

Sonography culture: Power and protectionism

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ABSTRACT

Introduction: The project aimed to explore the culture of sonography through the interpretation of the attitudes and opinions of a sample of practicing sonographers concerning the possible introduction of the graduate sonographer role. The participants' insights to their working world provided a new understanding of the professional culture of sonography and its impact on collective behaviour.

Methods: A qualitative study was undertaken using a constructivist methodology within a critical theory framework. A sample population was selected using theoretical purposive sampling. The interview transcripts were thematically analysed.

Results: Analysis identified main themes: protectionism, power, working world and career frameworks; these were interlinked with cross-cutting sub-themes of value, status and professional identity. The shortage of sonographers and increasing demand for ultrasound services created an imbalance that had put sonographers in a very powerful position; able to influence sonographer working practice, education and remuneration. The interpretations suggested that the initial power base of sonographers was achieved through a culture of occupational imperialism (delegation down). However, as the occupational group became established and a workforce crisis deepened, a culture of usurpation and protectionism had evolved within sonography.

Conclusions: The culture of sonography had a longstanding relationship with tradition and value that provided an emotional and political platform. An increasing self-awareness of power and status, due to the workforce shortage, had fostered a usurpatory and protectionist culture encouraging resistance to any workforce transformation.

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Introduction

In the United Kingdom, sonography as a professional group was initially a “trailblazer” in extended practice worldwide, but over time became relatively stagnant with very little career development since the 1990's.¹ The UK sonography workforce had been in a state of crisis for several years²; insufficient training, an aging workforce and lack of foresight and leadership were cited as reasons for the workforce shortage.^{1,3,4} After years of procrastination there was mounting political pressure to review the current postgraduate sonographer training models to incorporate pre-registration sonography education, facilitating a new role of sonographer practitioner.

A collective reluctance amongst sonographers toward the introduction of graduate sonographers has been previously

acknowledged^{2,4,5}; however, there was little explanation as to the extent of this resistance, where it was rooted and its impact. This article was drawn from a doctoral study which aimed to create new knowledge concerning the culture of sonography by exploring the attitudes and opinions of sonographers toward the graduate sonographer role. A review of the literature was initially carried out to contextualize professional culture.

Literature review

Culture – organizational and professional

Organizational culture is an elusive concept that has no consensus within the literature, however most organizational culture characteristics are fundamentally historical; a socially constructed heritage that is holistic and difficult to change.^{6,7} Organizational culture emerges from a collective sharing of perceptions, beliefs, attitudes and values.^{6,8} Its' complexities are exacerbated when co-existing sub-cultures are present; each

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sub-culture, created by different occupational or professional groups, seeks to differentiate themselves from one another by their own specific cultural values and artefacts.^{6,8,9}

Professional culture (professional socialization) is often associated with terms such as indoctrination, compliance and conformity¹⁰; being noted to be almost tribal within the health service, with marked cultural differences evident between different occupational groups.^{8,11–13} A profession seeks to gain control over their specific area of work through the development of minimum professional standards (threshold clinical competences), undertaking training and developing specialized knowledge.⁶ By doing this they become an exclusive group of individuals.^{14,15} Sonography is not currently a formally recognised professional group, however it shares the characteristics of a profession outlined in the literature, having a strong professional culture to which the individuals subscribe. However, the complexity of sonography (most practitioners having a primary profession as well as the secondary profession of sonography) has the potential to create difficulties and conflict.¹⁶

Practitioners often draw upon discrete elements of their professional mantle such as autonomy, integrity, accountability and duty to justify their areas of control.^{6,17} Through the creation of professional cultures, groups of individuals seek to control their status by using their skills and codes to highlight specific areas of knowledge and expertise which others lack; this legitimises their dominance.¹⁸ Power and control is harnessed through the creation of clinical competence thresholds; the desire to maintain power creates an environment for resistance and professional protectionism to thrive.¹⁸

Professional power

Professional dominance in health care was first established by the medical profession, peaking in the 19th century.¹⁹ The development of professional associations and the instigation of regulation and licensure increased occupational closure.¹⁹ These closed social structures represented a type of patrimonialist dominance; a form of authority that was rooted in tradition and maintained by historical cultures.^{6,9} Weber's⁹ explanation of the concept of social closure was unidirectional suggesting that individuals at the top of the hierarchy could exclude individuals below,⁶ such as the notion of the medical profession having jurisdiction over the development and scope of other health practitioners.^{19,20} However Weber's social stratification theory was challenged by many social theorists as it only considering a downward direction of the use of power. Nancarrow and Borthwick¹⁹ presented an upward use of power referred to as *usurpation*; *usurpers* were more likely associated with advanced practitioners with higher level skills,¹⁹ for example in the role expansion of nurses and radiographers over the last decade whereby practitioners were undertaking roles previously in the medical domain.^{15,20}

A similar concept is *occupational imperialism*, advancing professional status through the acquisition of high-status skills and roles delegated from other professional groups.¹⁹ However in contrast to *usurpation*, for *occupational imperialism* to exist these advancing occupational groups had to delegate lower status skills to subordinates to maintain their hierarchical position. This delegation of tasks, or *vertical substitution*, was evident within clinical competence frameworks and was controlled by the more powerful occupations.²¹ However in contrast to radiography, *vertical substitution* or *occupational imperialism* was not fully mirrored in sonography. While both professional groups were delegated skills from the radiologist, the sonographers failed to delegate lower status skills to subordinates. The reluctance to delegate may be due to the perception that it devalued their skills and knowledge¹⁵; indeed, this could be a form of occupational protectionism. This is associated with exhibited power through *usurpation* and specialism

which Ferris¹⁵ argued originated in exclusive and restricted practice; indeed, it was a form of social closure.

Professional power and control in a closed occupational group are directly related to the value placed on a skill set and the demand for these skills.¹⁶ The higher the demand for the skills, the greater the position of power to control, influence, instigate and/or resist change. In sonography, the demand for skills and knowledge created a position of economic, political and professional power.²² The imbalance in demand and supply provided safety to the occupational community and thus created a platform for professional protectionism to grow.¹⁹

Professional protectionism

Professional culture and professional identity maintain the jurisdiction of occupational practice; being instrumental in occupational ring fencing and protectionism due to the fear of losing that exclusive professional identity.^{11,13} The demarcation of boundaries of practice fosters and enhances territoriality between health professions and this exacerbates professional protectionism.^{11,23}

Bate¹¹ argues that every profession regards itself as elite, and this notion is strengthened by the credentialing or licensure of practice undertaken by professional and regulatory bodies. However, the practice of ultrasound is not currently closed to professionals through licensure or registration, leaving education and level of qualification the only options to ensure exclusivity. The lack of regulation arguably posed a threat to sonographers with regards to the safeguarding of occupational territory, thus exacerbating protectionism.²³

It was evident from the literature that professional protectionism is rife within the health professions and is underpinned by affiliation to professional identity, professional culture and the need to maintain status within organizational culture and society.^{6,11,23–25} Professional protectionism or resistance is evident especially where changes in workforce practices are being advocated.²⁶ The resistance is often associated with fear, anxiety, jealousy and perceived loss of value.^{25,27} As significant changes to the sonography workforce are on the horizon (including the introduction of a graduate sonographer role), it is anticipated that sonographers may be experiencing some of these uncomfortable feelings associated with professional protectionism and resistance. This project aimed to explore the attitudes and opinions of sonographers towards the creation of the graduate sonographer role.

Methods

The theoretical drive of this study was from a qualitative perspective using qualitative interviews within a critical theory framework.¹⁵ The data were collected over a period of 12 months from 2015–16. Ethical approval was gained from [institution name withheld] Research Degrees Ethics Committee [No. 2013/HWB/HSC/DPS/10]; NHS Research Ethics Committee approval was not required.

Population and sampling

Theoretical purposive sampling of a homogeneous group of participants was undertaken. The sample included sonographers working in the UK in consultant and advanced practitioner roles (UK Agenda for Change Bands 7 and 8), a locum sonographer, academics (all academics were also practicing sonographers) and ultrasound managers so that a range of perspectives from different contexts could be captured. Table 1 illustrates the sample population demographics.

The participants were recruited from the SCoR voluntary register of sonographers by individual invite letters, and also via an

advert within the research network LinkedIn. The researcher personally approached sonographers who met the participant profile. Although an initial sample of fifteen participants was identified, the size of the purposive sample was decided inductively. The researcher transcribed each interview; this enabled comparison of the data as it was being gathered and thereby facilitated an inductive approach to determining the sample size. The analysis, after the tenth interview, indicated a redundancy of the data as no new concepts were being identified suggesting saturation had been achieved.^{28–30} Whilst it is acknowledged the sample size was small and could be deemed a limitation of the study, Guest et al.³¹ argued that when a population sample was homogeneous with a relevant expertise in the field of study a sample size between 6 and 12 was able to achieve saturation.

Data collection and analysis

The data was gathered using audio-recorded face-to-face semi-structured interviews, each lasting approximately 45 min. Interviews followed a pre-designed schedule of questions (Fig. 1) which was refined following piloting of two interviews (both pilot participants met the same criteria for the sample population but were excluded from the research data). QSR-NVIVO version 10 was used in the management of the data. Thematic analysis was used to develop initial, thick descriptions of the participant's perceptions and attitudes into subsequent codes, themes and subthemes.

Trustworthiness

To enhance rigour, trustworthiness and credibility of naturalistic interpretative research triangulation, saturation, member checking, reflexivity and peer verification were undertaken.³⁰ Validity and reliability of the data and interpretations were ensured by participant verification during and after the interviews and independent blind coding of transcripts to ensure researcher interpretations were accurate and coding was consistent.

Findings

The analysis of the findings is presented in the form of selected participant quotes that are interwoven with researcher comments thereby providing evidence that the interpretations made from the data were grounded within the interview narratives. The participants' responses were, in the main, in agreement irrespective of role or professional background.

The main themes of power, protectionism and the working world were identified with cross cutting sub-themes of value, status and professional identify (Fig. 2). Sonography as a culture with 'belonging' at its core was evident in many quotations by the repeated use of 'they' and 'we'; references to professional belonging within the quotes are placed in bold.

Power

The main theme of power was evident within all of the transcripts.

“sonographers as a profession are very powerful” (participant F)

Narratives that used the terms elitism, value and status indicated the perception that sonographers held a position of power amongst other health care professionals. This power status was linked by the participants across all of the transcripts to their postgraduate education and typically high banding.

“But ultrasound – we've made ourselves that elite we're better than everybody else - train in ultrasound and you get a [Band] 7 ... and it's just that elite – we're better than everybody else attitude that we've always had that - it's that superiority” (participant D)

It was suggested that the radiologists, when delegating their ultrasound practice to the radiographers, transferred not only their skill base but also some of their power status.

“Well maybe it's the radiologist that we've got to blame for all of this then!” (participant E)

Reluctance to consider any training initiative that would address the workforce deficit was interpreted as being a vehicle to maintain this powerful position.

“And from the sonographer's point of view they get paid [high banding] now why would they make an effort to train anybody else it's more like hard work ... if there wasn't a deficit, they wouldn't all get their [high banding] so they are not going to support something that potentially means they might get down-graded ...” (participant D)

Workforce, value and status were interpreted to be subthemes that underpinned the main theme of power. Workforce deficits, and the value placed on the sonographer skills, such as autonomous independent reporting, were perceived by the participants to have placed them in a position of power.

“a small profession who at the moment are in an environment where people can pick and choose their roles and their jobs ...”(participant B)

Power was linked within the subthemes by tradition. The participants identified that their status was mainly historical, achieved through delegation from the medical profession (radiologists).

Table 1
Basic Participant Demographics [P = participant identifier].

P	Advanced Practitioner	Consultant practitioner	Locum	Ultrasound manager	Ultrasound academic	Professional background	Region
A	✓			✓		Radiographer	Midlands
B	✓				✓	Radiographer	Midlands
C	✓			✓		Radiographer	North
D	✓				✓	Radiographer	South-central
E		✓				Nurse	North
F	✓				✓	Radiographer	East Midlands
J	✓		✓			International sonographer	South
H	✓				✓	Midwife	Northern Ireland
K	✓					Radiographer	East Midlands
L	✓					Radiographer	North West

Interview Guide

- Welcome and introduction
- Affirmation of consent and ability to record
- Ice breaker - clarify the professional background of the participant

Phase 1 : Research Question	Interview Question
What is the participants' understanding about competence?	<ul style="list-style-type: none"> • How would you define clinical competence? • Are there key areas of clinical practice that can be used to determine competence? • What do you understand about the meaning of clinical competencies and skills?
Can the participants define the competences for sonographer from practitioner to consultant (bands 5-8)?	<ul style="list-style-type: none"> • What are the key clinical competencies that define the clinical role of an Advanced Practice sonographer? (band 7) • Can you identify the role and competences for a graduate (band 5) sonographer? • How would band 6 sonographer clinical competencies differ from the bands 5 and 7?
Is it possible to create a clinical competence framework that includes Band 4-8 sonographer practice?	<ul style="list-style-type: none"> • In your opinion do clinical competence frameworks help to define clinical role? • Are there any clinical competence frameworks that could be used to help create a clinical sonographer practice competence framework? • What challenges do you perceive to be potential barriers to developing a complete clinical competence framework for sonographers?
What does the sonographer working world look like?	<ul style="list-style-type: none"> • What is your typical workload/list? • What are the current working pressures? • Are you fully staffed?
Future of sonography	<ul style="list-style-type: none"> • How do you perceive the future of sonography? • How do we move forward to address current challenges faced by the workforce and service providers?

Figure 1. Interview guide.

“I think it comes from tradition” (participant D)

“we have to be realistic of where the power lies ... that generally speaking is the radiologists” (participant H)

“they feel like they've given away some of their job which is the way radiologists used to feel one time with sonographers” (participant B)

However, due to the sonographer workforce deficit and the reluctance of sonographers to delegate some of their clinical skills, this power base was now garnered via a strategy of usurpation.

“So gradually it's that spiral of – I guess it's just bullying and manipulating – it's like if you don't train me in this then I'll leave ... because they know there's that workforce deficit – they're in control” (participant D)

“it's like oh well you won't give us what we want so we are all going to leave and go to this department. We are going to do what we want and manipulate” (participant B)

The workforce deficit placed sonographers in a very powerful position that was fiercely protected.

“I think being in a profession where there is a significant deficit regardless of what your profession is puts you in a strong position because you are not easily replaceable.” (participant F)

Protectionism

The protectionism theme was defined by the resistance and negativity found within the participants' responses towards the concept of a graduate sonographer. There was an overall reluctance to identify any role for the sonographer practitioner, although it is acknowledged that this may be a result of a lack of understanding or awareness of the role, rather than a reluctance to implement it.

“I don't think there's any role for a [lower Band] 5” (participant J)

“I don't know how that would fit in” (participant L)

“I don't have one [a role] – this is the problem” – (participant C)

Protectionism was linked to the professional role which created the higher status for sonography.

“people already feel defensive about their role” (participant B)

“its tradition and its being protective of their profession” (participant D)

The participants that did identify where graduate sonographers could be employed identified an area of practice that was not their own main area of expertise.

“we've looked at whether the dating scans are appropriate” – (general medical sonographer)

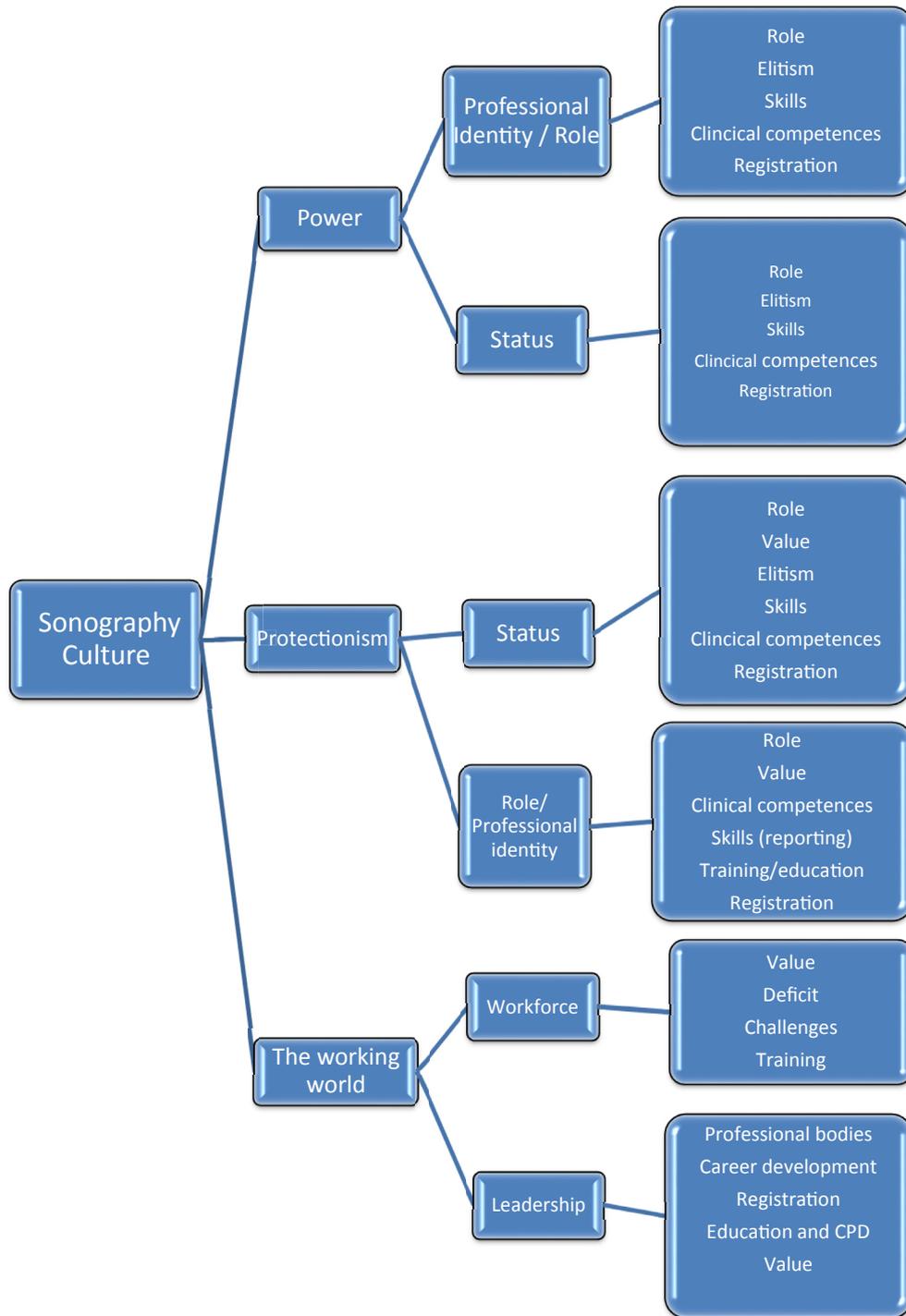


Figure 2. Coded themes.

“kidneys you know kidneys and abdomens” – (main focus MSK sonographer)

One participant, who felt that a role for graduate sonographers was possible, indicated a high level of protectionism for their own area of practice

“would I want a band 5 newly qualified sonographer working in my ... then probably not”. (participant E)

The participants' perceptions of the potential loss of value associated with a graduate sonographer workforce (through down banding and the “dumbing down” of the clinical skills) suggested a culture of protectionism within sonography. The concerns regarding banding appeared to be associated more with professional value for their clinical skills than with financial remuneration.

“to be honest it would be my pride hurt more than my pocket” (participant L)

“Cultural - ... at the moment it will be seen as dumbing down” (participant A)

“it makes them feel even more threatened ... I think they will be afraid that they will be banded down: (participant B)

“there are a lot of people feeling threatened and that it’s a way of undermining them and devaluing them” (participant C)

“I think there are all sorts of things that come into it but fear is a big thing” (participant D)

“everybody feels threatened about being down-graded” (participant K)

The working world

The participants were invited to describe their normal working week with regards to workload and pressures. Most agreed that the workload in the week created an environment of pressure and stress.

“everybody is under more and more pressure and more stressed and it makes the working environment less pleasant” (participant B)

This was reported by the participants to have created a culture of negativity amongst the workforce.

“how hard everyone works then you don’t feel appreciated basically” (participant J)

Insufficient training and education were identified by the participants to be at the heart of the sonographer workforce crisis.

“I mean historically it’s through training budgets being eroded eventually down to nothing, so we have a whole generation of sonographers are missing” (participant F)

“think we haven’t trained enough - I think not enough training has been taking place” (participant A)

Participants believed training and education was also an issue post qualification.

“one of the reasons he cited for leaving as well was that he didn’t feel like they were prepared to support him to develop any more than he already was” (participant K)

This lack of support for development could also be seen as a contributory factor to the resistance sonographers had towards relinquishing some of their clinical skills to lower grade sonographers.

Discussion

This article presents the first published qualitative study to explore the cultural attitudes of sonographers towards the introduction of graduate sonographers. While this study yielded rich data related to issues of power and protectionism in their working world, there are nevertheless limitations that must be acknowledged. While rigorous data collection and analysis methods were employed, the sample size was relatively small and as with most qualitative studies the findings cannot be generalised to the wider population. Whilst attempting to capture a range of perspectives from within the sonography world (academics, practitioners,

managers etc), the numbers from each sub-group were small and they may have had strong atypical views. Nevertheless, the fact that the participants were drawn from several different regions of the UK, and that many of their quotations were very similar to each other, suggests that their views may have been relatively typical of the wider sonographer culture.

Culture determines the “norms” of behaviour and thereby professionalism and professional identity within an occupation.¹⁹ Professional identity, valued by the community, can be argued to be at the core of occupational/professional protectionism. Professional identity characteristics were often used by the participants to justify control of an area of clinical practice.¹⁹ The extent to which these character traits were performed defined the status of the practitioner; for instance, a graduate sonographer, whilst being equally accountable, would not practice at the same level of autonomy as a consultant sonographer. This suggests a link between professional identity character traits and level of professional status.

When considering the evolution of sonography as a discrete community of professionals (commencing with a delegation of practice from radiologists to radiographers) this study suggests that the values and beliefs of the medical profession were also transferred to the sonographers along with a sense of being in a position of power. This notion that a power base and attitudes may be handed down from the medical profession to other professionals^{21,22} was certainly supported by the interview data.

“maybe it’s the radiologist that we’ve got to blame for all of this then!”

Ferris¹⁵ suggested that the specialty status, given to the sonographers by the radiologists, created an elite and exclusive clinical practice. It could be argued that the radiologists created a microcosm of their own professional world within sonography through the process of *occupational imperialism*; delegating skills and power to lower ranks in the hierarchy. Power was something that sonographers in this study recognised they possessed; power was gained firstly through delegation and then by exclusive ownership of the clinical skills. The exclusivity was achieved through training and clinical competence thresholds which directly fostered an attitude of elitism. The shift from power being delegated by the medical profession, through the mechanism of occupational imperialism, to power being realized and used by the sonographers (usurpation), was evident in the participants’ responses.

This concept that power was fluid and changed with situations was supported by 20th Century philosopher Michel Foucault who stated that power was not owned but exercised.^{32–35} Sonographers were able to use the power that the valued skills gave them to manipulate situations to their advantage, thereby moving from delegated power to usurpers of power. This cultural shift from occupational imperialism to usurpation was facilitated by the workforce crisis. Sonographers dictated employment terms and created opportunities to expand their practice; all possible due to the high demand for their clinical skills. Training for graduate sonographers (thus increasing sonographer numbers) was resisted in an attempt to protect the sonographer’s position of usurpatory power.

The emotional factors such as fear and anxiety linked to a perceived loss of value and dilution of professional identity had a strong association with occupational protectionism³²; this was evident in the research data with terms such as “*dumbing down*” and “*undermining*” being commonly cited by the participants in response to considering the role of the graduate sonographer. The research data would suggest that although financial remuneration for sonographers’ high level of skills was important; for some of the participants it was the professional recognition and value for their

clinical skills that was being fiercely defended and not the financial gains associated with grade/banding.

The participants' fear of their skills being devalued was a significant factor for the collective negativity and resistance towards the introduction of a graduate sonographer practitioner role. The extent of this negativity demonstrated in the participants' narratives at the time of the data collection was surprisingly extreme. Since this data collection there have been significant steps taken towards creating an inclusive sonographer workforce that will meet the service needs of the future; Health Education England is currently working collaboratively with the Society and College of Radiographers, the British Medical Ultrasound Society (BMUS) and the Consortium for Accreditation of Sonographer Education (CASE) to develop an inclusive sonographer career framework from graduate (band 5) to consultant (band 8).³⁶ CASE published new standards of education including for the first time academic level 6 and proficiency standards,³⁷ and the sonographer degree apprenticeship standard has recently been approved by the Institute for Apprenticeships. As the first graduate sonographers are entering the workforce, these organisations have collectively developed and submitted a strong case for the professional title Sonographer to be entered on the Health and Care Professions Council register. Whilst it is acknowledged that these developments may not have alleviated the fears articulated by the participants, anecdotal evidence suggests that there is an increasing recognition amongst sonographers that change is coming and the opinion that it is safer to drive it than to have it imposed.

The successful implementation of the graduate sonographer practitioner to the workforce will be reliant on the development of a skills hierarchy within sonography. Acknowledgement and recognition of the fiercely defended high level clinical skills associated with advanced ultrasound practice, may help to dissipate the fear, anxiety and negativity felt by advanced practice sonographers towards the graduate sonographer role. These strong emotional drivers that were key to maintaining a culture of protectionism within sonography, equally will be key to returning the profession to a culture built on the ethos of occupational imperialism as they are dissipated; emancipating the profession to develop a sonographer career framework that encompasses and embraces all levels of sonographic practice, from assistant to consultant practitioner.

Conclusion

The culture of sonography, built on tradition and value, provided an emotional and political platform on which practice and education had been framed. The delegated power status of sonographers was reinforced by the sonographer workforce deficit; with demand for services far outweighing the supply of sonographers. Self-awareness, amongst the sonographer community, of their power status had fostered a usurpatory and protectionist culture. This culture had encouraged resistance and negativity, underpinned by fear and anxiety, towards workforce transformation and development.

Moving forward, the community of sonographers and professional bodies had acknowledged that the progression of sonography was reliant on solving the supply and demand imbalance, leading to the dissolution of the negative usurpatory culture that had held it back. The attitudes and opinions of the participant sonographers toward the graduate sonographer practitioner role were, during the time the data was collected, extremely negative. Whilst there is no empirical evidence to suggest that attitudes have changed since this data was collected, it is likely that the extensive work undertaken by various professional organisations to collectively implement a new sonographer career and education structure will be influential. Positive sonographer attitudes will be vital to the success of graduate sonographer training programmes.

Further research to explore the professional culture of sonography as it transitions into this next phase of development will provide a greater understanding of the wider impact workforce transformation has on professional communities.

Conflict of interest

None.

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