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Expanding postgraduate clinical research capacity: an exploration of key resistances

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ABSTRACT

There have been increasing calls in healthcare for the development of a more robust evidence base. Facilitating research activity amongst clinicians is the primary means of achieving this, although engagement is often undermined by a number of barriers and resistors. This article identifies and explores the forms of resistance that graduates from three postgraduate healthcare education programmes have encountered on their return to practice. This study employed a collective case study approach and gathered data from 29 semi-structured interviews. Thematic analysis revealed a range of challenges, both anticipated and unexpected, which related to research engagement. Four forms of resistance were subsequently identified: managerial, medical, organisational and interprofessional. In exploring these forms of resistance, it became apparent that barriers to research engagement are not only contextually determined but also rooted in enduring social perceptions, role insecurity and professional protectionism. The study also found that, whilst research engagement was rhetorically supported, organisations offer very little tangible assistance to potential clinical researchers. A particular type of education has proved manifestly disruptive in this instance, and this disruption will need to be recognised as curricula are adjusted and developed. Further exploring the identified miscommunication between education and practice will also be of particular value to both fields.

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Introduction

The last two decades have seen an increasing demand in contemporary healthcare contexts for the facilitation and continuity of evidence-based practice (e.g. Aarons et al. 2009; Majid et al. 2011; Mitchell et al. 2015; Walshe and Rundall 2001). As a result, the accredited preparation of clinical staff to undertake research has become a strategic priority in UK healthcare (AUKUH 2014, 2016). Although the provision and quality of such courses grow year on year, there remains strong evidence to suggest that applying the research skills developed through formal education is proving to be difficult for many graduates (Logan et al. 2016; Murray et al. 2014).

Undertaking research in any context is challenging, yet attempting to engage whilst practising in clinical environments presents a complex range of barriers. Harris, Roussel, and Thomas (2010) offer one example of this. Exploring nursing perspectives, they found that many practitioners perceived research as 'extra-curricular' or even indulgent activity, which took them away from the more important work of delivering patient care. Walker (1994) also found tensions between clinical practice and research engagement. Drawing attention to the continuity of established clinical roles, Walker reported that participation in research was dependent on a notional status – over and above the

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clinical role. Both these studies suggest an inherent imbalance between undertaking (higher status) clinical work and engagement in (lower status) research work.

There are other more obvious barriers to research, such as time, lack of funding and/or differing organisational policy priorities (e.g. Dilts and Sandler 2006; Haynes and Haines 1998), as well as more subtle, cultural constraints. In relation to the latter issue, Sitzia (2002) found that an 'important factor in nursing "culture" is that of lack of authority. Lack of authority to make change' (234). As a result, the introduction of a more research-intensive culture may be difficult to achieve. Similar findings have been reported in other studies (e.g. Bryar et al. 2003; Hutchinson and Johnston 2006), which have found that cultural elements have created a number of challenges to adopting more evidence-based approaches.

Thomson (2003) expressed the need to address cultural context and improve collaboration in order to foster research in nursing and other health professions (e.g. physiotherapy, occupational therapy, speech and language therapy). For Thomson, 'in terms of research, fostering a cultural system in which the various parts of the organization are all working to a common end can only be to its advantage' (144). Whilst this sets out a positive agenda for professional cohesion, as presented above, research in this area has revealed that there are numerous factors at work that not only disrupt the development of a culture of shared experience but also directly counteract it.

The challenges that face clinicians who wish to undertake research are well documented. Sung et al. (2003) identified a myriad of institutional, financial, cultural and regulatory difficulties with clinical research in American contexts. There have also been parallels reported in the United Kingdom, as Koshy and Clark (2016) explored equivalent complexities associated with (medically-based) clinical trial processes. Whilst this refers to challenges in medical research, an area that has been historically prioritised over non-medical investigation, the implications for clinically-driven research, largely undertaken by nurses or allied health professionals, are therefore more acutely concerning. Smith and Boyd (2012) explored the professional transition from clinician to lecturer experienced by a number of former nurses, midwives and allied health professionals. Whilst they were able to transition relatively easily, and were well supported in many aspects, there were also reports that mid-career changes offered particular challenges, and that it was difficult for practitioners to leave their clinical identities behind in exchange for that of an academic. This begins to offer insight into the realities for clinicians who wish to undertake research.

Martin, Currie, and Finn (2009) explored tensions between managers and clinicians within a general practice (GP) setting, against broader shifts in the healthcare workforces that undergo a 'modernisation' project. Describing the creation of new GP roles, there are parallels with the tensions that emerge between clinical managers and their staff members who return to practice from a time away with new qualifications and skills. Whilst their difference in level (i.e. clinician, manager) will have once been understood and accepted, broadly contributing to the continuity of the profession, modernisation processes, such as increasing research engagement by clinical staff, can disrupt these established roles. New knowledge and aspirations in clinicians who are keen to undertake research may combine with increasing managerial insecurity and this could serve to widen the divide between professionals who, at one point, would have been stable colleagues who were aware of their respective roles and positions.

Pickstone et al. (2008) explored capacity building for research activity in allied health professionals (AHPs) and, in discussing the conditions needed to facilitate research engagement,identified one of the most enduring restrictors for contemporary practitioners:

> In order to participate as equal partners, many AHPs may need research training, and this has formed a key strand of the research capacity building strategy. However, while important, training alone will not deliver sufficient gains in capacity unless it is matched with management support and funding to disseminate ideas effectively. (63)

This succinctly identifies the way in which barriers to research go beyond the immediately measurable. (Lack of) managerial support represents a key area of interest to the current study

and, through exploring the professional dynamics that exist when clinicians return to practice, it will become possible to further interrogate a complex practical context.

This article presents an analysis from a study that explored the experiences of graduates from three postgraduate courses in clinical research and improvement science, after they had returned to clinical practice. We explore the challenges, conceptualised in this article as differing forms of 'resistance', which the graduates encountered when attempting to transfer the knowledge and skills developed during the educational experiences to their clinical practices.

Background

Using and exploring the notion of resistance in professional contexts is likely to be associated with a conventional sociological treatment of the term, which broadly situates resistance as a reactionary measure enacted by the 'oppressed' (Duncombe 2002). Whilst our use represents a more literal illustration of the barriers that face clinicians who attempt to engage in research, it will be useful to acknowledge the literature that critiques and conceptualises resistance in professional contexts.

Hollander and Einwohner (2004) confront the complex, and often contradictory, nature of resistance. Whilst generally aligning the term with models of opposition, they state that, 'dichotomizing resisters and dominators (in this way) ignores the fact that there are multiple systems of hierarchy, and that individuals can be simultaneously powerful and powerless within different systems' (550). This suggests that we should not view resistance simply as a subordinate's reaction; rather, we should see it as a more fluid and diverse characteristic of social context. Johansson and Vinthagen (2016) develop this theme, commenting that,

> resistance has the potential to undermine power relations, per definition. However not all resistance does succeed, at least not always, or in all aspects, but might instead reproduce and strengthen relations of dominance. This is not only due to the creation of counter forces or new oppositional alliances that explicitly try to capture the state or other entrenched power institutions, but is a more fundamental paradox of inbuilt ambivalence, complexity and even 'irrationality' within resistance. (418)

It is, then, important that resistance is interpreted in a way that goes beyond traditional characterisations. Through exploring an 'alternative' representation of resistance, it becomes possible to approach the more fractured reality of power dynamics in professional contexts. Sundberg et al. (2015) explored power and resistance in medical education, identifying a link between resistance and professional identity. These authors found that,

> resistance from teachers and supervisors to educational change and development is to a large extent based on identity issues – their identity as subject experts can be threatened by change and they also often identify more with being a clinician or a researcher than being a teacher/supervisor. (15)

As a result, it is possible to regard resistance to change as simultaneously affirming professional independence whilst acting as a barrier to pedagogical progression. As such, it is possible to interrogate the barriers to clinical research engagement from multiple perspectives. Although this study focused on interviewing clinicians from three postgraduate courses in clinical research and improvement science, who, in general, had the same intentions and aspirations, our analysis did not simply position these professionals in a conventional hierarchy. Instead, they were positioned as key components in a system that is subject to a complex network of competing, complementary and arbitrary behaviours. The 'resistance' that these individuals discuss below not only reflects this complexity, but also wider uncertainties in an inherently turbulent health service context.

Methods

We adopted a collective case study approach (Stake 1994) to inform our understanding of resistances embedded within three postgraduate courses in clinical research and improvement

sciences. Collective case studies allow researchers to focus on a phenomenon across cases that have been chosen to enhance understanding. Rather than focusing on each particular case, the emphasis is on the ways in which each case uniquely illuminates specific elements of the phenomenon of interest (ibid). To help us understand the nature of resistance that the graduates from three courses encountered when attempting to transfer the knowledge and skills developed during their educational experiences to their clinical practices, we selected three different participant cases (described below). By comparing our findings across three cases, we hoped to develop a multi-faceted understanding of resistance in this context.

Study context

Participants were purposively sampled from graduates who completed either a Master of Research in Clinical Practice (MResCP) at Kingston University and St George's, University of London (KUSG) or an MSc in Implementation and Improvement Science at King's College London, or attended a two-day Implementation Science Masterclass organised by the National Institute for Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care South London (CLAHRC).

The course at KUSG offered an opportunity for a number of health and social care professionals (e.g. nurses, midwives, pharmacists and allied health professionals) to undertake a fully-funded postgraduate course on a full-time (one-year) or part-time (two-year) basis. The MResCP adopts a collaborative approach to education and development, providing a programme of practical and academic study to enable participants to acquire the necessary research skills for future careers in clinical research. In line with a strategy for developing clinical academic researchers (Department of Health 2012), the programme aims to build research capacity for clinical practice.

The MSc in Implementation and Improvement Science at King's College London is a one-year full-time or two-year part-time Master's programme, which aims to equip graduates with the knowledge and expertise to improve healthcare services. Heavily aligned with enhancing evidence bases, the programme enables students to 'bridge the gap' between practice and research and, whilst aimed predominantly at nurses, midwives, pharmacists and other health professionals, a clinical background is not a prerequisite.

The NIHR Implementation Science Masterclass was a two-day event that took place at King's College London and was aimed at healthcare professionals, managers, researchers, service users and patients. Designed to offer an insight into improvement science, the workshop comprised lectures delivered by globally diverse experts in the field of implementation science and group work that focused on the development of the participants' own improvement projects.

Data collection and analysis

Semi-structured telephone interviews were conducted with a sample of course participants (selected to generate a range of professions) over a six-month period. Each participant engaged in a telephone interview of approximately 30–45 minutes' duration. They explored a range of topics including, but not limited to, motivation for undertaking the course, previous research, improvement/implementation science experience, institutional support, cultural support, individual support and barriers to and facilitators of engagement.

In total, 29 interviews were undertaken with the graduates from the improvement courses and involved the following professions: nursing (n = 10), physiotherapy (n = 10), speech and language therapy (n = 3), dietetics (n = 2), occupational therapy (n = 2), counselling (n = 1) and policy analysis (n = 1). Fourteen participants undertook the MResCP at St George's, seven the MSc in Implementation and Improvement Science at King's and the remaining eight the Improvement Science Masterclass, also at King's. A total pool of 78 potential participants existed, so the sample represented 37% of this number.

The interviews were undertaken by SF, who has a background in qualitative sociology and interprofessional healthcare research. The interviews built on findings that emerged from a previous pilot study (Fletcher et al. 2017). The pilot revealed a number of areas in which further investigation was warranted. These largely centred around resistance to engagement and provided the motivation to develop this research with a multi-institution sample.

A thematic analysis of the interview transcripts was undertaken. Using an interpretation of work by Nowell et al. (2017), in which thematic analysis takes on six distinct phases, we were able to safeguard the rigour and relevance of the study. Phase one saw a familiarisation with the data, as the research team collectively read through the interview transcripts. Phase two saw the generation of initial codes, such as: Organisational Issues, in which time, resources and practical elements of context were explored; Managerial Relationships, whereby we were able to initially identify the disruption caused by the increasing qualifications and knowledge bases of clinicians; Professional Hierarchies, in which medical dominance became apparent; and Interprofessional Issues, where the professional dynamics and tensions between various disciplines were explored. This stage enabled the early identification of barriers to research engagement after course completion and the various associated forms of resistance. This was followed by phase three, which used the results from the coding exercise to search for more robust themes. These themes were then reviewed in phase four and named in phase five, contributing finally to the production of the report and the identification of the four key forms of resistance. By following a process such as this, it becomes possible for author, reader and participant to gain insight into the systematic nature of evidence mapping, thereby ensuring a more credible study (Lincoln and Guba 1985).

Ethical considerations

The study was approved by the Faculty of Health, Social Care and Education, Kingston University and St George's University London Research Ethics Committee.

Results

Analysis of the data generated four key themes related to the resistance to research knowledge and skills in clinical contexts for this sample of graduates.

Managerial resistance

The first form of resistance was linked to a tension between the course graduates and their clinical managers. Manifested in instances of 'intellectual encroachment', the new knowledge bases of returning graduates proved deeply unsettling for their clinical managers, who were forced to reassess the hierarchies that had previously sustained professional relationships. This led to the overt creation of barriers to engagement in clinical research:

> From what she [manager] said, she was worried that if I became more involved in research that could perhaps lead to a promotion over her. (Physio #1)

> There can be resistance definitely within certain professions. If your manager isn't research active, then that's very difficult. I've had to experience a lot of barriers. Like when I did my MRes, my manager did everything in her human power to stop me doing it. She didn't want me to do it at all and it was only for the fact that I went to a different MDT [multidisciplinary team] member who was research active was the only reason I got it [sic]. (Nurse #3)

There are considerable implications for notions of role here, as definitions become blurred by the insecurities that 'new' qualifications evoke. There also appears to be potential for ideological divisions to open up between managers and clinicians. The apparent binary nature of being

'research active' or not creates an environment that not only stifles clinical research from the outset but also engages new forms of identity politics amongst these professionals.

In addition, informants described the combination of myriad pressures that deprioritised research engagement from a managerial perspective. Many noted that it was difficult for their managers to allocate time and resources for research against the need to demonstrate acute improvements; for example,

> [I]t's becoming increasingly difficult to persuade managers to do anything that isn't … that doesn't show, essentially, a financial benefit for the organisation, it's very difficult to get them to support. (Physio #2)

> If I was to go to my boss and say effectively that I was going to spend thirty per cent of my time doing research work, I think I would probably not get supported to do that. (Physio #5)

Not only did data suggest a disparity between managers and clinicians linked to research, there was also a broader professional problem related to specialism:

> There's a barrier I think especially in the NHS and in clinical practice between management and research, so there'll be clinical specialists, and then there's managers so it all depends, and that was my experience, the managers in the NHS didn't get involved in research but the clinical specialists did. (SLT #1)

As noted in the quote above, this positon presented a relatively difficult terrain for clinicians who still remained dependant on the individual inclinations of their respective managers:

> Also the manager who said yes to me going for the MRes has subsequently left and been replaced by a different manager. And I can see very clearly how it's gonna [sic] be much more difficult to convince this subsequent manager, so obviously that suggests that there's something about individuals' attitudes. (OT #1)

In addition, there were reported failures, at various levels, to acknowledge the processes behind and value of research engagement. Physio #2, for example, found that:

> It's like you take care of patients and that's it. And the people that [sic] develop the services are usually managers, often non-clinical, who come in and make a change which is dependent on a political and social climate. Not on experience and knowledge and understanding from the clinical area.

This was echoed by nurse #3, who commented:

> Because the structure and the management isn't educated enough to understand the value of research and the value of service development through research, then they'll never understand that there's a gap and that that money is an investment. I do believe that my trust is striving for better care for patients but there's a lot of short-sightedness and a lack of information.

The language used in the quote above provides an image of a stark division between managers and clinicians who wish to undertake research. The contention that the management is not educated enough to understand the value of research contributes to the continuity of the very attitudes and perceptions that encourage professional insecurity and the blurring of role definition on both sides. The clinicians believe what the managers fear, further widening an already significant gulf.

Medical resistance

This form of resistance was linked to the notion that medical research was regarded as having higher symbolic valuable than research generated from other professions (e.g. nursing, occupational therapy). One informant described the way in which infrastructure is predisposed to facilitate medical dominance in clinical research:

> Most of the people leading and doing clinical research in healthcare are doctors, they've got it quite well set up, it's almost part of their normal clinical training to be involved in some shape or form in clinical research and many of them take time out to do a Masters or PhD as part of their clinical training, and that's supported financially and also supported to allow them to maintain their clinical contacts whilst doing their research. (Nurse #3)

This informant went on to state that further jurisdictional tensions stemmed from non-medical involvement:

> [S]o I suppose to them [physicians] if they see other people coming in and trying to lead research clinically they might not be so happy about it because that's their kind of realm. (Nurse #2)

Another participant developed this notion further, stating that:

> I think there is this professional silo mentality to some extent now. I think that if you look at our medical colleagues some of them would be reluctant to engage in research that was genuinely multidisciplinary, because they wouldn't see it as having the kind of status that straightforward medical research gets, and they'd be concerned where it might be published. (Physio #4)

These perceptions around medical colleagues are, whilst likely grounded in truth, further responsible for the forms of reactionary professional isolation that are commonplace in multidisciplinary healthcare contexts. The admission that a silo mentality exists is reflective of the simultaneous production of barriers through practical professional insularity and the subsequent perception-based retreat into the comfort of the familiar and collegiate.

The data also suggested that these attitudes remained in place when research engagement was eventually obtained:

> I think in non-medics there's a culture of being involved in research but being involved as a research nurse rather than a chief investigator. I'm always questioning why aren't you giving opportunities to someone else and it'll be like 'well the doctor's the chief investigator and I'm the research nurse' and we're like 'well why are you researching their practice and not yours[?]' and it led me to question that a bit. (Nurse #2)

This extract succinctly combines cultural and practical constraints, as funding has and will likely continue to be allocated in a way that is consistent with this disparity.

Organisational resistance

This form of resistance, in relation to a lack of time and resources to undertake research alongside clinical commitments, also featured heavily in the graduates' dialogue, as the following quote indicated:

> It's not in my job description to undertake research as it were, building a research culture yes that's part of my job, but I must say I don't have any set time to do that. (OT #3)

This quote succinctly encapsulated the frustrations that faced these graduates as new researchers, and highlighted how organisational support for them to act as researchers was lacking. Being expected to undertake research activities and develop a research culture without support was also echoed in the statement below:

> If I'm meant to be doing this [research] in the same hours that I'm meant to be doing my clinical role, I have been given NO time, NO resources, NO change to my pay structure, NO change to my job description, NO change to my banding, and NO allowance of my caseload or duties in order to be able to do the research project. [Since returning to clinical practice] nothing has changed in my job description and although the personal annual reviews might set me goals where I'd engage in more research activity, there's nothing been changed about my job plan in order to allow that to happen, and no targets or goals have been set by anyone. (Physio #2)

Another informant describes the failure of his institution to recognise his new attributes on returning to practice:

> I've just spent two years away. I've got a scholarship for this, I've brought a bit of esteem to the trust, I've developed a research project that I'm now trying to get published, I sort of thought 'how can you [the trust] help me in my career?' But it's kind of fallen on deaf ears, it's kind of like it's not relevant to them, despite the fact that if we look at the research that could be done it will improve services and be more cost effective. (Nurse #5)

The practical constraints described here compound the ideological and perception-based professional tensions that have also been identified. Not only do they restrict engagement in research in isolation, but they are also complicit in the production of a culture that encourages these multiple forms of resistance to operate together. The inextricable link between service provision and what is deemed valuable in these contexts invalidates research activities.

Interprofessional resistance

The fourth form of resistance that emerged in the analysis was linked to interprofessional research (involving two or more professional groups). This was viewed by participants as a type of work that could undermine the unique value attached by members of that profession. For example, if research knowledge is developed collaboratively, how much of a role did the physiotherapist or nurse play individually? As one informant commented:

> I think [what] some of the other professions might also have, and I have come across a little bit of this with some of the AHPs, is a sense of wanting to stick up for their own profession[, which] … can lead to a kind of wariness about something that might take away the uniqueness of their profession, if you like. (Physio #5)

There were also fairly rigid perceptions around professional role, which also contributed to a sense of isolation. As one of the graduates stated:

> I think it's other people's perception about role. Some people think, you know, 'physios are better at this, OTs are better at this' so that sometimes stops some people wanting to work together. (OT #2)

Another informant also discussed this notion of professional isolation:

> Historically we've always had a joint national conference with the dermatologists and the nursing dermatology group and it's interesting because last year was the first year that they decided that they wanted their own conference and so nurses weren't able to go, and I think potentially this is going backwards rather than working towards collaborative care. (Nurse #6)

Further perceptions that sustain professional isolationism were echoed by another informant, who described his experience of a 'silo mentality' in clinical practice:

> Even working at the hospital, you tended to work in a silo, like you work in a silo of being in a mental health hospital and even to the point of just being your ward, you kind of work in the silo of your ward so you don't … as a ward manager I'd spread my wings and embrace other departments and other wards and things but I think generally you kind of stuck to your own and you're in a silo so I think that was the case with mental health nursing. Obviously you'd come into contact with other disciplines throughout the course of your work like the police and the council and housing and that kind of thing, but other healthcare professionals not so much. (Nurse #5)

The admission and, in a sense, resigned acceptance of the fact that professionals 'stick to their own' speaks of a base-level insularity in clinical settings that does little to engage the collaborative networks proven to encourage research. Further questions around why such attitudes are in place from the outset will of course be useful; however, the reflection of the above participant that this is the default position for many practitioners offers a strong indication that there are entrenched concerns regarding the movement beyond and across professional boundaries.

These instances of interprofessional tension and resistance can of course be exacerbated by a sense of competition in clinical contexts. As one participant commented:

> Well no one's doing it on the other side, that's the whole point. There's no integration, sometimes there's an 'us and them', there's a protectionist thing, everyone's very busy. You know at the moment it's a competition, you know 'we're doing more than you are' or 'we're more hard done by' or 'we're busier'. It's fairly dysfunctional. It's the interaction amongst different groups in the same department that's not always aligned. We're always pulling for the patient, not each other. (Genetic counsellor #1)

There was, however, some encouraging evidence of reflexivity within staff, who see this tension, or professional distinction, as an inevitable aspect of practice to be negotiated as their career develops:

> Moving forward as a researcher, I will be encountering these situations where I need to be able to manage people with these different professional identities, both as people who are of a higher power than I am, or at some point when I become a professional researcher myself, those who are actually under me, how to negotiate those kinds of things. (Nurse #7)

Discussion

This article explored resistance to engagement in research encountered by the graduates of three educational experiences designed to increase the research capacity of clinical staff. As presented above, these informants faced various forms of resistance on their return to clinical practice. Not only were there practical barriers to research engagement such as time/space constraints and financial limitations, but their research abilities were further devalued by managerial attitudes, professional isolationism and medical dominance. Below we discuss these different forms of resistance and their implications for practice.

Managerial resistance was visible in the tension between clinical managers and returning graduates, and revealed how wider instability can engender insecurity between professionals and their managers. As indicated above, traditional hierarchies can be disrupted by the previously 'subordinate' clinicians possessing new forms of knowledge and, in most cases, aspirations to work beyond their clinical roles alone. The findings suggest that it is difficult for clinical managers to envision the longitudinal benefit of research engagement (Hanney et al. 2013) when they are both concerned about encroachment on their professional status and increasingly expected to produce acute and immediate improvements in outcome.

The way in which resistance is evident in both the behaviour of the recent graduates, as they seek developmental opportunities beyond the traditional parameters of 'role', and the more senior professionals/managers, who resist the shift towards formal qualification, provides a striking example of the dual properties of 'resistance' in clinical research contexts. Both forms not only represent the personal and individual professional experiences of practitioners who have been exposed to divergent agendas, but also a more outward-looking desire to either progress their discipline, in the case of the returning graduates, or retain some form of professional identity in the case of the managers. The range of conflicting intentions consistent with the multiple realities of resistance offers support for the contention that intervention (educational and otherwise) in clinical research engagement should acknowledge what is a fundamental complexity.

The medical resistance theme provided an insight into the perceptions that surround medical dominance in healthcare. Freidson (1970) and Witz (1992) both suggest that medical knowledge and its assumed and acknowledged superiority places medicine in an advantageous position over the division of labour in healthcare. Medical professionals can therefore attain 'true autonomy' by evaluating the work and input of others without being subject to the same scrutiny. The idea that research, the foundation of knowledge production, is less valuable when undertaken by non-medical professionals reveals that this is a particularly enduring perception.

Medical dominance is unlikely to diminish as it is both practically and ideologically sustained (Reeves, Macmillan, and van Soeren 2010). This may be subconscious or implicit, yet the influence of medical knowledge will often overshadow contributions from other disciplines, leading to a range of insecurities around professional identity. However, instances in which medical staff sustain this, or go further and assert their own cultural superiority over clinical colleagues, for example resisting their entry into research contexts, suggests that there is some discomfort with a decreasing knowledge gap between medical and clinical professionals. This resistance, therefore, can again be interpreted in two ways. It simultaneously acts as a barrier to research engagement for clinical practitioners and enables the useful exposure of problematic and constraining medical

parochialism. Whilst this may not overtly counteract traditional perceptions of medical dominance, it does at least draw attention to a narrative that has previously been obscured.

In relation to organisational resistance, there have been evident shortcomings on the part of healthcare institutions to recognise the *value* of research and its potential for improving outcomes and saving money over the long term (Krzyzanowska, Kaplan, and Sullivan 2011; Tunis, Stryer, and Clancy 2003). Given that there are multiple pressures on clinical managers to institute immediate improvements, it is perhaps possible to attribute any reluctance to embrace research as a consequence of contemporary circumstance. Whilst many administrators are likely to recognise the potential of research, it simply cannot be prioritised when all implementation is expected to contribute directly to acute care. Whereas resistance is embedded here in contextual constraints, the ideological resistance that has been evident in the dialogue represents a more problematic and perhaps more persistent barrier to clinical research engagement. The changing priorities in the National Health Service (NHS) should again be referred to, as they combine to obscure the potential of research practice. These forms of resistance also cover the practical constraints that restrict access to and engagement with clinical research. Whilst time, resources and space are always likely to be limited, the way in which protected research time during clinical hours is rarely, if ever, facilitated forces research to become extra-curricular, impinging on clinical work and broadening disparities.

Interprofessional resistance reflects the tendency of professional members to attempt to protect the individuality and perceived value of their particular profession in a health service that is undergoing significant transition. This is strongly consistent with the sociological work of authors such as Larson (1977) and Abbott (1988), who have discussed the notion of a professional project whereby the autonomy of a profession depends upon support from the state to ensure its privileged position is established, secured and sustained. Healthcare professions, particularly physiotherapy, speech and language therapy, occupational therapy and nursing, are under pressure to collaborate in their research studies. Whilst professional autonomy is unlikely to be compromised by interprofessional collaboration (Salhani and Coulter 2009), notional identities and contested professional jurisdictions may be disrupted by this type of work (Baker et al. 2011).

It is possible to suggest that these forms of professional protectionism are products of continued turbulence for the NHS related to ongoing reforms in structures, service delivery and commissioning. For example, the focus on patient safety in the wake of a number of high-profile institutional failings, a focus on improvement and a wider push towards patient involvement may have contributed to this shift in protectionism. Whilst it is difficult to categorically identify the implications for clinical research, the prioritisation of improved acute outcomes and a more general climate of uncertainty present a distinctly unsettling professional terrain. It is perhaps unsurprising that attempts to negotiate this come in the form of a retreat to the notional sanctuary of a well-established and familial professional group identity. Clinical research engagement may contribute to distinct forms of fragmentation as the disruption of familiar roles based largely around conventional perceptions of knowledge cause professional relationships to become more complex. As clinicians increasingly engage, or attempt to engage, in research, long-established and predetermined roles have been challenged in both practical and ideological terms.

The way in which research is rhetorically supported yet practically undermined is particularly worthy of further investigation. The comments of one participant who described 'building a research culture' as being part of her job whilst simultaneously being allocated no time, space or resources to achieve this, suggest that the everyday pressures of clinical work will, for the foreseeable future, relegate and separate clinical research. The requirement to appear conducive to research rather than to actually enable engagement in it creates a situation in which research and clinical practice become mutually exclusive. Research will only be facilitated under obligation, and its superficial promotion is a concerning example of this. Being research active in this context is encouraged by organisational rhetoric yet any actual attempt to undertake or engage in research by a full-time clinical professional can be seen as an act of resistance. It is perceived as subversive,

or even negligent, to commit to research engagement above and beyond clinical priorities and this once more demonstrates how resistance is so fundamentally embedded in specific cultural systems and their associated power structures. Pledging a commitment to research,as many NHS trusts and other clinical institutions have done, represents a possible contradiction. By appearing conducive to research, these organisations comply with general discourses that recognise the value of engagement in evidence-based practice; however, when a clinician attempts to undertake research, this can be undermined by the everyday organisational practices, attitudes and priorities that underpin many clinical contexts.

Conclusions

Our findings suggest that the introduction of formal education in research, implementation and improvement in clinical contexts will encounter a range of interconnected and self-sustaining forms of resistance. As we reiterate these below, we also attempt to offer tentative solutions.

The tensions that emerged between managers and their staff members after these professionals returned to practice with new qualifications represented a particular area of concern. Based largely around notions of professional insecurity, the way in which research polarises managers and clinicians, and is representative of an ideological divergence, serves to discourage both engagement and allocation. Although these personal insecurities are not easy to counteract, by adapting what research represents and communicating its importance and efficacy it is possible to at least begin to respond to the diversification of the workforce in more productive ways.

Medical resistance was evident in the form of notions of medical dominance or superiority when research was discussed. Whilst this is a well-documented dilemma for clinicians and all other healthcare professionals, the narratives that we uncovered enable us to problematise ideas that surround medical precedence and challenge them accordingly. The desire to engage in research expressed by the clinicians we spoke to in this study was unrelated to any conventional, role-defined 'rules' around who should be undertaking it or its subsequent quality, and shows an organic willingness to broaden understanding.

The organisational constraints facing the clinicians represented a difficult challenge. There were, in some instances, practical issues that rendered research above and beyond clinical practice impossible, despite promises made on behalf of managers and administrators to the contrary. Although there are objective difficulties when clinicians attempt to accommodate research activity, the reluctance to recognise its value, combined with the pressure to remain theoretically open to engagement whilst coping with the logistical realities of clinical practice, inextricably connect organisational constraints with the perceptions that surround clinical research practice. This reinforces the need to change ideas surrounding clinical research activity as we begin to see an ideological trend emerging.

The interprofessional tension identified in the graduates' dialogue can also be linked to ideas around professional insecurity and the need for familiarity in a turbulent contemporary healthcare context. Whilst notions of competition and role encroachment are possible consequences of a culture that devalues and blocks clinical research, the naturally collaborative characteristics of research, which encourage and in many cases necessitate cross- and inter-professional interaction, will provide an opportunity to learn from, with and about other professionals, rather than participating in a territorial conflict that is largely rooted in ontological fear.

What is perhaps most challenging for those clinicians who wish to engage in research in addition to and beyond their practical commitments is the tendency for those in positions of power to sustain a narrative in which research is deemed important whilst providing no practical or substantively ideological conditions under which it can take place. This remains one area in which it is difficult to suggest a solution, as a superficial accommodation of research in clinical contexts serves to obscure the nuanced difficulties described above. Exploring this issue in more depth is thus imperative.

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