as a standalone activity.

There was a diversity of opinion as to whether research should be part of the role of a consultant radiographer.

Table 2
The ten theoretical categories.

Theoretical category	Themes
The role	<ul style="list-style-type: none"> • Research as a core domain • Leadership, control and autonomy • The clinical role
Qualifications and training	<ul style="list-style-type: none"> • Research capability • Lack of confidence to do research
An understanding of research	<ul style="list-style-type: none"> • What is clinical research? • What actually counts as research? • How does research affect practice?
Research activity	<ul style="list-style-type: none"> • Publication record • Research user • Feedback to practice
Lack of time	<ul style="list-style-type: none"> • Real lack of time • Perceived lack of time • Job plan
Research collaboration	<ul style="list-style-type: none"> • HEIs <ul style="list-style-type: none"> ◦ Research link ◦ Teaching only • Other AHPs/professions • Research radiographers
Support	<ul style="list-style-type: none"> • Consultant radiographer providing support to others • Managerial support to consultant radiographer • Other radiographers support to consultant radiographer • Clinicians support to consultant radiographer • Rivalry
Research culture	<ul style="list-style-type: none"> • None • Acceptance • Interaction
Professional issues	<ul style="list-style-type: none"> • Succession planning • Pushing boundaries • Traditional influences
Fears and feelings	<ul style="list-style-type: none"> • Making excuses • Defensive • Apologetic • Concerned • Feelings of inadequacies • Isolated

All felt if they were going to do research they wanted it to have an impact on their practice and was, as several described as, ‘worthwhile’. Nearly all felt research should be supporting their practice, and that an evidence base for their practice was an obligation.

Research activity

A few felt publishing and presenting was something they could do and they were supported to do it. Others appeared to have less confidence in this aspect of their role. One even commented that:

“You know what I think is we probably are doing the research but because we’re not publishing it ... We are doing research but unless you see it in professional journals, it’s sort of like you’ve not done anything.” (Interview 21)

Lack of time

Twelve (48%) described lack of time as a real barrier affecting the research they could undertake. Interviewee four reflected on this a great deal.

“... But if you had me to write a job plan down, because I would feel obliged to put research in ... Simply to cover my own back ... And I’m acutely aware that over the past few years, my job has sort of shall we say morphed a bit. And if anybody would look at it today and say, well, where’s the research component? I’m a little bit stuck, if I must be honest.” (Interview 04)

Five (20%) remarked that any additional work above and beyond their clinical workloads was untenable.

“Well, my job is here to see patients and I work 8 sessions, seeing patients for 6, I don’t have much time left over to do extra things. And every week I work more hours than I should do ... There are always a lot of patients to get through and you know, we struggle to fit everything else into the week ... That there’s just not extra time for that as well.” (Interview 19)

Four (16%) of those who wanted to do research stated it would have to be done in their own time. A few expressed that research needed to be valued in the same way as other aspects of the role, i.e. if overtime was required to undertake research this should be a valid remuneration claim.

Others, despite having heavy clinical workloads, managed to achieve a workable system of integrating research into their role.

“It’s hard to know what the constraints would be elsewhere because I suppose my feeling is if someone comes out with a good idea that potentially can improve services, what can stop them? ... I mean I think with an intelligent overview then you can get around that and somehow perhaps fit that into a role.” (Interview 22)

Having dedicated research time appeared to be strongly linked to whether or not the respondent had a defined job plan.

“I think that’s probably when it goes wrong with some consultant radiographer roles because they don’t have a job plan ...” (Interview 01)

Several stated they did have job plans, but these were not adhered to or respected by others.

Research collaboration

Those who had linked with an academic collaborator found it was very helpful. Interviewee seven reflected that the consultant radiographer needs to be at an education level on a par with the academic partner and supported the view that consultant practitioners should aspire to Doctoral level education.

Working collaboratively on research projects with other health professionals did not appear to occur that often.

In diagnostic radiography there appeared to be a lack of understanding as to how they could work with a research radiographer and what the roles could offer each other. One interviewee stated she would not know how to work with a research radiographer even if the department had one.

Support

A few noted having supportive managers, who allowed them to fulfil the four core domains. However, the majority stated that there appeared to be a lack of management understanding regarding both their roles and the reasoning for the core domains.

“What I don't and never ever had is managerial support ... So, managerial support, I would say, very poor ...” (Interview 11)

In particular, most felt there was a lack of management understanding regarding the research aspect of the role.

“I think from management there's a very poor attitude to the research ... Because you know, to managers we get as many patients off the waiting list and extending working hours and doing all that.” (Interview 23)

A few described conflicts with those in medical roles and for a number of respondents it was clear they felt there were boundaries to their role.

“I mean, we're only able to achieve with their (radiologists) help ... If they want to be a barrier to anybody's development, they can be ... It is, and that has been our stumbling block ...” (Interview 21)

Research culture

Most described a lack of research culture in their department and that people did not understand or appreciate the value.

Four noted the prerequisite for a positive research culture. Three of these felt the driver should be the consultant radiographer.

“I suppose if you've got people who are enthusiastic with you. But basically, I think it has to come from me ... you have to self drive to a degree because no one's going to force you to do it.” (Interview 25)

Those who described more interactive research cultures emphasised how crucial it was to include others, to encourage and to support.

Professional issues

Five (20%) expressed a desire to pass on their skills and knowledge to the next generation of radiographers. However, there was a lack of succession planning in place and most felt if they were to leave their post the vacancy would not be filled.

A lack of consistency in the roles was described as potential for stifling role development and for causing inconsistency and compatibility issues.

“I have a bit of problem with the name again because a lot of consultants ... a lot of the people I know who have been consultants are not really consultants in true sense of the word ... I think there should be clinical specialists and there should be consultants and they should be different ...” (Interview 11)

To this end a few felt accreditation would be helpful.

“... accreditation for the consultants is brilliant ... it gives substance to the title and it's transferable then if everybody's assessed in the same way, you know that it's one department's consultant is similar ... So they can see you're accredited at the standard and this is what I do.” (Interview 15)

The majority considered the ideal of their roles and the realities were often different. The traditional role of radiographers as being “subservient” (interview 01) and being “relegated to the role of button pusher” (interview 07) was often raised as an issue.

Four reflected how different the professional growth of radiography has been compared to other AHP professions, and that radiographers should be more proactive and take on leadership challenges.

“We're sitting at the back, no? The physios are sitting at the front ... and it is very difficult to change it.” (Interview 11)

Fears and feelings

A variety of attitudes and feelings came across at the interviews. A few seemed to be ‘making excuses’ to themselves as to why they were not undertaking the research element of their role. Four were almost defensive as to why they were not undertaking research.

Some came across as ‘apologetic’ that they were not doing research. Others expressed concern for the future of their role.

“And my underlying horror or panic is that somebody will come along and say, oh, I don't know if you're working to your job description. I think we'll try and change your grade.” (Interview 04)

Many felt they needed enhanced research skills to be more confident in their role as they were worried if they did do research that they would “do it all wrong” (interview 21).

Nearly every interviewee expressed the words ‘lonely’ or ‘isolated’ in their interview.

“It's too hard, you know. I don't think I'm ... I don't think I'm particularly, you know, a weak person, but I just find it too hard and, you know, I wouldn't encourage it ... Lonely roles.” (Interview 11)

Barriers and facilitators

Human interaction with situations is complex and hence one theme is no more significant than another. It is the interdependency across all of the themes that affect the ability for individual consultant radiographers to undertake research, as can be seen on Fig. 3. Therefore, it seems more useful, in terms of understanding how research activity may be increased in the future, to consider the themes as barriers, Fig. 4, and potential facilitators, Fig. 5.

Discussion

The *'Advance Letter'*³ indicated that 'expert clinical practice' requires a minimum of 50% clinical focus, but for many the proportion of clinical work appears to be 90–100% with no allocated time for the other aspects of the role. In particular those in breast imaging recorded lower time allocations for research, with 66% stating 'no' or 'unspecified' time. So it would appear even for those who had research in their job descriptions, and perhaps with an expectation that this would be undertaken, in practice the clinical workload was too high for it to be factored in.

However, a few stated that research was in their job description to get the post banded as an 8, but there was no expectation that this would occur. Therefore one needs to question if these individuals are actually consultant practitioners or are they working at advanced practice level?

Five believed their clinical role was the *raison d'être* for their post and did not see the relevance of the research component, or even wanted it. Four of these were in breast imaging roles. This area of practice has had the greatest growth in role numbers over the last two years; probably in part owing to workload pressures in breast screening.

Perhaps variability in roles is to be expected, and indeed even accepted, owing to the diversity of practice across the discipline of radiography. However, for radiography to achieve recognised research activity parity with other AHP professions then research must surely remain central to the ethos of the role, as determined and currently unchanged by the Department of Health.^{1,2}

Numerous government and professional papers^{7–10} have stressed the foundation for learning at Master's level as a minimum. Twenty two felt consultant radiographers should be educated to at least Master's level and that the absence of this level of qualification was "watering down" the role. Nightingale and Hardy¹² explored trainee consultant roles and all the trainees considered that a Master's degree should be attained before undertaking a substantive consultant post.

There has been much debate within the profession over the last few years as to level of qualification expected of a consultant radiographer, and it has been argued¹¹ that all should be aspiring towards Doctoral level. At the time of data collection there were no consultant radiographers in practice with a Doctoral level qualification; although two were working towards this.

Several interviewees expressed a lack of both preparation for the role and confidence in doing research. Most felt evidence-based practice was needed, but significantly they did not always relate this to themselves building on a body of professional knowledge. Many were doing service evaluation and audit, but fewer were conducting actual research and then publishing that work. On the whole, the sample was more research 'users' than 'doers'.

Pager, Holden and Golenko¹³ observed that an individual's desire to do research is influenced by a positive attitude towards it, together with confidence, the facilities, and opportunities to undertake it. The results from the interviews corroborate this, as those who felt confident and supported in undertaking research activity tended to be the ones who fulfilled the research domain.

Several stated they were doing the research element in their own time. Often this appears to be the case in more senior roles, but professionally should this expectation be challenged? For those trying to achieve the research core domain, certainly it would be unacceptable for this to be completed solely in their own time.

A number were successful in managing to integrate the four core domains, and it is very doubtful their workloads were any less onerous than that for others, but they appeared to have more autonomy in managing their work. A few stated that good leadership

(also a core domain) and self-management were needed to ensure they structured their time effectively.

A job plan with dedicated time therein appeared to be vital, with clear and realistic expectations for the working week. Those who had work plans with set sessions during the week were more likely to be undertaking research regularly, because they had the allocated time.

Most (80%) felt research should be a core domain and that this defined the role differently from that of advanced practice. Overall, this is a much higher response in favour of the core domain than that gleaned from the questionnaire stage of the study,⁴ and indicates that those who agreed to be interviewed were largely in favour of the research domain. Again, those working in breast imaging appeared to be less in favour of the research core domain; some of these felt the four domains should be challenged and that the research domain be removed from the role.

"I think we should be challenging the four core domains at the new culture of austerity and trying to make sure that we are working what we've got to full potential, and whether it is really feasible for clinically working consultant radiographers ..."
(Interview 12)

Some posts appear to have been developed to meet both service demand and the clinical pressures of waiting lists, and this may be at the detriment of evolving new ways of working.^{14,15} Either there is a need for cultural changes towards the acceptance and requirement for research so that this element of the role can be achieved; or if this is not being fulfilled then does the definition of the role need to be changed to reflect practice? Currently, there is disparity across the practitioners and this needs to be resolved if such posts are to be credible and stand up to scrutiny.

Many indicated a lack of managerial understanding of the research domain of the role. Engaging managers in research and developing its culture appears to be a key facilitator, as managers often hold the power of time release and target setting in personal development reviews (PDRs). As stated by Kelly, Piper and Nightingale¹⁶ managers appear to have the "capability to facilitate or stifle change" (page e74).

This is supported by consultant nursing studies^{17–19} so is not unique to radiography. Indeed, Woodford²⁰ considered that nurse consultant roles were designed not to have management and budgetary control, but to be autonomous, and to instigate and lead change; but without such control this was challenging and thus required a positive management 'buy-in' to all aspects of the role.

The College of Radiographers *'Scope of Practice'* Report⁶ suggested that a number of managers questioned the "added value" of consultant radiographer posts; as these were viewed as costing more than, and bringing few extra benefits above, an advanced practitioner. Those interviewees, who felt they received managerial support for their role, i.e. an understanding of the ethos of their role, and had resources such as allocated time, were engaging in the research core domain.

Collaboration with education institutions would help to ensure applicable clinical research was undertaken^{21,22} and yet was uncommon. The results of the studies by Woodward, Webb and Prowse^{17,18} revealed that all the nurse consultants they interviewed had a contract with a university. Such collaboration does not tend to exist in radiography. Indeed, only two of the interviewees had such an arrangement.

There was a significant lack of collaboration with other health professionals which was another opportunity missed, especially given the central roles of radiographers in care pathways. Snaith and Hardy²³ discussed various ways in which radiographers can become involved in research, but commented that radiographers

THE TEN THEORETICAL CATEGORIES

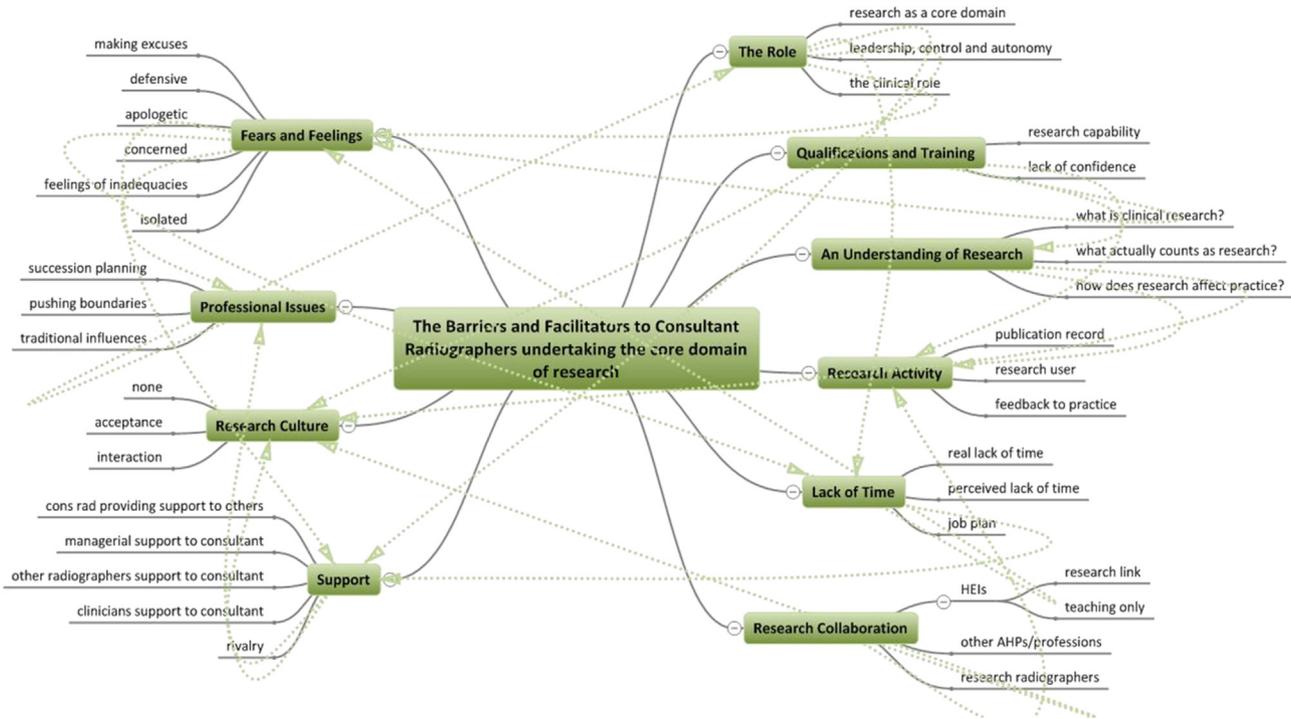


Figure 3. The relationship of the ten theoretical categories: showing the interaction across themes.

are often excluded from research teams, noting that “*research active does not mean undertaking the imaging for another person’s study*” (page 144).

Several interviewees described conflict with medical roles and that in effect, hierarchical boundaries were imposed on their own roles. Woodford²⁰ also highlighted that the role development opportunities for radiographers may precipitate territorial conflict with other professionals trying to protect their own domains of practice. This was confirmed by some interviewees.

Several respondents described an overall lack of professional drive for radiographers to push boundaries. The traditional “subservient” (Interview 01) role of the radiographer was deemed as a professional hindrance and it was considered that radiographers were different to other AHPs in this respect.

Few had succession planning in place and stated that if they were to leave their role the post would probably be lost. For the profession as a whole, there is a requirement to identify and develop potential consultant radiographers, to ensure succession

BARRIERS



Figure 4. The potential barriers to the research core domain: showing the network of barriers which can block research from happening.

FACILITATORS

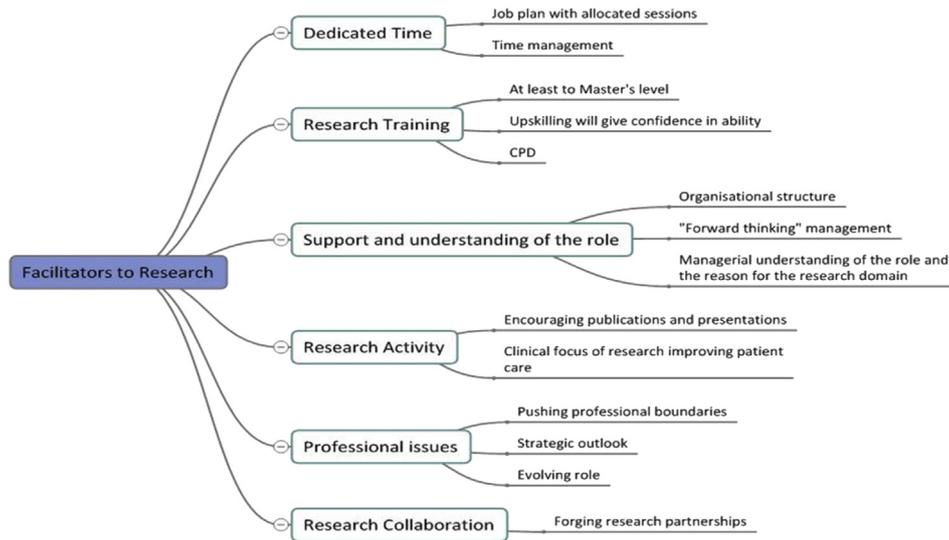


Figure 5. The potential facilitators to the research core domain: showing the network of factors which can motivate and enable research to happen.

planning is in place, and those with potential are up-skilled prior to being upgraded. Therein the trainee consultant post appears to be a sensible and viable approach.

Limitations

There are certain limitations to the work that should be recognised.

The coding of interview transcripts and production of themes was largely subjective.

All the interviewees knew the interviewer and might, therefore, have felt they needed to say what they thought the latter wanted to hear.

The researchers are biased towards the demands of research for the profession and this may have transgressed into discussions during the interviews.

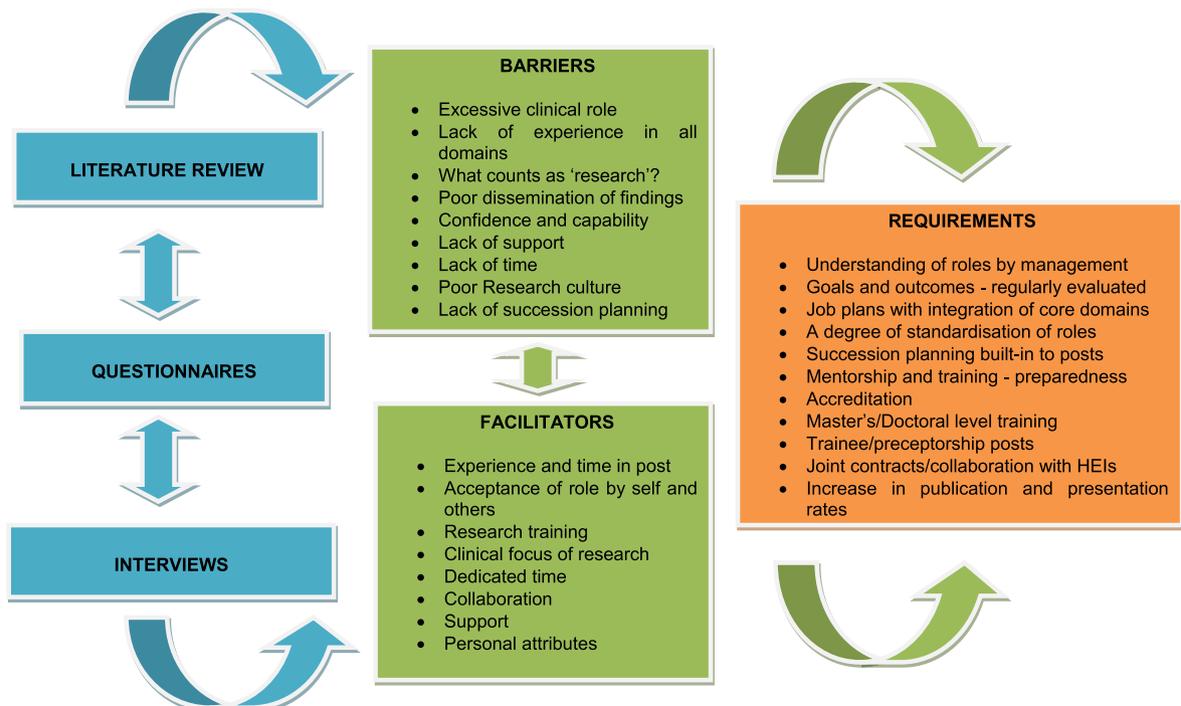


Figure 6. The conceptual framework: showing the barriers and facilitators to research and the changes required to support those in post.

Table 3
Recommendations and proposed outcomes.

Recommendation	Proposed outcome
Understanding of roles by management	It emerges that many of the consultant radiographers in the study felt that their departmental managers did not understand, or even see the relevance of, the research core domain in consultant radiographer roles. Managers would benefit from more guidance on implementing such posts.
Goals and outcomes – regularly evaluated	Goals should be set within personal development reviews (PDRs) that include all four core domains. Targets related to the research core domain should include publication and presentation expectations.
Job plans with integration of core domains	Job plans with allocated time for research activity in a working week would ensure that the research core domain was part of everyday practice, and an integral and accepted part of the role.
A degree of standardisation of roles	Although the disciplines within the radiography profession are diverse there should not be such diversity in the implementation of the four core domains in consultant practice. More defined allocations for all four core domains need to be clarified, as currently it is only the ‘clinical expert’ domain that has a specified minimum time allocation.
Succession planning built-in to posts	Succession planning needs to be addressed so that posts are not lost that would enhance effective and efficient service delivery.
Mentorship and training – preparedness	Newly appointed consultant radiographers may benefit from a research mentor, to provide advice and support in research. If this mentor was from the education sector this may also aid in facilitating future research collaborations between clinical and academic institutions.
Accreditation	As the title ‘consultant radiographer’ is not Health and Care Professions Council (HCPC) protected, then professional body standardised accreditation of the role is recommended by The Society and College of Radiographers. While this is voluntary, it needs to be encouraged very strongly by both employers and the Society and College of Radiographers, and needs to be re-evaluated regularly to ensure a set standard is both attained and maintained across the profession.
Master's/Doctoral level training Trainee/preceptorship posts	Prior to appointment to a consultant radiographer post, at least a Master's level qualification should have been attained. Consultant radiographer trainee and preceptorship posts should be supported as these would provide opportunities to up-skill, especially in research. Research skills should be obtained prior to substantive appointment to a consultant radiographer post, thereby building the confidence of post holders in undertaking research activity.
Joint contracts/collaboration with education institutions	Research links between education institutions and clinical practice are required urgently to ensure that collaborative research undertaken is of current and needed clinical relevance. Radiographic research must support evidenced based care and ensure it is strategic and progressive. Individuals in post need to forge partnerships with their local education providers and this should be a target within an individual's PDR.
Increase in publication and presentation rates	Training courses on how to write for publication need to be accessed and undertaking such a course should be part of an individual's PDR.

Those with a more active interest in research might have largely comprised the volunteer group for interviews, and might therefore have positively skewed the interview sample responses.

Recommendations

This study proposed a Conceptual Framework, as per Fig. 6, of the barriers and facilitators to consultant radiographers undertaking the research core domain and required outcomes to support successful incorporation into roles, as per Table 3.

Conclusions

Research is one of the four core domains of consultant allied health professional and nursing roles but, as yet, it is not fully embedded into those of all consultant radiographers. Fulfilling the clinical role is imperative and integral to the profession at consultant level; however, if it is undertaken to the detriment of the other domains then these practitioners may not be operating at ‘consultant’ level.

Currently, there is disparity across the practitioners. Certain radiography disciplines seem to be coping better than others in being able to undertake research. Notably, those in radiotherapy and oncology appear to be best prepared to facilitate the research core domain, and those in breast imaging appear to have the most barriers. This difference in preparedness and attitudes are worthy of further investigation, and may help address the challenges associated with embedding the research domain into all consultant radiographer posts.

For consultant radiography practice to fulfil the ambition of the government when it introduced AHP consultant roles and the ambition of the radiography profession specifically, further development and exploration is needed.

Conflicts of interest statement

Both authors were employees of the Society and College of Radiographers at the time of the research.

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