

Understanding the relationship between GP education and patient outcomes

Dr Sanjiv Ahluwalia

MBBS FRCGP MSc BMedSci FHEA

Institute of Education, University College London

**Submitted in part fulfilment of the requirements of the degree of
Doctor of Education**

June 2019

Supervisors:

Dr Bryan Cunningham, Institute of Education, University College London

Professor Deborah Gill, Medical School, University College London

Declaration

I, Sanjiv Ahluwalia, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Word count: 42000 words

Abstract

This enquiry is concerned with an exploration of the relationship between clinical education and patient care in General Practice. Previous work in the field has highlighted a statistical association between GP training practice status and patient outcomes. The size of the effect of GP training practice status is small relative to the influence of factors such as patient demography, disease burden, ethnicity, and deprivation. The established literature is largely silent on how clinical education in General Practice influences patient care and outcomes.

It has been my experience that my work as a clinician and educator is a social practice where learning and working are influenced by interactions between doctors with patients and educators with learners. This study aimed to identify how this influence of clinical education on patient care is mediated. The socio-cultural theories of learning explored in this thesis offer a useful framework for understanding the role of clinical education on patient care. In exploring relevant theories of education, I draw a distinction between those designed to highlight acquisition of knowledge and participation in the workplace and conceive of GP training practices as complex systems in which the interplay between component elements (learners and teachers, teams and organisations, physical materials and resources, and patients) evolves with time. Importantly, engagement with clinical education and the presence of learners has the potential to create opportunities for practices that influence patient care and clinical outcomes.

I am attracted to pragmatism as a worldview which is particularly suited for asking real-world questions in often messy settings where context, utility, and practicality have significance in defining methodological considerations. I have used phenomenology as a methodological approach to study the lived experience of GP trainers in understanding the interplay between clinical education and

patient care. I undertook a series of semi-structured interviews with a purposive sample of GP educators involved in front-line education and with experience of the assessment of quality of clinical and educational practice. Interviews were transcribed verbatim. Data generated were analysed using the Framework Approach. All data were handled using electronic software. Rigour and trustworthiness were ensured by providing a clear description of the process of data collection and analysis; using electronic software to handle data and provide an audit trail; peer debriefing; and respondent validation.

This study identified four overarching themes to describe how engagement with clinical education by GP training practices influenced patient care. These included: influencing through educational standards; influencing through educational leadership; influencing through learners; and influencing through the educational process. The application of educational standards through the process of accreditation was seen to improve patient outcomes. The development of GP trainers as educational leaders and their developing senses of agency were important mechanisms for influencing patient care within the training practice. GP trainers introduced new ways of thinking (engagement with innovation); values (changes to the way training practices learn and engage with patients); and practices (modernised systems and processes). GP trainees influenced patient care directly as well as by influencing GP trainer and practice systems development. The influences of educational ideas, values, skills, and practices were mediated through enhanced communication and consultation skills of clinical and non-clinical staff; reflection on clinical care (with individuals and teams); collectivised learning characterised by safe spaces to share and learn; involving the whole team in clinical education; and team working characterised by a less hierarchical and more open environment.

The interplay between learners and their learning environment is far more bi-directional and relevant than often considered in apprenticeship models of training. GP trainees are “change agents” who

disrupt the equilibrium of a training practice. Power relations, diversity of communicative interaction, and norms and rules influence how training practices respond to such a disruption to their equilibrium. Traditional GP training is viewed as an apprenticeship model in which there exists a central one-to-one relationship between GP trainer and trainee. This research challenges the traditional view of GP training as an apprenticeship with a one-to-one relationship between trainer and trainer; instead it proposes an alternative view – one in which GP trainees (as learners) enter a complex educational eco-system recast as participant observers and alter the dynamic that exists between differing components of the system.

Implications for my work as a clinical educator are explored with reference to policy and practice on the need to enhance learner well-being; the link between GP training and practice resilience; enhancing competency assessment through capability; exploring notions of apprenticeship in GP training; and healthcare education economics.

This research makes several unique contributions to the literature. It seeks to make the importance of patient care central to medical education research. The nature of the bidirectional learning is also clarified – GP trainees offer up-to-date propositional knowledge to exchange with GP trainers; in turn GP trainers share their experiential and problem-solving strategies. This research extends the notion that learners actively influence their learning environment and that practice preparedness for disruptive change (not merely from learners) is enhanced by the introduction of clinical education into practices. Training practices are conceived as complex educational eco-systems in which learners are disruptive change agents. Introducing learners changes the equilibrium of the training practice creating new and unpredictable opportunities to learn. This research confirms the importance of learners legitimately entering the learning environment and learning through opportunities arising from the whole educational eco-system.

Impact statement

The doctorate in education is a professional degree, grounded in the work-context of the participants. For me, the impact of the last seven years has been profound. I started the doctoral programme with a superficial understanding of research. In-depth engagement with the research process has helped me to understand it better, develop an appreciation of the importance of context, the nature of knowledge and reality, and my own positioning within it. I have also come to appreciate the use of theory as a lens for understanding phenomena – this is a shift significant in my approach to research prior to starting the doctoral programme.

Long and deep engagement with theories of education have had a profound influence on my thinking and work. Most postgraduate training is driven by organisational and health services management thinking. It has added an additional dimension to discussions about the management of postgraduate education beyond service, workforce, and financial ones. An appreciation of the theoretical literature in education is refreshing for my colleagues and myself. It is also clear that there are far fewer practitioners with an understanding of educational theory and its use in postgraduate compared to undergraduate education. My work in this context has started to add new thinking to the empirical literature.

Over time I have come to see my work as a social practice profoundly influenced by engagement with colleagues, patients and the environment of learning. This reflection, based on experience, has been reinforced having undertaken this empirical study. The findings from this empirical study confirm the importance of the workplace context within which interactions (between doctors, staff and patients) take place on the quality of patient care and the development of junior doctors as GPs. For me therefore this workplace context to learning and its underlying theoretical framework offer a lens for

understanding the opportunities and challenges associated with postgraduate medical education more broadly.

Establishing the link between clinical education and the quality of care has been challenging – both methodologically and in logistical terms. Within the doctoral programme I have found the context within which to discuss and develop ideas for interrogating the link between the two. The value of being connected to teams with complementary and diverse research skill sets has proved very valuable and offered me significant learning. I have developed a network of colleagues with research expertise including in the primary care research departments at Kings College London and University College London.

A source of significant personal, emotional, and social support has been the cohort of doctoral students who I started with in August 2012. Interacting with individuals from non-healthcare backgrounds has been amongst the most powerful elements of the programme. The contrasts in attitudes, ways of thinking, jobs and remuneration have challenged my perceptions, and these, in turn, have influenced my work as a teacher and clinician. I have also found that I have much in common in the way I think about political and social issues – it has given me the confidence to explore these issues, particularly as medicine is a much more conservative profession.

The research from the doctoral programme has added new findings to the empirical literature. Demonstrating the link between clinical education and the quality of patient care has been well received in the empirical literature journals. There has also been interest in the social media. I have also presented at the Royal College of General Practitioners annual conference. The dissemination of

these findings has generated conversations and ideas for further research as well as alternative explanations for describing the associations generated.

Contents

	Page
Title	0
Declaration	1
Abstract	2
Impact statement	5
Contents	8
List of figures and tables	11
Overview statement of the EdD programme	12
Thesis overview	19
Chapter 1: Introduction	22
1.0 Context of the study	22
1.1 Quality of care in the NHS	22
1.2 General Practice in the UK	23
1.3 Quality of care and clinical education	25
1.4 Training practices and quality of care	26
1.5 Personal and professional context	28
1.6 Philosophical stance	29
1.7 Research aims and objectives	30
1.8 Organisation of the thesis	31
1.9 Summary	31
Chapter 2: Review of the relevant literature	32
2.0 Introduction	32
2.1 Impact of GP education on patient care	32
2.1.1 Professionalisation of General Practice in the UK	33
2.1.2 Structure of GP training in the UK	35
2.1.3 Quality of care in General Practice	40
2.1.4 GP training practices and quality of care	41
2.1.5 Conclusions	46

2.2	Understanding how clinical education influences patient care	47
2.2.1	Theories that promote individual learning	48
2.2.2	Organisational learning	51
2.2.3	Workplace learning and the socio-cultural and socio-material context	53
2.2.4	Established research on workplace learning in General Practice	57
2.2.5	Bringing it all together	65
2.3	Conclusions	66
Chapter 3: Methods		68
3.0	Introduction	68
3.1	Research paradigms	68
3.2	Research methods	71
3.2.1	Rationale for qualitative methods	71
3.2.2	Phenomenology	72
3.2.3	Semi-structured interviews	73
3.2.4	Participant selection	76
3.2.5	Data analysis	77
3.2.6	Methodological considerations	79
3.2.7	Research timeline	84
3.3	Conclusions	85
Chapter 4: Results		86
4.0	Introduction	86
4.1	Review of original research questions	86
4.2	Use of data	87
4.3	Emergent themes from analysis	91
4.3.1	Influencing through educational standards	93
4.3.2	Influencing through educational leadership	103
4.3.3	Influencing through learners	108
4.3.4	Influencing through educational process	113
4.4.	Summary of findings	126
4.5	Conclusions	128

Chapter 5: Discussion	130
5.0 Introduction	130
5.1 Summary of findings	130
5.2 Relationship to the empirical and theoretical literature	130
5.2.1 Identity formation and agency in GPs as educational leaders	131
5.2.2 Learners and their influence on learning and clinical environments	133
5.2.3 Clinical education and workplace learning	137
5.2.4 Training practices as complex educational eco-systems	144
5.2.5 Responding to instability	146
5.2.6 The use of time and space in clinical education	149
5.2.7 Summary	151
5.3 Implications of this research	152
5.3.1 The well-being of junior doctors	152
5.3.2 Issues with assessment	154
5.3.3 The value of GP training and patient care	155
5.3.4 Is GP training an apprenticeship or not?	156
5.3.5 Capacity and quality of learning in the workplace	157
5.3.6 The connection to organisational resilience	158
5.4 Methodological reflections	160
5.5 Contribution to the research area	163
5.6 Future research directions	165
5.7 Conclusions	166
Chapter 6: References, acknowledgements and appendices	167
6.1 References	167
6.2 Acknowledgements	184
6.3.1 Appendix 1 – Participant Information Leaflet	186
6.3.2 Appendix 2 – Consent form	188
6.3.3 Appendix 3 - Interview schedule	189
6.3.4 Appendix 4 – Excerpt from an interview	190
6.3.5 Appendix 5 - Examples of data coding to themes	200

List of figures and tables

	Page
Table 1: Threats to validity identified in Ahluwalia (2015)	43
Table 2: Framework analysis adapted from Ritchie and Spencer (1994)	78
Table 3: Research timeline	84
Table 4: Participant details	89
Table 5: Characteristics of complex and non-complex systems	148
Figure 1: Educational theories relevant to this study	47
Figure 2: Inter-relationship between education, patient care and time	66
Figure 3: Themes describing the influence of education on patient care	91

Overview statement of the Educational Doctorate (EdD) programme

Introduction

This thesis forms part of the professional doctorate in education. In this section, I shall reflect on my doctoral journey outlining the key milestones along the way, what I have learned and how these have linked to my academic and clinical work as a general practitioner.

Unsure beginnings

I was out to dinner with a couple of colleagues (Dr Tim Swanwick and Dr Diana Hamilton-Fairley) in early 2012 where the discussion moved on to the challenges of medical education research with a focus on the absence of academic training opportunities and career pathways for medical educators in the postgraduate arena. It was at this moment that my spark for exploring the fundamental questions about postgraduate medical education was lit.

I then explored several options for developing research competencies and considered standalone courses in medical research, working with a mentor in an undergraduate medical school, and different university-level degrees until I was pointed towards the Institute of Education professional doctorate. A fruitful discussion with a faculty member ensued and shortly after I signed up to start the programme.

My first impressions of joining the cohort of students in early October 2012 were of uncertainty about

whether I had made the correct choice, mingled with a sense that I was the only medical doctor amongst 40 individuals from diverse backgrounds and potentially would lack peer professional support. These first few weeks proved to be critical – the group gelled, and I found myself having conversations unimaginable before starting the course. The diversity of thought, richness of ideas and experiences, and support for each other proved to be a sustaining factor through the seven subsequent years.

The first module, Foundations of Professionalism (FOP) (Ahluwalia, 2012), explored contemporary issues. Whilst the group of students was getting to know each other, I was also being immersed in a process of self-reflection about my own professional identity and its challenges. This proved to be a profound learning experience – reflecting on the changing nature of professionalism in General Practice, its implications for my work as an educator and clinician, and it flamed my desire to understand the interplay between education and patient care. I was encouraged to explore literature and readings beyond medicine and make connections that I had never considered. It was in the FOP programme that I explored Ralph Stacey's Complexity theory, Celia Whitchurch's work on third spaces, and Ron Barnett's concepts of super-complexity and the modern university.

Medicine is a profession which relies heavily on short note forms of written communication. Writing prose with word counts over 2000 proved a challenge. Structuring an argument, critiquing theories and concepts, mingling empirical and theoretical research, and relating these to my professional context were key learnings during FOP.

Methods of Enquiry (MOE) 1 and 2 (Ahluwalia, 2013a; Ahluwalia, 2013b) proved all together a more settled experience. The focus on the research process, differing approaches to epistemology and

ontology, framing research questions, and the range of methods were fruitful foregrounding to then writing a research proposal and conducting a pilot project. My research proposal covered standards for educational delivery in General Practice and pilot research looked at the lived experiences of GP trainers – both proved to be contributory to my thesis work.

For my non-compulsory module, I was attracted to psychoanalysis in education. I found this powerful at a personal as well as intellectual level. The various ideas and concepts had resonance in my work with patients as a GP. I had never considered their relevance to my work as an educator, particularly my one-to-one interactions with learners in General Practice. I realised during this course that it was time for me to move on from supervising individual learners – framed in the tension between ego and super-ego. I eventually gave up individual supervision in 2013.

By this time the EdD group had become a close-knit community with an online chat forum and regular meetings, outside of the formal classroom teaching programme, where we started to share with each other our hopes, frustrations, challenges, and resources. I learned that many of my concerns about working in the NHS are replicated across the public sectors and some of the solutions and workarounds colleagues had invented were innovative and transferable. I realised in this group that through the language of education there is much in common – I had entered another rich community of practice.

Marching onwards

Towards the end of 2013, I was increasingly focused on undertaking the Institution Focused Study (IFS). I had become involved in debates about the cost and benefit of GP education with its large

taxpayer bill. GP education at this time had become quite political with different factions in parliament and the health system decrying the lack of GPs. One option mooted was to make GP education “cheaper” without any understanding of the value of GP education to patients as much as the development of the future workforce. It was here that I crystallised in my mind the notion of focusing on this topic as relevant to my Institution-focused study (IFS).

I was fortunate enough to have come across a paper by Dr Chris Pike (working as a health economist at NHS Monitor) who was looking into the influence of provider competition on GP services and patient outcomes. He had used a method of regression analysis to do this. In correspondence, he agreed to work with me on looking at the influence of GP training on patient care. However, this work was limited by lack of time and resources (particularly data sets and IT facilities). However, I now had the outline sketch of a method that would allow me to compare clinical outcomes between training and non-training practices as well as a clear idea of the potential confounding variables that might influence outcomes.

A colleague introduced me to Dr Mark Ashworth (a reader in primary care) at Kings College London. He had built up a large database of primary care outcomes data for all the practices in England. He also had an interest in GP training having previously been a GP trainer in his practice. I shared with him my ideas for studying the association between training practice status and its influence on patient outcomes. He agreed to support me by allowing access to his database as well as relevant IT and statistical support. The work I did at Kings College London formed the basis of my IFS. In addition to undertaking this quantitative work, I also conducted a rapid systematic evaluation of the evidence on clinical education and patient outcomes in General Practice.

The IFS was my first significant foray into quantitative research – grappling with large databases, statistical packages, and statistical approaches were both alien and a significant learning curve. Developing an understanding of the role of systematic reviews proved valuable. As did the differences between causation and association in statistical relationships. It was a period of significant learning about the different experimental models.

Just after my IFS submission in 2015, I was involved in an accident that resulted in my being off work for a significant time. This period off work was a time for reflection on what I had achieved in the previous 3 years as well as my ongoing developmental needs as a researcher. Through the period up to the IFS, I had come to value the importance of being part of a team of colleagues involved in research. The bringing together of differing skills and attributes, aligned with a collective purpose had resulted in an incredibly productive set of interactions. It was in my interactions with the team at Kings that I also realised the benefits of part of a social set-up in research terms. The other great source of friendship and companionship was (and remains) the fellow educators on the EdD programme.

Amongst the 40 or so colleagues who started starry-eyed on the programme in August 2012, a significant proportion have either dropped out, exited or deferred their participation in the programme. The greatest challenge that I have heard being shared is the difficulty of balancing the demands of the EdD programme with the pressures of ones' work and personal life. For me this was a significant issue – I took up a new and high-profile role in medical education. Adjusting to a new job whilst managing personal issues was a significant challenge. Again, I found turning to colleagues and friends an invaluable source of support.

The final stretch

My journey through the EdD has taught me as much about myself as the research method. Resilience to contend with long periods where seemingly little progress was being made, patience when dealing with complex research questions, and willingness to accept criticism given in a constructive spirit. Some of the hardest times were yet to come through. Between 2016 and 2018 I spent significant time developing a research protocol for the thesis project. Hurdles included achieving agreement with my supervisors, ethical and research governance barriers, and time to undertake research (whilst balancing the demands of my clinical and educational roles).

Underpinning the last 7 years has been my relationship with my supervisors – one of unconditional positive regard, even in the most strained of times. This is perhaps the most important reflection of my research journey – this relationship has spanned friendship, mentorship, intellectual jousting, and empathic support. It has not been all warm and fuzzy by any means – but it has never been without unconditional positive regard.

When I look back to the person I was at the start of the doctoral programme I seem barely recognisable. As William Yeats proclaimed “*All changed, changed utterly*” so has been my own experience. My clinical, educational and research practice has changed. I have new ways of understanding and viewing the world – a sense of being comfortable with the discomfort of competing and conflicting worldviews. I also take away from the doctoral programme a treasured and hard-won gift – the networks of people, who through their unconditional positive regard have given me so much. My colleagues and friends on the EdD programme, the research team at Kings College London, the

participants in my thesis work, and colleagues across Health Education England (HEE) who have been engaged and involved in this journey.

The future

I look to the future with great hope. Apart from the friends, colleagues, and attributes I have developed during these past years, I also sense a purpose – researching my two passions in work – clinical education and patient care. On a more pragmatic note, the future is filling up with activities related to research – disseminating the findings of my thesis through writing for journals and presentations at conferences; applying for grants to further our understanding of education in my clinical practice and seeking to influence educational and workforce policy directed at improving patient care.

There is a part of me that is excited at the opportunities that are open for clinician-researcher-educators. Opportunities to offer educational leadership; develop an educational research portfolio; or manage educational programmes have never been more available than in the current climate. Paulo Coelho sums that sense up thus *“When we strive to become better than we are, everything around us becomes better too.”*

Thesis overview

In this thesis I explore the relationship between GP training and its influence on patient care. I draw upon the lived experiences of established GP educators to develop an understanding of this relationship.

Chapter 1: Introduction

This chapter provides an overview of the thesis including a rationale for the study and introduction to the key concepts relevant to this enquiry. It provides an outline of the personal and professional perspectives as well as philosophical stance that underpin the research questions and approach.

Chapter 2: Literature review

This chapter builds on and further explores the key concepts introduced in chapter 1. It provides an overview of the established empirical and theoretical literature on what and how GP education influences patient care. It explores the key theoretical perspectives on workplace learning, drawing the distinction between individual acquisition and collaborative participation. Learnings from the literature review are synthesised to offer a framework for exploring the research questions.

Chapter 3: Methods

This chapter reviews the most relevant research paradigm for this research and its impact on the choice of methods. The first section of this chapter will explore the prevalent research worldviews or paradigms covering different ways of knowing and the nature of reality. I will then focus on pragmatism as a school of thinking that has influenced my research journey. The second section of this chapter will describe the rationale for the methods chosen as well as explore the ethical issues involved.

Chapter 4: Results

Demographic and biographic data of the research participants are presented. The results from the data collection and analysis are provided. Four themes emerge highlighting the influence of GP education on patient care. These include: the role of GP education influencing patient care through achievement of educational standards; educational leadership; the influence of learners; and application of educational process in the training practice.

Chapter 5: Discussion

I summarise the results of the research; consider the relationship between the research findings and the established literature. There is an exploration of the implications of this work for my educational practice as well as methodological reflections. Future directions and contributions to the literature are described.

Chapter 6: References, acknowledgements and appendices

Chapter 6 provides a list of references and acknowledges the contributions of others to this work.

Appendices are added to provide further detail relevant to the research process.

Chapter 1: Introduction

1.0 Context of the study

In this introductory chapter, I provide an overview of the key issues and concepts relevant to this thesis including the quality of clinical care in the National Health Service (NHS); and General Practice in the United Kingdom. I establish a link between clinical education and quality of care; provide a personal and professional context to this work; and identify my philosophical stance before going on to clarify the key research questions that have guided the development of this work. The chapter ends with a brief introduction to the organisation of this thesis.

1.1 The quality of care in the NHS

Ever since the NHS was set up in 1948, much media, professional and organisational attention has been focused on the quality¹ of patient care. Debates about the definition of the quality of care and how it is measured have raged on for a decade (this is explored further in section 2.1.3). Over the 70 years since its inception, the NHS has changed to respond to influences such as rising population numbers, individuals living longer with co-morbid conditions, the impact of new technologies, and societal expectations of healthcare to maintain a focus on the quality of care. These influences have contributed to the ongoing focus and debate on enhancing clinical quality and cost-effectiveness often encapsulated in the concept of the “triple aim²” (Berwick, Nolan, & Whittington, 2008). Government policy and

¹ For the purpose of this work I use Lord Darzi's definition of quality (Darzi, 2007), which has been enshrined in law (DH., 2012) and forms the basis for the NHS Quality and Outcomes Framework. The NHS Next Stage Review has used three domains in defining quality: safety, experience and effectiveness (Darzi, 2008).

² The Triple Aim is a concept developed by the Institute for Healthcare Improvement for optimising healthcare performance. The three domains need to be developed at the same time to enhance an organisation's performance. The three domains include improving patient experience of care; improving the health of populations; and reducing the per capita cost of health care.

healthcare regulation (explored further in 2.1.1) have been shaped by these factors as well as high profile failures in the delivery of quality care in the United Kingdom: the failure of the healthcare profession to deal with the consequences of health inequalities (Acheson, 1998; Black, Morris, Smith, & Townsend, 1980; Marmot et al., 2010); the inability to manage the performance of teams and individuals such as the Bristol Heart Scandal (Kennedy, 2001) and the Harold Shipman affair (Janet Smith, 2005); and the management failure of secondary care services such as Mid-Staffordshire Hospital (Francis, 2013).

A significant contributor to delivering high-quality care and better patient outcomes is primary care. Starfield et al (Starfield, Shi, & Macinko, 2005) conclusively demonstrated that population and patient outcomes are improved through access to a healthcare system with a well-developed primary care system; and that improvements in outcomes are directly linked to numbers of primary care but not to secondary care clinicians. The key characteristics of primary care are defined as a system that offers care which is first-contact, comprehensive, coordinated, and continuous. General Practice (GP) in the United Kingdom (UK) fulfils the role of providing such primary care services as part of the NHS.

1.2 General Practice in the United Kingdom

The roots of General Practice in the UK are in the development of apothecaries (clinicians who were charged with mixing and dispensing medicinal compounds to patients on the instructions of physicians and surgeons) from medieval times. The Society of Apothecaries was formed in 1815 following the granting of a Royal Charter. The journey of professionalising the role and work of GPs started in the 1950s with the formation of the Royal College of General Practice (RCGP). It produced the first definition of a GP (RCGP, 1972) and has contributed to modern understandings of the role (World Organisation of Family Doctors, 2002). It has developed new concepts described in the literature in General Practice, such as biopsychosocial medicine, patient-centred care, and holistic care. Membership of the RCGP

(MRCGP) is achieved through a professional examination. The RCGP develops curricula for postgraduate training, sets standards for clinical practice and professional development, and conducts examinations for managing entry. Guidance on organisational and clinical aspects of General Practice as well as clinical professionalism have been developed – these form the basis for professional development and revalidation (RCGP, 2008).

General Practice in England is made up of nearly 8000 individual small businesses contracting their services to the NHS. These are GP-owned, ranging from single-handed to large partnerships. These businesses provide services to populations ranging from 1500 to over 50,000 patients. The workforce in General Practice consists of approximately 30,000 GPs, 15,000 practice nurses and 50,000 support and ancillary staff. Given the numbers and diversity of GP practices in England, it has been challenging to measure the quality of care and degree of unwarranted variation in the provision of services. The first steps to overcoming this challenge arrived in 2003 when the British Government, in partnership with the British Medical Association (BMA, 2003), introduced the Quality and Outcomes Framework (QOF), a pay-for-performance tool, for the whole of General Practice nationally. This was intended to improve performance and reduce variation in provision. The QOF uses several criteria (covering clinical, organisational, educational, and patient-related aspects of care), awarding points for achievement against these. The number of points translates to income for the practice, the maximum number of points accounting for a significant proportion of practice and GP income. The introduction of QOF, for the first time, allowed for the systematic collection of data about General Practice across England to inform discussion and debate about the quality of care provided.

In recent years the use of data generated from the QOF has facilitated the assessment of the quality of General Practice. The Kings Fund (Goodwin, Dixon, Poole, & Raleigh, 2011) assessed the quality of General Practice the United Kingdom using process, organisational, and clinical outcomes data sets derived from a broad range of sources. Their conclusion was that the quality of care provided by General

Practice is generally high but that there is a significant amount of variation. The Care Quality Commission (CQC) monitors the quality of care through regular visits to practices. Their most recent State of Care Report (CQC, 2017) reports that 93% of GP practices have been rated as providing good or outstanding care. International comparators of quality in primary care (Kossarova, Blunt, & Bardsley, 2015) provide a picture where the UK does well for public health interventions (e.g. immunisations and low antimicrobial prescribing) but less so for areas such as early diagnosis of cancer and admissions avoidance in chronic diseases.

Approximately a third of England's GP practices are licensed as training units. The education of GPs and other healthcare professionals takes place in both these GP training practices as well as hospitals. Curricula are defined by the Royal Medical Colleges and approved by the General Medical Council (GMC) and other professional regulators. Placements for clinical education are commissioned in training practices and hospital by Health Education England (HEE).

1.3 Quality of care and clinical education

Early research undertaken in the United States suggested that when organisations are involved in educating the healthcare workforce there is a positive association with enhanced quality of patient care. Ayanian and Weissman (2002) conducted a systematic review looking at the relationship between hospital teaching status and its impact on patient outcomes. Their work suggested that teaching hospitals offered better clinical outcomes for common conditions, better process-related outcomes, and improved mortality rates than non-teaching hospitals. Similarly, Drenkard (2010) looked at the role of "magnet organisations"³ and identified that such organisations have better clinical outcomes for patients, better recruitment and retention of staff, and better continuing professional development

³ Magnet status is an award from the American Nurses Credentialing Centre given to hospitals that fulfil a set of criteria focusing on nurse leadership and professional education.

opportunities. However, further research has offered contrary views. Au and colleagues (Au, Padwal, Majumdar, & McAlister, 2014) and Papanikolaou et al (Papanikolaou, Christidi, & Ioannidis, 2006) separately conducted systematic reviews of the literature comparing hospital-based teaching and non-teaching units and arrived at different conclusions to that of Ayanian and Drenkard. These studies were conducted in secondary care units in the United States, where the arrangements for service as well as educational delivery are very different from that in the UK.

Outcomes research between teaching organisations and patient care in the UK has been lacking until relatively recently. As part of the Institution Focused Study (Ahluwalia, 2015) I conducted a rapid evidence assessment (REA) that confirmed the absence of robust evidence exploring the relationship between clinical education in General Practice and patient-related outcomes. This is further explored in Chapter 2.

1.4 Training practices⁴ and quality of care

Work undertaken during and after the Institution Focused Study has shown that there are statistically significant associations between patient outcomes (clinical, prescribing and satisfaction) and training practice status (Ahluwalia, Sadak, & Ashworth, 2018; Ashworth, Schofield, Durbaba, & Ahluwalia, 2014; Weston et al., 2017). The association is now well documented in peer-reviewed literature and will be critically explored in chapter two. The available empirical evidence on *how* the involvement of clinicians in postgraduate GP education impacts on the clinical care is significantly less well developed. Waters and Wall (2008) suggested that engagement with education improved GP trainers' consultation skills – this was based on a focus group study of GP trainers and did not provide insights into how these skills

⁴ GP practices and GPs involved in educating the healthcare workforce are termed “training practices” and “GP trainers”. This historic terminology reflects the reductive and historic terminology of postgraduate healthcare training. Though used throughout the thesis, it is important to note that GP trainers do more than train, they develop individuals with a future focus and wide perspective.

developed as a result of engagement with education nor how patient care or practice development was influenced by these consultation skills. Similarly, Howe and Carter (2003) suggested that engagement with postgraduate education improved GP trainer's consultation skills and clinical knowledge – again without elaborating on processes nor offering empirical evidence for how they arrived at their conclusion. Lake (2013) used qualitative methods to explore the relationship between being an educator and practising clinician. His work suggests that clinical educators construct their professional identities through their work in education and use skills inter-changeably between educational and clinical practice. His work identified consultation skills, diagnostic thinking, relationship development and formation of professional identity as being key areas engaged in both spheres of activity. Lake's work is supported by Smith et al (C. C. Smith, Newman, & Huang, 2018) who undertook a sophisticated qualitative analysis of clinicians' educational and clinical practice in a United States residency⁵ programme. They found that themes linking clinical and teaching skills were similar for both patient-physician and learner-teacher relationships. They concluded that improving residents' teaching skills had the potential to improve the care of patients as well as the education of learners. However, there remains a gap in the understanding of how medical education influences reflective practice, the development of the practice as a clinical service provider, or the evolution of GPs as educators.

In summary, the current state of the published empirical literature demonstrates a statistical association between training practice status and improved patient care. However, statistical association alone is not sufficient to develop an understanding of the mechanisms that may provide an explanation for causation. There is a need to better understand *how* engagement with clinical training might contribute to improved aspects of patient care. This is the current gap in the established literature and our understanding of how clinical education influences patient care and outcomes. This

⁵ Residency programmes are postgraduate training programmes in which medical graduates practise and learn under the supervision of a senior clinician in hospital or community settings. It is a commonly used term across the world and equivalent to foundation and higher speciality training in the United Kingdom.

gap in the current literature forms the basis of this thesis, to develop an understanding of how clinical education influences patient care and outcomes.

1.5 Personal and professional context

I am a British trained clinically active General Practitioner and immensely proud of the role that General Practice plays in improving the lives of the people we serve. I have previously been a GP trainer and then taken various educational managerial roles in General Practice. I currently work as Postgraduate Medical Dean, working across North Central and East London, responsible for the professional development of nearly 4000 doctors as specialists. A key part of my current role is to monitor the quality of clinical education in hospital wards and training practices. In my experience, there is a close correlation between the quality of clinical education and patient care. Like many clinical colleagues, I have been deeply shocked and appalled by the failures of care that have rocked our healthcare system. Robert Francis QC (2013 page 1258) in his seminal report on the Mid-Staffordshire affair writes:

“Good practical training should only be given where there is good clinical care. Absence of care to that standard will mean that training is deficient. Therefore, there is an inextricable link between the two that no organisation responsible for the provision, supervision or regulation of education can properly ignore. Trainees are invaluable eyes and ears in a hospital setting. They come without preconceptions, are not likely to be immediately infected by any unhealthy local culture, and are therefore perhaps more likely than established staff to perceive unacceptable practices. Concerns raised by trainees should therefore be given weight and not discounted merely because they may lack experience or qualification.”

As an educational manager with responsibility for the provision, supervision and regulation of clinical education, Francis talks directly to me as to the power of clinical education as a mirror of clinical care, but also its potential to improve outcomes for patients. For me understanding how patient care can be improved through engagement with clinical education is important if I am to achieve the twin benefits of better patient care and well-developed doctors.

I believe the results of this research will contribute as, first and foremost, the evidence emerging from this work is likely to provide a more robust basis for discussions about the value and contribution of postgraduate medical education in patient care and safety. This is especially relevant given the role of Health Education England (my current employer) as an arms-length body (ALB) in developing strategy and provision for improving healthcare and patient outcomes. Second, the research will develop a theoretical basis for understanding the relationship between postgraduate clinical education and patient care. This theoretical approach will assist in guiding future research to build a unique knowledge base to support enhancing the quality of educational provision and patient care. Finally, it is possible that this research reveals unique mechanisms and processes for enhancing patient care that can be disseminated and used by non-training organisations to enhance patient care. These will be of interest to health care policymakers.

1.6 Philosophical stance

During the course of the past few years, I have been interested in better understanding the relationship between clinical education and patient outcomes. To do so has meant using a mixed methods approach involving both quantitative and qualitative methodologies. A mixed methods approach prioritises the problem over the methods (and therefore underlying philosophical assumptions) as being key to the design of the research process (Creswell, 2003). Pragmatism, as a

knowledge stance for mixed methods approaches, has therefore gained increasing prominence in the past 20 years (Cameron, 2011).

The Institution Focused Study (IFS) stage (Ahluwalia, 2015) of my doctoral journey explored the association between clinical education and patient outcomes using statistical methods. I was interested in unearthing whether there was a correlation, and if so, what was the magnitude of that correlation. The data used were measurable, readily available, and the questions asked were deductive. By contrast, exploring why an association between the two exists requires an exploration using inductive approaches (Silverman, 2000). The research questions for the thesis stage of my doctoral journey are therefore best explored using qualitative approaches. Greater detail of this approach is provided in the methods section of the thesis.

1.7 Research aims and objectives

The aim of this research is therefore to answer the following:

1. How and why do GPs become involved in clinical education? What are their motivators and enablers?
2. How do GPs develop as a result of engagement with clinical education; both as educational and clinical practitioners?
3. How do GPs perceive clinical education as influencing patient care and vice-versa? How might this influence extend across the care organisation?

1.8 Organisation of the thesis

The thesis is organised into six chapters. Chapter One outlines the context of the study, its aims and objectives and the organisation of the thesis. Chapter Two provides a literature review and introduces the theoretical and conceptual framework. Chapter Three outlines the methodological approach of the study, the data collection and analysis methods. Chapter Four describes the findings of the study. Chapter Five discusses the findings in relation to established literature, implications of the study findings, methodological reflections and future directions. Chapter Six provides references, acknowledgements, and appendices for the reader.

1.9 Summary

This chapter sets out the context and background to the study, describes the aims and objectives of the study, and introduces my philosophical stance. The following chapter will provide a review of the relevant literature available.

Chapter 2: Review of the relevant literature

2.0 Introduction

In this chapter, I shall review the established empirical and theoretical literature to contextualise the research questions and how they arise. The chapter is in two sections: a synthesis of the literature on what impact GP education has on patient care; and how GP education influences patient care. In the first section I shall set the scene and explore the development of General Practice as a profession; the development of GP training in the UK; and the relationship between quality of care and GP training. In the second section, I shall draw on several theoretical models to synthesise into a framework for the thesis and report research findings from the medical education literature relevant to General Practice.

2.1 The impact of GP education on patient care

To fully appreciate the extent to which GPs (and their teams) involved in educating doctors influences patient care I shall provide an overview of the development and professionalisation of General Practice in the UK; GP training and its management; key concepts in understanding quality of care in General Practice; and our current understanding of the relationship between clinical training and the quality of care.

2.1.1 The professionalisation of General Practice in the UK

In 1950, Collings, a medical graduate from Australia, reviewed the state of General Practice in the UK. He observed clinical practice and premises in 55 GP practices and produced a report published in the Lancet Journal (Collings, 1950). His report highlighted the poor state of the infrastructure and quality of patient care in the post-war years. He also described the absence of a theoretical base for the work of GPs, a lack of academic training and significant variation in the quality of clinical provision.

“There are no real standards for General Practice. What a doctor does and how he does it depends entirely on his own conscience.”

This stark indictment of the quality of General Practice in the UK caused an outcry in the public and professional press. It also catalysed a move towards the professionalisation of General Practice in a similar manner to other medical groups such as that of physicians and surgeons. Ideas of what it means to be a profession have been captured in Freidson's writing. Elliott Freidson (1970) described a profession as *“an occupation which has assumed a dominant position in a division of labour so that it gains control over the determination of the substance of its own work”*. Millerson (Millerson, 1964; Whitty, 2000) highlighted the traits or characteristics of professions as having skills based upon *“theoretical knowledge; whose education was certified by examination; codes of professional conduct orientated towards the “public good”; and a powerful professional organisation designed to support members”*.

The development of GP education has been intimately intertwined with the development of General Practice as a profession. General Practice is a young entrant to the club of professions by such “trait” based definitions. Prior to the 1950s teaching hospital colleagues often considered GPs as failed members of the profession for not being able to succeed in secondary care (Curwen, 1964). Partly as a counter-balance to such negative perceptions, in the 1950s GPs started to organise themselves and develop structures akin to that of the hospital-based Medical Royal Colleges – this included the development of educational opportunities and membership by professional examination. The RCGP was founded in 1952 and the first definition of the role of a general practitioner was published in 1972 (RCGP, 1972). Membership is via a prescribed postgraduate education programme and professional examination. The RCGP has responsibility for curricular development, setting professional and clinical standards, clinical guidance, and advice on continuing professional development and conducting examinations.

The monitoring of service provision in General Practice, akin to secondary care providers, is via clinical commissioning groups (CCGs) and NHS England (NHS England); the General Medical Council (GMC) regulates individual practitioner performance, and the Care Quality Commission (CQC) manages the environments in which care is delivered. This complex arrangement of professional support and regulation reflects the challenge of managing high-risk activities delivered through a large number of small business units. The involvement of several different organisations also reflects the accretion of regulation as a response to concerns about the quality and safety of clinical care over several decades (Sanfey & Ahluwalia, 2016, 2018).

Government and societal concern related to the quality of care and financial stability in the NHS (Rowe & Calnan, 2006) have resulted in a series of policy interventions, including the increasing burden of

regulation, often termed performativity (Ball, 2012). Pay-for-performance (PFP), the development of guidelines for use in daily clinical practice (by the National Institute for Health and Clinical Excellence), and the reform of healthcare professionals regulation are some of the strategies adopted to manage these concerns in General Practice over the past 20 or so years. PFP (introduced in 2003 as part of the quality and outcomes framework) now forms 25% of practice income and links these resources to government defined outcomes. Alongside reform of pay structures in the NHS, the GMC and regulatory environment now includes greater lay involvement, changes to the legal standards by which the actions of clinicians are judged from criminal to civil (making clinicians more vulnerable to facing sanction for poor performance), and repeated licensing (every five years) of all healthcare professionals through the process of revalidation. In my view, the sum of these changes has been to curtail the clinical autonomy of professionals in General Practice whilst seeking to ensure that the nature and quality of work is more aligned to the needs of the populations we serve.

In this section, I have described the development and management of General Practice as a medical specialty and its professionalisation. Importantly, I draw attention to the significant emphasis placed on the education of future GPs and their status as a professional group. The next section describes the development of General Practice training and its modern-day delivery and regulation.

2.1.2 The structure of GP training in the United Kingdom

The Medical Act (Parliament, 1858) required all practitioners to undertake medical examinations in medicine, surgery and midwifery. Lloyd George passed the National Insurance Act (Parliament, 1911). This act legislated for the development of a capitated list-based system of primary healthcare

provision⁶ for all “*working men and their families*”. In 1948, the BMA produced “The Training of a Doctor” which called for the development of standardised training for all doctors wanting to practise as General Practitioners. With the formation of the RCGP in 1952 came the development of the Postgraduate Education and Regional Organisational Committee. This coincided with the development of new models of training GPs emerging in Wessex and Inverness. These schemes included a half-day release programme and supervised hospital posts recognisable as the basis of today’s GP training.

GP training started in the early 1980s to provide qualified doctors with the skills required to work in the community under the apprenticeship of an established GP trainer. As the work of General Practice evolved, the need for more sophisticated educational strategies emerged. Due to legal and contractual reasons, the terms GP trainer and GP training practice have remained in use. The term GP trainer is a reductionist term and this thesis is related to the education of postgraduate doctors. However, GP trainers use established educational techniques and concepts in their work developing the future workforce. I have therefore retained the use of the terms GP trainer and training practice through the rest of the thesis.

In 1968 the Royal Commission on Medical Education (often referred to as the Todd Commission) (Todd, 1968) led to the recognition of GP training as a medical specialty akin to others. In 1971, the UK-wide local medical committees (representative groupings of local GPs) of the BMA recommended that vocational training be compulsory before entering General Practice as an independent practitioner. Therefore, the Joint Committee of Postgraduate General Practice Training (JCPTGP),

⁶ General Practice in the United Kingdom is funded through a capitated budget and is based on a registered list of patients. GP surgeries are expected to provide all primary care services as defined in nationally negotiated contracts and manage the business within this capitated budget.

comprising membership from the RCGP and BMA, was set up in 1976 to pursue the development of compulsory postgraduate training and the quality standards for training. Subsequently, the UK parliament approved legislation (DH, 1983) that brought into effect compulsory training for all doctors wanting to practise as GPs.

The organisation of pre-certification postgraduate GP training⁷ has been defined in the 1983 Medical Act which stated the expectation that the minimum requirements for training as a GP require that learners spend *“a period or periods amounting to at least 12 months employment as a GP Registrar under the supervision of a general practitioner who has been approved by the General Council under section, and a period or periods amounting to at least 12 months employment in a post (or posts), in one or more specialties that are approved by the General Council as being relevant to General Practice”*. (DH, 1983)

The development of appropriate assessment methods for doctors in training to become GPs was first implemented in 1996 when they had to undertake summative assessment (JCPTGP, 1993). Summative assessment was a nationally managed system that included a multiple-choice knowledge test, consultation skills assessment, demonstration of the ability to undertake an audit as part of a written submission, and a written report of recommendation from a qualified GP educator (known as a GP trainer). Separate to summative assessment, the RCGP continued to develop a system of examination as an entry to membership of the college, though this qualification was not required to practise as a GP at the time. This changed in 2007 when it became compulsory for all doctors training as GPs to complete the membership examination of the RCGP. This includes a multiple choice applied knowledge test; clinical skills objective structured skills examination; and work-placed based

⁷ GP training takes place after five to six years at undergraduate level in medical school and two years post-qualification in foundation training.

assessments. The content of the membership examination is based upon the knowledge, skills and competencies deemed relevant to practise as a GP in the United Kingdom (Patterson et al., 2000; Patterson et al., 2013).

The approval of GP practices as training units was initiated in the early 1980s by the GP training committee in Oxford, which developed, piloted and evaluated standards for approving GPs and their practices as trainers and training organisations (Schofield & Hasler, 1984a, 1984b, 1984c). These have been widely adopted across the UK (albeit it with minor local variation) as a means of quality management of GP trainers and their practices. Approval and re-approval of GP trainers and their practices confers the right to make recommendations about doctors as fit to practise as GPs; attract a fee for such training known as a GP trainer grant; an educational continuing professional development grant; and the salary for employed GP trainees being reimbursed by the exchequer. The criteria for accreditation of GP trainers and their practices as learning environments was developed based on a consensus of views and expertise related to best educational and clinical practice in postgraduate medical education (Boendermaker et al., 2003; Cotton et al., 2009; Munro, Hornung, & McAleer, 1997; Pringle, 1984). The criteria cover three areas namely: the doctor as a clinician, as an educator, and the practice as a learning environment (RCGP, 2008).

In 2007, the JCPTGP was amalgamated into a new regulatory body called the Postgraduate Medical Education and Training Board, which itself was subsumed into the General Medical Council (GMC) in 2010. The GMC has overall responsibility for the licensing of doctors onto specialist registers based on recommendations from Local Education and Training Boards (LETBs) and the RCGP, assess the quality of provision of training through LETBs, and approve curricula (developed through the Royal Colleges).

Roles such as training programme directors, associate directors, sub-deans, and deans of General Practice training have been developed to support GP trainees and trainers. These roles, in increasing order, take on greater managerial and educational responsibility for the provision and management of GP training (Mehay, 2012). In turn, administrative teams based in geographic deaneries across the UK support these roles. Deaneries (now subsumed into LETBs), and their local schools of General Practice are responsible for the accreditation of GPs as trainers and practices as approved learning environments for GMC recognition; rotation and planning of GP trainees through their educational programmes; the regular assessment of progression through ARCP (annual review of competency progression) panels; recruitment of doctors on to GP training programmes; educational diagnosis and management of GP trainees struggling to complete their training at a satisfactory rate; developing resources for faculty development; overseeing coverage of the curriculum, and innovation in GP education (Mehay, 2012).

GP education has been at the cutting edge of innovations and improving learner experience in postgraduate clinical education. Repeated satisfaction surveys of postgraduate learners in the UK have demonstrated that GP trainees have amongst the highest satisfaction rates amongst the various professional groups (GMC, 2012). Postgraduate GP training was the first to develop a GMC approved competency based curriculum (RCGP, 2009). National and standardised recruitment and assessment for postgraduate medical training have been developed and led by those working in GP training as well as workplace based achievement of curricular outcomes (NRO, 2010).

In this section, I have spelled out the complex world of educating the future GP to highlight the extensive regulatory, educational and financial infrastructure that is now in place for this purpose. Whilst there is an extensive literature on the development of education and training for General

Practice, and its impact on the experiences and development of learners (Smith, 2004; Smith & Wiener-Ogilvie, 2009), this is rather divorced from patient outcomes research. In the next section, I shall introduce the concept of quality of care and critically explore the available literature on the relationship between training GP practices and clinical or patient outcomes.

2.1.3 Quality of Care in General Practice

Defining quality of care is a complex and contested concept, with differing meanings and interpretations. Broadly speaking, monitoring the quality of healthcare has a number of purposes including quality improvement of practitioners and practices; seeking to reduce variation in care; monitoring for contractual reasons; and for planning and re-shaping services (De Silva & Bamber, 2014). The mainstream approach to assessing quality is through using structure, process and outcome indicators⁸.

The quality of healthcare in the NHS is commonly measured across three domains: patient experience, clinical effectiveness, and clinical safety as defined in the NHS Outcomes Framework (DH, 2010). Several tools have been made available to support practice development in the UK (Elwyn et al., 2004; NHSIII, 2012; RCGP, 2012, 2013). These tools were developed for different purposes and using different techniques. They use different change methods and methods of assessment (Rhydderch et al., 2005). None of these tools has been utilised to understand the differences between training and non-training organisations, and their potential impact on patient outcomes.

⁸ Structure indicators denote “attributes of the settings in which care occurs”; process indicators denote “what is actually done giving and receiving care”; and outcome indicators denote “the effects of care on the health status of patients and populations” (Mainz, 2003).

2.1.4 GP training practices and quality of care

As part of the IFS (Ahluwalia, 2015), I conducted a Systematic Rapid Evidence Assessment (SREA) covering the period 1983 to 2015 which identified six full-text articles. In this section, I shall summarise the findings of the SREA based upon the six included studies as well as my assessment of their methodological quality. I shall update these findings with further literature published since 2015. Table 1 outlines the six studies identified and threats to internal and external validity.

Baker (1985) investigated the differences between training status and non-training status GP practices with regard to the location, size of premises, numbers of staff; organisation and range of services; range of clinical activities undertaken; educational and research activities; and the use of a deputising service. His questionnaire study from the Severn area in the UK found significant differences between training and non-training practices in the areas studied. Baker and Thompson (1995) and Houghton et al (2006) looked at the development of training and non-training practices and determined that training practices were more innovative and that over time the gap between training and non-training practices had widened not narrowed. Both of these studies suggested that training practices were more developed and had sophisticated systems for care delivery and practice development. However, the studies did not explore the relationship between training practice status and clinical outcomes.

The first direct comparisons of clinical care between training and non-training practices emerged with the introduction of QOF. Houghton et al (2006) were able to show that training practices in Birmingham and the Black Country scored higher QOF scores than non-training practices for most clinical and organisational markers of care. Ashworth and Armstrong (2006) demonstrated that this

association was prevalent in training versus non-training practices across England and Wales, and persisted even after controlling for potential confounding variables such as deprivation and practice list size. Ashworth et al (2007) were able to demonstrate that training practices achieved higher QOF scores than non-training practices in more deprived areas.

Houghton et al (2006), Ashworth and Armstrong (2006) and Ashworth et al (2007) found a statistically positive association between training practice status and the total QOF score⁹ achieved by practices. GP training practices performed better across all three studies, though the level of achievement varied. Houghton et al (2006) identified a difference of 63 QOF points (using the QOF 2004-05 dataset) in favour of training practices when corrected for practice size; Ashworth and Armstrong (2006) identified the difference in achievement to be 29.7 QOF points (after correcting for a number of variables using the 2004-05 QOF dataset); and Ashworth et al (2007) found the difference to be 20.7 points (after correcting for a number of variables using the 2005-06 QOF dataset).

The data available on patient satisfaction and training GP practice status are conflicting. Baker (1996) and Baker and Streatfield (1995) suggest that training practice status was statistically associated with worse patient satisfaction scores. Baker (1996) found that the regression coefficient (B value) for general satisfaction was -20.66, professional care -19.32, and depth of relationship -23.32, suggesting that training practice status had a significant negative influence on patient satisfaction outcomes. Baker and Streatfield (1995) found that training practice status explained 4-8% of the variance in patient satisfaction scores compared to 22-43% for total list size and 8-9% for a personal list system. By contrast, the analysis by Ashworth et al (2014) suggests that training practice status was associated with

⁹ Total QOF score is the aggregated achievement of clinical, management, patient experience and additional services domains.

higher patient satisfaction. Patients registered with GP training practices rated overall satisfaction 1.52-1.98% higher than non-training practices.

The six articles included in this SREA were critically analysed for methodological quality using the Strengthening the Reporting of Observational studies in Epidemiology (STROBE) criteria specifically designed for the assessment of cross-sectional studies and assessed by a second reviewer. Differences between reviewers were discussed. There was agreement that all the included studies suffered from significant issues of bias in their methods, which appear to have been inadequately addressed, and sources of funding for their studies had not been adequately described. The significant source of disagreement between the two reviewers related to differing views about the quality of the descriptions of data handling in the methods sections of Houghton et al (2006) and the description of statistical methods in Baker and Streatfield (1995) and Houghton et al (2006). A common theme throughout all six studies was the absence of a conceptual framework, used to guide the development of the research or support future work in this area. The presence of a conceptual framework is not included within the STROBE criteria though it has been recognised as increasingly important in medical education research (Cook & West, 2013).

Table 1: Threats to validity identified in Ahluwalia (2015)

Study	Threats to validity
Baker 1996	Conducted in one Strategic Health Area ¹ Only volunteers recruited ² Factors such as ethnicity not included ²
Baker and Streatfield (1995)	Conducted in one Strategic Health Area ¹

	<p>Only volunteers recruited²</p> <p>Factors such as ethnicity not included²</p>
Houghton et al (2006)	<p>QOF subject to gaming and exception reporting²</p> <p>Conducted in one Strategic Health Area¹</p>
Ashworth and Armstrong (2006)	<p>QOF subject to gaming and exception reporting²</p> <p>Using total QOF as an outcome²</p> <p>Using QOF achievement from 2004-05¹</p>
Ashworth et al (2007)	<p>QOF subject to gaming and exception reporting</p> <p>Using total QOF as an outcome²</p> <p>Using QOF achievement from 2004-05¹</p>
Ashworth et al (2014)	<p>GPPS subject to recall bias²</p> <p>Low questionnaire return rates²</p>

¹ Threats to external validity; ² Threats to internal validity

Acknowledging the significant methodological quality issues identified with the studies identified (as outlined in Table 1) I previously worked with colleagues to undertake a series of studies (Ahluwalia et al., 2018; Ashworth et al., 2014; Weston et al., 2017) designed to explore the association between GP training practices and clinical care. To overcome methodological issues, we used national data sets; included measures of deprivation, ethnicity, workforce, and population profile; used clinical parameters that included utilisation of secondary care services, prescribing, cancer care, and patient satisfaction.

Ashworth et al (2014), having analysed General Practice Patient Survey (GPPS) data, found that being a GP training practice was a significant predictor of positive responses to all six GPPS questions in the 'doctor care domain' (Q21a–e, Q22) and to both the questions relating to 'overall satisfaction' (Q28, Q29). Patients registered with GP training practices rated the 'doctor care domain' questions from 0.68% to 1.11% higher than patients registered with non-training practices; they rated the 'overall satisfaction' questions 1.52% to 1.98% higher.

Weston et al (2017) demonstrated that patients registered at training practices reported higher satisfaction in three domains: access, communication and overall patient experience. However, lower levels of satisfaction with continuity of care were reported in training practices. Training practices achieved a mean of 11 QOF points more than non-training practices. Secondary care utilisation by training practices showed no significant difference in rates of emergency admissions, ambulatory care sensitive admissions or out-patient attendances. Although Accident and Emergency (A&E) attendance rates were significantly lower by patients registered in training practices, the difference was small. On the other hand, training practices were characterised by significantly higher cancer detection rates and cancer referral rates, putting training practices in the lead in terms of early cancer diagnosis. Findings included somewhat lower 'cancer conversion' rates (a lower proportion of urgent cancer referrals eventually diagnosed as cancer) but this is an expected consequence of a higher referral rate in these practices. Ahluwalia et al (2018) have also demonstrated that GP training practices prescribe fewer antibiotics overall and fewer broad-spectrum antibiotics. Where training practice status had an effect on patient care, the size of this effect was modest relative to factors such as deprivation, disease burden, demographics, and ethnicity.

2.1.5 Conclusions

In section 2.1 of this chapter I have outlined the development of General Practice as a profession and the inter-twining of clinical education as central to its status; with a focus on the development of its educational infrastructure. I offer key thoughts on the meaning and assessment of the quality of care in General Practice. The review of the literature demonstrates that there are associations between the quality of clinical care and GP training practices. In section 2.2 I will explore relevant educational theory and empirical research that offer insights into how GP education influences patient care.

2.2 Understanding how clinical education influences patient care

In this section of the chapter, I will draw on relevant theoretical and empirical literature to explore the role of clinical education on patient care in General Practice. I start by examining theories of learning that focus on individual learning and then move on to consider the opportunities afforded by an exploration of perspectives from organisational learning, socio-cultural and socio-material contexts (figure 1 depicts the significant theories covered in this section). I also report on the learnings from the empirical literature relevant to medical education. I draw this section to a close with a short summary of the key messages emerging from this review of relevance to the research questions.



Figure 1: Educational theories relevant to this study

Theories of learning relevant to General Practices as places of work arise from different schools of thought — the behaviourist, cognitive, humanist and social. Behaviourist principles are often applied

in skills-based teaching while cognitive and humanistic models have been used in postgraduate medical education for many years. More recently socio-cultural theories have been employed to inform our understanding of postgraduate medical education and having relevance in General Practice. The following sub-sections provide descriptions of these different approaches, their application to medical education and their relationship to workplace learning. Research findings from medical education literature are also reported.

2.2.1 Theories that promote individual learning

Early theories of learning arose from the work of clinical psychologists such as John Watson (1913) who suggested the stimulus-response model based on measurable and observable behaviour rather than internal thought processes, the assumption being that environment shapes behaviour, and on the principles that congruity and reinforcement are central to explanations of the learning process. Thorndike (1905) and Skinner (1938) developed the concept of operant conditioning whereby reinforcing encouraged positive behaviours and non-reinforcement extinguished behaviours. Congruity, in this context, refers to how close in time two events must be for a bond to be formed and reinforcement refers to the factors that increase the likelihood that any event will be repeated. Their work has influenced my work in educating future GPs whereby I have seen that learning is better when the learner is active rather than passive, that frequent practice is necessary for learning to take place, that positive reinforcement is more impactful than negative events such as criticism, and punitive measures and that learning is helped when objectives are clear. In my view, the influence of the early behaviourists is best seen in the use of teaching strategies targeted to procedural skills development such as simulation.

The overt focus on observable and measurable experimentation by the behaviourist movement in education resulted in a critique about its failure to consider the role of cognitive and other processes in learning. From such disagreement, the work of the cognitivists such as Piaget (Piaget, 1970) arose. Piaget, whilst recognising the contribution of the environment, explored changes in cognitive structure. Piaget identified four stages of mental growth (sensorimotor, preoperational, concrete operational and formal operational). Bruner (2009) described the link between mental processes and teaching and how learning can be enhanced through discovery. Gagné (1965) described different types of learning and different instructional events for the different types of learning.

From this cognitivist tradition are I believe a number of principles that have influenced clinical education in General Practice including: that instruction should be well-organised, structured to mirror the mental processes of learning; take into account a learner's prior knowledge needs; show flexibility in teaching styles - recognising that individuals learn differently; that feedback plays a significant role in helping learners shape the development of their thinking; and gaps, incongruities, or disturbances are an important stimulus to learning. Schön (1983) described the importance of reflection in learning, and the value of reflection on action as an important tool in learning from experience. Kolb's cycle (1984) described the process by which experience is assimilated to produce new interpretations and utilised to inform practice. New understandings have arisen from this work, which has changed the face of postgraduate education, from didactic lecture driven continuing education to continuing professional development. In postgraduate General Practice, this work has influenced the introduction of portfolio learning (Donaldson & Britain, 2002), and the use of personal learning plans (Swanwick & Chana, 2005).

The work of Maslow (1954) and Rogers (1994) affirmed the importance of the affective and subjective aspects of individuals, in learning. Maslow's hierarchy of needs suggests that there is a hierarchy of motivation, ranging from physiological at the lowest, to self-actualisation at the highest. Only when the lower order needs are fulfilled can the individual reach the full potential of their learning. Rogers, in his work on client centred therapy, drew parallels with ideas on learning. Rogers' work has influenced my own adoption of principles including: significant learning takes place when the subject is relevant to the individual; experience provides the basis for adults' learning; involving learners in planning and evaluation of their instruction is essential; the sense of personal threat has a profound impact on the capacity to learn; and self-initiated learning is the most lasting and pervasive.

Theories drawn from the behaviourist, cognitive, and humanist traditions all focus on supporting the acquisition of knowledge by individuals. Bleakley (2006) citing Davenport (1993) offers a critique of these "individualistic" learning theories identifying their lack of a conceptual and empirical basis. He describes how experiential models of learning (e.g. Kolb) have been criticised for being focused on the individual learner and decontextualised from their learning environment. Similarly, reflective practice is often used in medical education to consider an individual's perspective rather than the systems within which learners work and learn. He describes how the privileging of individual approaches and theories of learning in medical education is the more remarkable given the emphasis on enhanced care and outcomes for patients in areas such as interprofessional team working (citing West, 2002; Molyneux, 2001), systems thinking in patient safety (citing Kohn, 2000), and organisational learning (citing Fraser & Greenhalgh, 2001). To better understand learning through participation in the workplace, I turn to organisational and socio-cultural theories (Sfard, 1998).

2.2.2 Organisational learning

The literature from organisational learning has sought to understand and explain the difference between individuals learning within an organisation versus learning by organisations. Organisations lack the neural networks to learn independently and are therefore reliant on learning taking place through individuals. However, there appears to be agreement that organisational and individual learning undergo a similar process (collection, analysis, abstraction and retention of information). What appears to be different is that organisational learning requires *“roles, functions, and procedures that enable organizational members to systematically collect, analyse, store, disseminate, and use information relevant to their own and other members’ performance”* (Friedman, Lipshitz and Popper, 2005).

Argyris and Schön (1974, 1978, 1996) developed a theoretical model for improving organisational performance based on 20 years of empirical research. They have drawn heavily from the work of others including John Dewey’s (Dewey, 1938) work on experience and learning and Kurt Lewin’s (1951) theories of action research. Their work centres on three inter-related concepts: mental maps; single-loop and double-loop learning; and models 1 and 2 virtues. They also offered a description of the way individual and organisational learning relate to each other. They suggested that individuals develop incomplete *“theories in use”* of the whole (the organisation) and seek to make their *“theory-in-use”* complete so as to understand their place in the organisation. Organisational learning is, therefore, a *“cognitive process”* driven by the desire of individual members to understand themselves in the context of their working environment. Such constant activity requires individuals to challenge and develop their *“theory-in-use”* against their *“espoused theory”* (Argyris and Schön, 1974) a reflexive activity. Argyris and Schön (1974) suggest that individuals need external references against which to compare their individual internal *“theory-in-use”*. These may take the form of organisational data or

maps and are constantly evolving based upon input from individuals within (and outside) the organisation in an ongoing iterative process.

Over time, researchers in the field of organisational learning have identified issues with the work of Argyris and Schön (1974, 1978, and 1996) and offered adaptations to this work. Argyris and Schön's model of organisational learning is seen as reactive and does not accommodate proactive opportunities for enhancing organisational effectiveness. Argyris and Schön's work has focused on offering a theoretical perspective without providing a description of the processes and facilitators for improving double-loop learning within organisations. This led Senge (1990) to propose that systemic thinking¹⁰ connects with four other disciplines (personal mastery, mental models, shared vision, and team learning). Senge also suggests that the "glue" running through the five disciplines is dialogue – the interaction between individuals (and teams) and the opportunity to re-visit and question beliefs and assumptions.

Argyris and Schön (1978) have suggested a fusing of organisational and individual learning through tools such as "theories-of-action" and "mental maps". Whilst useful in bridging the difference between learning in organisations and learning by organisations there remains uncertainty within the literature on whether organisational learning, at one extreme, is the collective sum of individual learning within an organisation, or in the other is related to the processes, functions and structures of an organisation (Nicolini and Mezner, 1995). The processes of organisational learning are not visible, are difficult to study empirically and do not make explicit the behaviours and processes relevant to making organisational learning effective. This reduces the utility of this theoretical approach as a resource for

¹⁰ Systemic thinking refers to the concept of seeing the "whole" as well as "parts" of the organisation, and their relationship with each other.

understanding and studying organisational learning. Much of the work in this area has been theoretically driven with little empirical evidence (Easterby-Smith, Araujo, and Burgoyne, 1999).

Stacey (2003) in his review of theories of learning cites Easterby-Smith et al (1999) who identify two broad themes in the organisational learning literature – technical and social. The technical theme focuses on processing, interpreting and responding to quantitative and qualitative information within organisations. Argyris and Schön (1978) are considered significant thinkers in this tradition. By contrast, the social theme is focused on how people make sense of their work practices (Weick, 1995). In the following section, I explore this social context in greater detail.

2.2.3 Workplace learning and the socio-cultural and socio-material context

As my own work as an educator and clinician has evolved, I have come to see both as a social practice; learning and working influenced profoundly by the learning environment, interactions with patients and staff, and the narratives and tools that are specific to the context of General Practice. Socio-cultural approaches to understanding workplace learning therefore offer an alternative range of thinking to inform an understanding of participation in the process of learning. Socio-cultural theories of learning view the learner as but another part of the social system accessing knowledge distributed across persons and artefacts. Learning is thought to be non-linear and situated in the local context (Bleakley, 2006); the distinction between learning and working being seen to be artificial. In this section I shall explore the significant socio-cultural theoretical perspectives offered by the work of Engeström (2014), Lave and Wenger (1991, 1998), and Stacey (2000).

Activity theory (Engeström, 1987) introduced the concept of “expansive learning” whereby learner participation in a social context “acts as a disturbance to an already unstable system that offers productive possibilities that change over time” (Bleakley, 2006). The introduction of a learner therefore has the potential to generate new knowledge beyond being exposed to a corpus of established knowledge. It invites an exploration of learning through both time and space. Its main critique is that it does not adequately explain how practitioners gain legitimate entry to an activity system. Lave and Wenger (1991, 1998) propose a mechanism for this through their descriptions of legitimate peripheral participation in communities of practice.

Lave and Wenger (1991, 1998) offer insights on the social construction of professional identity and agency through their descriptions of communities of practice. A community of practice is one that shares a craft or profession. Communities of practice may be real or virtual and share a common set of knowledge, create a space for learning this knowledge, and maintain and develop this area of common knowledge. Communities of practice can either be very tight-knit or looser groupings. Entry into a community of practice involves abiding by a set of parameters and rules as well as agreement to collaborate and engage with members. Communities of practice develop from within and through interaction with the outside world. They are not uniform, having sub-groups and are continually evolving. Language is a central part of practice and learning.

Lave and Wenger describe learning within such communities through legitimate peripheral participation. Newcomers gradually become more central to its development and ongoing functioning. Situated learning values the contribution of newcomers to the development of practice, as with time newcomers themselves can shape the values and practices of their community. Lave and Wenger’s work has been criticised for the lack of attention to the way “old timers” learn and evolve in the workplace, and the role of formal learning opportunities for workers (Morris et al, 2010), and

for its lack of attention to how the characteristics of the workplace affect learning (Billett 2002). Despite these concerns, my view is that their theoretical approach has potential explanatory utility in exploring the role of clinical education on patient care.

As a discipline, General Practice has a specific set of knowledge, skills and attitudes. Entry into General Practice is carefully regulated, and ongoing membership requires adhering to several regulations and processes including engagement with continuing professional development. Training practices may be described as such communities with GP trainees as legitimate peripheral participants. Their participation in the “life” of a practice has therefore the potential to influence their GP educators, the practice and the provision of care.

Ralph Stacey (2000) specifically developed social complexity theory based on the concept of complex responsive processes of relating (CRPR) between sentient individuals. The complexity of a system arises from the rich interplay between its component parts rather than its structures. Complex systems are also characterised by fuzzy rather than rigid boundaries. This means that complex systems interact with the inside and outside world, being influenced and influencing their surroundings through continuous and ongoing interaction. These interactions taking place within a complex system have non-linear impacts: a small external influence can have a large impact. Similarly, a large external influence may have no impact whatsoever.

Interactions between doctors and patients, and between GP trainers and their trainees, can be regarded as being examples of CRPRs and have the characteristics of complex systems. Interactions with patients follow a non-linear path - seemingly minor interventions on the part of one can have little or a profound effect on the other. On the other hand, a consultation disrupted by external forces (e.g. a patient’s life events) can have a profound destabilising effect on a consultation leading to the

emergence of new ways of understanding the world on the part of both the doctor and patient. The notion of control in doctor-patient interactions is thus illusory. Similarly, video recording a consultation between a patient and GP (a common strategy for teaching consultation skills in General Practice) has the effect of altering the dynamic of the interaction between doctor and patient. Both are acutely aware of the nature of the observation and cannot remain immune from its effect. More profoundly, any observer (for example a GP trainer working with a GP trainee on developing their consultation skills), by watching the video has now (however temporarily) become a part of the complex system, in turn influencing future doctor-patient interactions.

External observers of complex systems cannot ignore their own effect. The act of observation has the impact of changing the complex system, and in turn, observers are themselves altered through this process. All complex systems have a history and are highly sensitive to the initial conditions in which they were formed, but rules and patterns of behaviour can emerge within such a complex system. Such self organising behaviour is characteristic, a version of which is known as attractor patterns, which in themselves can be used to influence behaviours. Attractor behaviours are also seen in doctor-patient interactions - the frequent attender patient can cause frustration in the doctor. But by acknowledging and reviewing this kind of behaviour, doctors can bring about change to the attendance and its consequences: an alteration secondary to the attractor behaviour.

'Emergence'¹¹ is a key property of complex systems which are constantly changing through internal and external influences and the nature of interactions between components of a complex system determine the emergent properties. Emergence is difficult to predict and forecast. Complex systems are driven towards achieving equilibrium or a level of self-organisation. The further a complex system

¹¹ Emergence is a concept whereby complex systems develop new properties which its parts do not have. This new property has however emerged from interaction between component parts of the complex system.

is from its equilibrium the more likely it is to change and evolve so that new patterns of interaction and behaviour emerge.

The socio-cultural theories outlined in this section offer significant insights into how learning may take place in the context of social practice. Engeström's ideas on expansive learning, Lave and Wenger's concept of legitimate peripheral participation, and Stacey's complex responsive processes of relating offer a complementarity that makes them useful to consider together. However, they lack attention to how material characteristics of the workplace affect learning. Actor Network Theory (Latour, 2005) offers a mechanism for analysing the role and properties of social and material actors and their interaction. Using these simple distinctions makes it possible to develop a detailed analysis of relevant units of learning for example a training practice. They offer a means for understanding the differences between training and non-training practices that may have emerged through engagement with clinical education. The literature on the role of socio-material aspects of learning in General Practice is limited. Alex Harding (2017) studied workplace based learning of third year medical students using Actor Network Theory (Latour 2005). His work identified physical and social facilitators and barriers to effective learning. A significant challenge for his work was developing the theoretical and conceptual ideas as tools for the field study.

2.2.4 Established research on workplace learning in General Practice

In this section I provide an overview of the established empirical literature relevant to clinical education in General Practice. This section covers the dual role of the GP as both clinician and educator; identity formation amongst GPs as educators; reasons for GPs becoming educators; competencies regarded as relevant to GP educators; and the learning environment in General

Practice. A significant lacuna in the empirical research is how GP education influences patient care and outcomes.

2.2.4.1 The dual role of the GP as clinician and educator

Jonathan Lake (2013) used an ethnographic approach to interview GP trainers in order to gain an understanding of the dual role of educator and clinician. Lake (2013) found that GP trainers transferred skills between both domains. The key skills identified that GP trainers used interchangeably included communication skills, diagnostic thinking ability, building close relationships with others, and managing inter-personal boundaries. Lake identified that the trainers reconstructed their identities through teaching. The reconstruction of their identity and sense of agency was seen as a means by which they manage the tensions arising from engagement with teaching: with patients, trainees, their practice staff and other colleagues.

Stone et al (2002) interviewed ten undergraduate medical preceptors and described the inherent link between being a clinician and teacher. She identified four themes of relevance in developing their identities: underlying humanitarianism, familiarity with adult learning principles, understanding of the benefits and drawbacks of teaching, and the image of self as teacher. Starr et al (2003) affirmed this role-duality after conducting focus group interviews with 35 community physicians involved in teaching undergraduates in the United States. Their work identified the factors that promoted their identities as teachers, including: feeling a sense of intrinsic satisfaction with teaching, familiarity with educational knowledge, a sense of responsibility to share clinical knowledge to others, and faculty development opportunities. Similarly, Smith et al (2018) undertook sophisticated qualitative analysis of clinicians' educational and clinical practice in a United States residency programme. This study

identified that the themes linking clinical and teaching skills were similar for both patient-physician and learner-teacher relationships. They concluded that improving residents' teaching skills had the potential to improve the care of patients as well as the education of learners.

The dual role of doctors as educators is powerful in altering their clinical practice and potentially improving the care provided. However, there are many more individuals within GP practices who, on the surface, are not involved in education. Such role-duality therefore appears not to be an adequate explanation for why we see better patient outcomes in training practices relative to non-training organisations. Nor do these research findings directly explore the influence of the development of the clinician-educator on patient care, though they offer an important segue into postulating that development of skills through educational and clinical practice improves clinical care. The shifting sense of identity and its associated sense of agency offers a powerful mechanism for explaining how patient care may be improved beyond the individual consultation between a GP and patient.

2.2.4.2 Identity formation amongst GPs as educators

Lake (2013) used Sfard and Prusak's theory of identity formation (Sfard & Prusak, 2005) to explore the shifting identities of GP trainers. They postulated that individual identity is readily changeable and shaped by stories and that individuals differentiate between who we are and who we want to be - stories change us if they are powerful enough. Celia Whitchurch studied third spaces, involving professional managers, librarians, and academic managers in higher education, and their fluid positioning at interfaces between academic/educational and professional/management domains (Whitchurch, 2008). Her work draws on the thinking of Bhabha (1990) who describes the emergence of new cultural forms from multiculturalism. He describes the concept of a third space as "*a place*

where we construct our identities in relation to varied and often contradictory systems of meaning”.

The process by which new cultural forms emerge is referred to as hybridity. GPs, when engaging with education, enter that liminal space where they realise there may be other ways of viewing clinical education and patient care - this is Bhabha's third space. The third space is the arena in which two sets of cultures meet; those entering the third space evolve through the process of hybridity; and new sets of ideas, values, tasks, and practices are created. It is surmised that entering the third space requires combining both sets of cultures to develop a distinct and unique one.

Whitchurch (2008) has described the Third Space as offering opportunities and challenges for those engaged; one in which traditional assumptions, beliefs and practices are questioned; and through these new ways of thinking values and practices can emerge. Sterrett (2015) suggests that the concepts of third space and hybridity can provide a lens for understanding power relationships as well as identity and culture formation for GPs as educators. It also offers a means for exploring how skills and knowledge are developed and transferred, including the creation of new ones that belong to neither domain precisely. Beach (1999) suggests that transitions (for example from one role to another) are opportunities for transformation, where the individual 'becomes something new'. These transitions have the potential to change one's sense of self and their social position within a group.

A study that highlighted this shift in self-perception and identity was that of Walker (1988). Walker (1988) conducted an ethnographic study of GPs on their educator development course, to understand how their identity changed as they were increasingly exposed to educational principles on a part-time year long course. Walker (1998) found that during the duration of the educator development course, GPs shifted their identity toward a person-centred and situational view of the world, moving away from a hospital-centric view of clinical practice. Waters and Wall (2007), in a questionnaire study of British GP trainers, explored barriers to their ongoing development as teachers. GP trainers identified

that their preferred formative development was through reflection on educational activities (e.g. watching videos of themselves teaching) rather than undertaking formal qualifications – this was particularly so for female GPs who struggled to find time for such professional development. They also described the importance of support from their GP colleagues in practice for protected time to develop as educators.

2.2.4.3 Motivations and barriers to becoming GP trainers

The motivations of GPs to become trainers in the first place is a poorly researched and understood area. In a now dated study, Spencer-Jones (Spencer-Jones, 1997) interviewed GP trainers to determine their reasons for engaging with educational activity in their practices. He identified complex reasons that included learner, practice, personal, professional and developmental reasons. Becoming a GP trainer is not the only route to achieving the perceived benefits of involvement in clinical education. Undertaking educational roles (such as undergraduate education or university-based roles) afforded the opportunity for clinicians in General Practice to consider their own practice in greater detail and was a positive professional development opportunity (Grant et al, 2010; Stenfors-Hayes et al, 2010; Van de Wiel et al, 2011).

A number of authors have also identified the negative impact of educational activity on time management as a barrier to becoming a trainer (Walker 1988; Stenfors-Hayes et al, 2010; Waters and Wall, 2007). Other barriers included a requirement to undertake accredited university-based courses (Walker 1988), lack of protected time for professional development, and lack of support from practice colleagues (Waters and Wall, 2007).

2.2.4.4 Competencies of effective GP educators

A number of researchers have looked at the competencies required to be an effective GP educator. Boedenermaker et al (2000) used a Delphi approach to characterise the key features of competent trainers. Their findings included the ability to give feedback, good communication skills, and demonstrating respect for learners. Similarly, Kilminster and Jolly (2000) conducted a systematic review and identified the ability to offer effective feedback and developing the trainee-trainer relationship as being important competencies for effective supervision in practice settings. Wearne (2012) confirmed these findings as part of their literature review on educational supervision in postgraduate clinical education.

Jones (2011) undertook a Delphi study to identify how the future GP trainer needs to evolve to keep up with the training needs of GPs in a changing landscape of healthcare provision. He highlighted the need for educators to develop skills in supporting critical thinking, leadership development, professionalism amongst GP trainees as well as become familiar with modern teaching skills. This study hints at the possibility that GP trainers are doing much more than offering propositional knowledge to GP trainees in an apprenticeship model of training.

2.2.4.5 The learning environment in General Practice

In this section I explore the empirical literature on the learning environment in General Practice which offers insights into the nature of learning in the workplace; the factors that influence learning in the workplace; and the characteristics of a training practice.

Parboosingh (2002) proposed that interaction with peers in the workplace offers the best environment for learning. Furthermore, that engagement with meaningful activities (e.g. patient care) and individually constructed learning that results in action are important principles. Involvement with clinical work and the opportunity to see patients have been demonstrated to facilitate the workplace learning of medical students (Boor et al, 2008; Hoellein et al, 2007; Pearson and Lucas, 2011). Characteristics of postgraduate training practices include a positive environment (motivated staff, feeling part of the team, ability to ask questions), a supportive trainer (well-organised, knowledgeable, and able to provide feedback), and practice organisation (well-organised teaching, protected time for learning) (Smith and Wiener-Ogilvie, 2009). Weiner-Ogilvie et al (2014) suggests that inclusive training environments are best in preparing GPs for their future role. Such inclusion is deemed essential to permit them to participate in “the community of social practice”. Weiner-Ogilvie (2014) suggest that practices that are less hierarchical and open to new ideas afforded such opportunities and suggest that the role of the trainer in supporting the trainees’ confidence was found to be essential.

Pearson (2010) studied a single GP training practice in Yorkshire over a twelve-month period. He collected interview, observational and documentary data from practice staff and a broad range of learners. He used Lave and Wenger’s (1991, 1998) ideas to explore how clinical education takes place through engagement. He found that this requires four key elements: recognition of learners as legitimate members of the team and having a right to be in the practice, respect for their needs as learners, offering relevant experiences for their learning, and engagement at an emotional level to support their development.

More recent research from Eraut (2004) explores how early career professionals learn in the workplace. He followed the development of accountants, nurses, and lawyers. His work determined that certain types of work-process gave rise to learning opportunities including participation in group activities; working alongside others; tackling challenging tasks; problem-solving; and working with clients. The workplace resources available to support learning included knowledge resources; formal education; supervision, coaching, mentoring; and shadowing and visiting. Factors that influenced uptake of learning included the challenge of the work; feeling supported in the workplace; gaining confidence in achieving things; receiving constructive feedback on development; a sense of the value of the work; and an ongoing commitment to learning.

Eraut also identified the “types” of knowledge gained through such learning which included codified knowledge; cultural knowledge; and personal knowledge. My own experience suggests that the development of personal and cultural knowledge amongst GP trainees is most influential in changing them and for which GP trainers are most adept at facilitating. GP trainers use several different approaches that include using their own self and ways of thinking, their own idiosyncrasies and values, and encouraging the development of reflexive dialogue (Ahluwalia and Launer, 2014). Though Eraut’s work did not explore the workplace learning of doctors as GPs, his insights offer useful learnings about the development of early career professionals and the role of types of work; the resources for learning; and factors that influence learning. The findings are thus generalisable as modern General Practice training offers the types of work and supports learning in much the way described by Eraut.

2.2.5 Bringing it all together

Hawe et al (2009) suggest theorising interventions (such as clinical education) as events within a system changing and evolving over a period of time. This approach offers a number of potential benefits in research terms: introducing education ideas and practices can be seen as an intervention undertaken over a time period; its introduction requires understanding the inter-relationship between General Practitioners as educators, trainees, practice staff/colleagues, systems and processes, services and patients; how these component actors evolve over time; and the potential for understanding how different systems (practices) introduce and maintain engagement with educational activity.

Socio-cultural and socio-material theories offer ways of thinking about GP practices as inseparable learning and clinical environments with their social and material resources; the role and influence of learners as legitimate participants; identity formation amongst GPs as educators; and how educational ideas influence power relations and development amongst practice staff within communities of practice. Uniquely these theories propose that the role of the learner has the potential to profoundly affect clinical services through the creation of expansive learning opportunities (Engeström, 1987); through legitimate participation in understanding the whole context and work of a training practice (Lave and Wenger, 1991, 1998); or as an attractor in a social complex adaptive system (Stacey, 2000). I see the activity of developing teachers, teams, learners and organising materials/resources over time as a framework for understanding how clinical education may influence patient care. This is diagrammatically represented in figure 2.



Time 

Figure 2: The inter-relationship between educational activity, patient care and time in a GP practice

2.3 Conclusions

In this chapter, I have explored the relevant theoretical and empirical literature to frame and shape the research questions. In the first section of the chapter I described and identified the journey of General Practice towards professionalisation, the development of clinical education as being critical to its development as a profession, key concepts in defining the quality of care, and the relationship between clinical education and quality of care in General Practice. The findings highlight that engagement with GP education has a statistically significant though clinically modest impact on patient care.

The following sections explored the relevant theories of education drawing a distinction between those designed to highlight acquisition of knowledge and participation in the workplace and explored their application to General Practice. In seeking to understand the interplay between clinical education and patient care, my thinking has developed to consider training practices as a complex system in which the inter-play between component elements (learners and teachers, teams and organisations, physical materials and resources, and patients) evolve with time. Further, that engagement with clinical education and the presence of learners has the potential to create opportunities for the practice that influence patient care and clinical outcomes. The socio-cultural theories of learning explored in this chapter offer a useful framework for understanding and making sense of this research on the role of clinical education on patient care. This conceptualisation is based on my reflections engaged with a career in education aligned with the learnings available from theory, research and practice. Whilst there is a body of empirical literature on GP training, the work to date cannot explain or describe the influence of education on patient outcomes. In the following chapter, I shall outline the philosophical context of the thesis, and data collection and analysis methods.

Chapter 3: Methods

3.0 Introduction

In this chapter I review the most relevant research paradigm for this research and its impact on the choice of methods. The first section of this chapter will explore the prevalent research worldviews or paradigms covering different ways of knowing and the nature of reality. I will then focus on pragmatism as a school of thinking that has influenced my research journey. The second section of this chapter will describe the rationale for the methods chosen as well as explore the ethical issues involved.

3.1 Research paradigms

In this section, I review the prevalent research paradigms, and relate these to my professional and research experience, and my thinking about the research questions and how these might be addressed. I also explore how these inform my choice of methods for the thesis element of my doctoral journey. Thomas Kuhn (1962) described a research paradigm as *“the set of common beliefs and agreements shared between scientists about how problems should be understood and addressed”*. Creswell and Creswell (2017) describe four predominant research worldviews or paradigms that guide the choices researchers make. These include: post-positivist, constructivist, transformative, and pragmatic.

Medical School was an undoubtedly positivist experience for me with clinical teaching informed by reductionist and empirical research; and the hypothetico-deductive model clinical method being directed at including and excluding various diagnoses or theories using history taking, examination and investigations. Working as a GP I realised that there are limitations to this approach with patients' expectations best described in the words of Paul Kalanithi (2016) : *"What patients seek is not scientific knowledge that doctors hide, but existential authenticity each person must find on her own ... the angst of facing mortality has no remedy in probability."* My latter experience as a GP has required the use of inductive strategies and socially contextualised narratives directed at making sense together using our histories and experience to generate new meanings (or seen another way, generating theories).

In both situations, there are fundamental differences in the way I have conceived of reality and the approach to developing knowledge. The post-positivist paradigm is fundamentally associated with an ontological perspective that reality is external, universal, and objectively measured to clarify or refute hypotheses. By contrast, the constructivist paradigm is associated with a view of reality as constructed by individuals in their own contexts. Research in the constructivist paradigm studies and interprets these multiple realities to understand the nature of knowledge. Knowledge in a post-positivist paradigm is decontextualised and verifiable whereas in a constructivist paradigm is context-specific, fallible, contested, and continuously evolving.

Returning briefly to my own experience of General Practice, this has been that it is founded on continuous relationships (in my case some lasting as long as 20 years) where narratives are constantly being re-shaped for patients (and their doctor) and updated by the events in their lives. Peter Toon

(1994) has described the doctor-patient consultation as *“the patient’s forum for coming to understand her illness, not merely a rational understanding, but an understanding which involves the emotions, and which contributes to the growth of the individual”*. For me Peter Toon’s description (and hinted by Paul Kalanithi) identifies a characteristic that is central to the pragmatist paradigm – that the value of knowledge arises in the actions and benefit they create rather than their historic causes. By linking knowledge and actions, pragmatism has extended my understanding and the value of my work and research - beyond that available through post-positivist and constructivist thought. Pragmatist thinking also permeates Iona Heath’s seminal work, *The Mystery of General Practice* (Heath, 1995). Key concepts such as the work of GPs being witnesses to the dying process, acting as biographers of our patients, actively seeking to alleviate distress, tackling the myth of cure, and working at the interface between illness and disease are reflective of the inter-twining of knowledge and consequences of actions arising from the consultation.

Pragmatism has its roots in the thinking of individuals such as John Dewey and George Mead. Dewey (Dewey, 1938) described knowledge as *“an instrument or organ of successful action”* and Mead (1934) described the gesture-response cycle as completed when it has meaning to those involved. Pragmatism therefore emphasises the search for solutions to problems of individuals’ *“lived experiences”*. The emphasis on successful action and meaning within pragmatism means that researchers tend to be real world practice-focused, problem-centred, and pluralistic in their use of methods. Within post-positivism and constructionism, the paradigm dictates the choice of methods whereas pragmatism draws on a broad range of methods (taken from both post-positivist and constructivist approaches) deemed appropriate to answer the overarching questions (Creswell, 2003).

My work has involved understanding the relationship between clinical education and patient care. For exploring this, I have had to use methods drawn from quantitative and qualitative traditions. Pragmatism, with its focus on successful action, therefore offers a worldview in which the questions for exploration take precedence over the methods chosen.

3.2 Research methods

3.2.1 Rationale for choosing qualitative methods for thesis

My research objectives are to understand the inter-play between clinical education and patient care. Questions such as does clinical education influence patient care, and if so, to what extent does it do so require positivist approaches. My Institution Focused Study (Ahluwalia, 2015) sought to answer these questions using quantitative data and statistical analyses techniques. Whilst the research to-date has identified statistical associations between clinical education in General Practice and patient care it has left unanswered questions about how and why this is seen. I could not find answers to these questions within the literature (as outlined in chapter 2). Seeking explanations for these associations, (the focus of the thesis section of my doctoral journey) needs the development of an understanding of why this happens. Qualitative techniques therefore appear to be the most appropriate approach. Creswell (Creswell, 2013) describes such mixed-methods approaches as an explanatory sequential design.

3.2.2 Phenomenology

The IFS demonstrated associations between training practice status and patient care without offering an understanding of the mechanisms and processes by which this association might be explained/understood. To achieve this requires an inductive approach of qualitative methods (Silverman, 2000). I propose my most appropriate design within qualitative methods is phenomenology that seeks to study the phenomena in terms of the lived experience of the participants of the research.

There are several reasons for selecting this approach. Firstly, I am seeking to identify, explore and describe how GP trainers (as clinical educators) and their practices develop because of their engagement with education and how it influences patient care. These are likely to have cognitive and emotive reactions best explored using a phenomenological approach where meaning is derived from examining the individual's relationship with, and reactions to, the phenomenon (Husserl & Moran, 2001; Svensson, 1997). Secondly, not all such processes are easily observable in ethnographic research. Flick (2006) highlights the fact that biographical processes, comprehensive knowledge processes and rare events or practices are difficult to observe. Similarly, Atkinson and Hammersley (1998) cited in Flick (2006 p 228) suggest that ethnographic research undertakes an "*analysis of data that involves explicit interpretation of the meanings and functions of human actions*" making cognitive and emotional processes difficult to study using ethnographic approaches. Another factor to consider are the complex ethical and resource related issues associated with the observation of the work of GPs as clinicians and educators, which I believe have placed significant limitations on my ability to conduct this research within a meaningful timeframe. Whilst I have chosen phenomenology as my

preferred approach to exploring the interplay between clinical education and patient care, observational work would usefully support triangulation and further development of emergent findings from this.

Phenomenology has been used both as a philosophical stance and a research approach. In this research, I use the term phenomenology to describe a qualitative research approach. The primary purpose of phenomenological research is to explain the lived experience of individuals in relation to a specific phenomenon. Phenomenological research does not generate testable hypotheses of the phenomenon though seeks to describe, explain and increase understanding of the phenomenon being studied. The benefits of this approach are that it has allowed me to explore and develop a profound view of how GP trainers perceive the influence of clinical education on patient outcomes within the context of General Practice. It has given me rich data about the phenomenon. Whilst understanding and describing the influence of GP education on patient care has been valuable, I have not developed theory that can be further interrogated. This research has also raised issues such as the potential for researcher bias and subjectivity as well as generalisability of the findings. These are explored further in the remainder of this chapter.

3.2.3 Semi-structured interviews

In line with my methodological approach I have chosen to use interviews as the means for collecting my data. I am working with busy individuals with differing timetables and work pressures. Being able to bring together several GP trainers for focus groups has previously proved difficult. With focus groups, there is a risk that dominant individuals overwhelm the process and prevent others from offering their own perspectives.

By contrast, the specific time and location needs of participants are easier to meet by undertaking interviews. In addition, semi-structured interviews involve the use of open questions covering areas that the interviewer wishes to cover. These areas have been pre-determined, and questions drawn up to represent these. This approach allows the interviewer to explore responses, and where necessary, use closed questioning to clarify issues (Mathers et al, 1998). In relation to this study, the interviews had to balance order and structure against the need for revision so that contextually relevant interviews could occur (Morse, Swanson, & Kuzel, 2001).

In collating data for answering the questions posed, interviews are particularly appropriate for the research questions as the focus is on understanding the meaning of the association under study and individual perceptions are critical to developing such an understanding. By contrast, questionnaires or surveys would be difficult to use due to the absence of literature that could be used for the development of such a tool. I could use my a priori knowledge as a GP educator-clinician. However, this would have limited validity compared to the development of a theoretical framework that prevents *“the survey questionnaire degenerating into a fishing trip where questions are added simply because it seemed a good idea at the time”* (Robson, 2002 page 240). Observation of doctor-patient interactions and various aspects of GP practices (such as educational meetings and patient-receptionist interactions) may be useful for understanding the association between postgraduate education and patient care. However, there are challenges associated with such an approach. Meaningful observation would require the development of an appropriate coding scheme.

In developing an interview schedule, Smith (1996) suggested that questions should be neutral rather than value-laden, avoid the use of jargon, and should be open-ended rather than closed. The interview

schedule (see Appendix 1) was developed to assist this process but was evolved as the interviews were dependent on the issues raised from the ongoing analysis, highlighting further areas of exploration and shifts in emphasis where appropriate (Hammersley & Atkinson, 1995).

I conducted the interviews in an informal conversational style and participants were encouraged to expand ideas and thoughts arising unexpectedly. Throughout the interviews, I sought to maintain the balance between allowing participants' to speak about issues and material they felt were important whilst seeking to control the interview to ensure that the agenda for the interview had been fully addressed (Hammersley and Atkinson, 1995). Each interview was focused on the individual participant and the unique context of their contribution (Denzin, 1997). The interviews were conducted in a setting of the participants choice (most often their workplace), at a time of their convenience, and either face-to-face or telephone. Flexibilities of timing, venue and mode of interview encouraged as much control by the participant as possible. Each interview was tape-recorded and transcribed verbatim. Data were read and analysed to produce common themes and highlight understandings as set out in Chapter 4.

As the data generator, it becomes pertinent to consider the impact of my own a priori views and perceptions on the research, particularly related to the theoretical frame I have developed and outlined in chapter 2. Husserl and Moran (2001) suggested that researchers in the phenomenological tradition needed to be able to separate and set aside their own views and perceptions in the research process, a concept he termed "bracketing". By contrast, Heidegger (1962) believed it impossible for researchers to "bracket" themselves from their pre-conceived ideas about the phenomena under study and that these are embraced as part of the research process. The interview process, in a phenomenological paradigm, is an active process (Flick, 2006) whereby the interviewer is continuously

making interpretations from the narrative and through a cycle of iterative dialogue. It is my view that it is difficult to “bracket” out a priori views and that my own perceptions can be a useful insight in guiding the interviews and research process.

The reliability of the interpretation of interview transcripts was improved by using field note conventions (Silverman, 2000). Miles and Huberman (1984) suggest writing contact summary sheets after each observation. They suggest that contact sheets are valuable to guide planning for the next contact, to suggest new or revised codes, to serve as a reminder of the contact at a later stage, and to serve as a basis for data analysis.

3.2.4 Participant selection

In selecting participants, I adopted a purposive sampling approach, one in which individuals were selected because they have experience or expertise in the area of interest (Silverman, 2000). I am interested in identifying individuals (both early and late in their individual careers) with experience of GP education and providing patient care but also with exposure to assessing the quality of clinical practice. For the purposes of this study, I targeted GPs licensed as trainers (as recognised by the GMC) and involved in the quality assessment of General Practice for conducting semi-structured interviews.

Participants were initially approached by email that included a participant information leaflet (appendix 2) and consent form (appendix 3) for their perusal. I anticipated undertaking a minimum of 10-12 interviews or until I achieved data saturation. Kelly (1999) suggests that the potential number of participants is dependent upon the quality and quantity of the established literature, the level of detail expected from each interview as well as cost and time-related factors. He proposes that six to

eight participants are sufficient when there is not much variability expected, whereas when significant variation is expected, ten to twelve interviews may be required.

3.2.5 Data analysis

Tesch (1990) offers a classification of data analysis strategies based upon whether the intention is to analyse language (through methods such as conversation and discourse analysis); generate meaning and interpretation of phenomena (using approaches such as thematic analysis); or the generation of theories from collated data (using ground theory techniques). There is significant debate about whether data analysis techniques need to be underpinned by a theoretical perspective (Smith, Bekker and Cheater, 2011).

The purpose of this research was not to generate theories (using grounded theory) or to obtain meaning in the use of language (using discourse or conversation analysis) but rather to interpret and describe the complex phenomena under study. In analysing the generated data, I used the framework analysis methodology described by Ritchie and Spencer (1994) further developed by Ritchie and Lewis (2003). This approach was developed for applied social policy research and has become popular in health and social care.

This approach has much in common with other approaches (thematic analysis and interpretive phenomenological analysis) (Smith, Bekker, & Cheater, 2011) seeking to reduce large volumes of data, is inductive and allows for a priori as well as emergent concepts. The steps involved in framework analysis are very similar to those in interpretive phenomenological analysis (Silverman, 2010) page 275); the data are handled in a similar fashion; and the method is frequently used to generate

explanatory and interpreted accounts of people's experiences and perceptions (Smith, Bekker and Cheater, 2011). By contrast thematic analysis has been criticised for fragmenting data and not being transparent. Framework analysis provides transparent steps to enhance trustworthiness of the research process (Smith & Firth, 2011). Ultimately, my familiarity with the use of framework analysis, and the limited differences with other approaches to thematic analysis was a significant factor in my choice of this methodology.

The process of framework analysis is broadly divided into five stages:

- *Familiarisation with the data: The researcher read all the collected data and associated materials.*
- *Identification of a thematic framework: The researcher develops a coding framework from a priori and emergent issues arising from the familiarisation stage. The framework is developed and refined during subsequent stages.*
- *Indexing/Coding: The framework is applied to the data using numerical or textual codes to identify specific pieces of data corresponding to differing themes.*
- *Charting: Using headings from the framework, charts of relevant data are generated so that relevant data can be read easily across the whole dataset.*
- *Mapping and Interpretation: The researcher searches for patterns, associations, concepts and explanations arising from the data.*

Table 2: Framework analysis adapted from Ritchie and Spencer (1994)

All material available from the data collection stage was collated, including interview transcripts and field notes. The material was imported into computer assisted qualitative data analysis software (CAQDAS) (Richards, 1999) programme NVIVO 7. I coded the data using the coding functionality of the

software programme; gradually building the codes into an emerging framework of themes related to the research questions.

3.2.6 Methodological considerations

In the previous sections I have already explored and highlighted the consequences of my methodological choices. In this section I focus on issues of generalisability arising from this research, the impact of my position on the study and the ethical considerations that shaped the conduct of the study.

It has long been debated whether the tests of rigour and trustworthiness of research described in quantitative research (e.g. reliability, validity and generalisability) can be applied to qualitative approaches. Given the theoretical and philosophical differences between the two, a significant proportion of healthcare researchers prefer to consider alternative approaches that consider issues such as the truth value, consistency and neutrality, and applicability to other contexts (Noble and Smith 2015).

To ensure truth value (also regarded as validity in quantitative research terms), I deployed several different approaches. These included peer debriefing (described in the following paragraph); considering the representativeness of the participants in the study; using audio-recorded and transcribed interviews to check emergent themes against source materials; I have used rich and thick verbatim extracts from the transcriptions in the results section (the following chapter) to allow the reader a sense of the accounts of participants; and participants were invited to comment on the

research findings and themes.

Peer debriefing refers to the method where the researcher discusses research methods, analysis, and interpretations throughout the process with peers who are not directly involved in the research (Lincoln and Guba 1985). For this work I recruited two GPs, both with expertise in qualitative research and clinical education, who were not involved in the research directly. We met on a regular basis through the process of data collection, analysis and interpretation. Notes of these meetings were maintained, and decisions documented. Both GPs offered comment and challenge on methodological issues as well as interpretations of analysis. They had access to the raw data transcripts, and codes and themes as they emerged through the process of analysis. Differences in view were managed through agreement until consensus was achieved.

I have sought to maintain consistency and neutrality of the research (also referred to as reliability in quantitative terms) by offering a clear and transparent description of the research process throughout (from initial proposal through its documentation in this thesis); maintaining field notes; testing emergent themes through debriefing with peers; and documenting the analytical process (data coding and themes generation) using auditable software.

Applicability (often considered generalisability in quantitative research) refers to the degree to which the findings can be applied to other contexts and settings or with other populations and groups. In this situation, I am seeking to understand the phenomenon of the relationship between clinical education and patient care in General Practice. I am not seeking learnings that can be generalised to other settings or populations. Given the small number of participants in this study, I considered whether my approach to recruiting participants would help me understand the phenomenon from the

perspective of the participants. Silverman (2000) suggests that the basic structures of social order are to be found anywhere; therefore, it does not matter where the research is initiated. In his opinion, the possibility that something exists is enough. He quotes Perakyla (1997: 215-216) in her research on AIDS counselling in a London teaching hospital:

“As possibilities, the practices that I analyzed are very likely to be generalizable. There is no reason to think that they could not be made possible by any competent member of society. In this sense, this study produced generalizable results. The results were not generalizable as descriptions of what other counsellors or other professionals do with their clients; but they were generalizable as descriptions of what any counsellor or other professional, with his or her clients, can do, given that he or she has the same array of interactional competencies as the participants of the AIDS counselling sessions have.”

The number of participants selected in this study was low. However, purposive selection ensured individuals with the relevant range of expertise and experiences were recruited. It is likely that their experience and understanding of GP education and its influence on patient care is likely to be like that of other GP trainers in other practices across England. Whilst it is for others to decide about the applicability of findings from this research to their particular context, I have offered a detailed description of the process of research, the selection of participants, and the results. In later chapters I shall explore the utility of the research findings for further exploration such as developing explanatory models, informing further research, and influencing policy.

Much has been written about the position of researchers in the qualitative paradigm including debates

about the degree to which an individual is an insider; the benefits and challenges of being an insider; and the influence of insider researchers on interactions with participants. Mercer (2007) suggests that insider researchers, through their prior expertise, can gain access to individuals with relevant experience of the phenomenon under study; will often generate a sense of trust amongst participants; be able to explore concepts and ideas that outsiders may not; and understand how to undertake data collection in a timely and effective manner. By contrast, significant concerns have been raised about insider researchers as being unable to separate themselves from their own biases, potentially inhibiting participant perspectives through fear of being judged or upsetting the researcher; and seeking to skew participant responses and interpretations towards their particular views and perspectives.

This research has been conducted with participants with whom I have much in common. All the participants have been or are GP trainers. They all have had a role in managing and assuring GP training in their practices and beyond. Like the participants in this study, I was a GP trainer for ten years and have been heavily involved in the quality management and assurance of GP training in London. These commonalities aside, I have also had several high-profile positions in medical education over the past 10 years including director of postgraduate GP training and postgraduate medical dean. These latter roles have meant that I have had line management responsibility over several of the participants. Even where I have had no formal line management, the high-profile nature of these roles in the world of GP education is likely to influence the interaction between participants and myself. In short, my position in this research has been that of an insider researcher. I do believe that my position as an insider researcher influenced my ability to access appropriate participants and their agreement to participate in the research. I also think that my role as a clinical educator meant that I was able to explore educational issues and ideas that arose through my intimate experience and understanding of GP training. Knowing the pressures of being a GP, I was able to arrange interviews that were suited

to times and places least intrusive to the professional lives of the participants in the study.

Kvale (2008) draws attention to the often-unreported power differential between interviewer and interviewee in qualitative research. In addition, he offers several different approaches to equalising the power imbalance towards interviewees including the use of Socratic questioning approaches, antagonistic interviews in which the interviewer creates conflicts and divergences of opinion, and dissensus research whereby interviewees are invited to critically review the material and propose interpretations of the outputs of the interview. Being aware of these issues, I adopted a Socratic style that uses open-ended questioning, pauses and silence, triangulating responses and checking interpretations arising from the research with participants (validation).

As a GMC registered medical practitioner I am bound by professional obligations to report issues of serious patient safety observed because of this research. Such serious lapses in clinical care override the need for impartiality otherwise required in this research. This duty of candour (http://www.gmc-uk.org/DoC_guidance_englsih.pdf 61618688.pdf) is applicable to all medical practitioners (whether undertaking clinical practice or research) and it was important to clarify this with all potential participants when undertaking recruitment to the study. This was also noted at the point of consenting to take part in the semi-structured interviews.

A significant part of the thesis research involved semi-structured interviews with GP educators. The regulations governing NHS ethics approval allow for NHS staff to be interviewed without the need for presenting an application to a local NHS research ethics committee. However, to ensure appropriate review and governance I submitted relevant paperwork to the UCL IOE ethics committee as well as the HEE and NHS research governance office for consideration and review.

The data generated as a result of the semi-structured interviews were held in secure electronic formats with appropriate encryption and password protection. Participants were assigned a code only known to me to assure their confidentiality and anonymity. Written consent was obtained from each participant using standard procedures. All participants were made aware of their right to withdraw from the study at any time and their right to refuse to answer any questions without any adverse effect on employment or working relationships.

3.2.7 Research timeline

Below is table 3 that provides a timeline with key milestones during the design, conduct, and write-up phases of the research.

Table 3: Research timeline

Date	Events
April 2015 to January 2017	<ol style="list-style-type: none"> 1. Initial thesis proposal submitted to the supervisor 2. Multiple redrafted proposals submitted for supervisor approval
January to August 2017	<ol style="list-style-type: none"> 1. Submission to NHS research ethics 2. Submission to HEE research governance 3. IOE thesis review
August to November 2017	Redrafting thesis proposal
December 2017	Change of supervisor
January to February 2018	Redrafting of the thesis proposal
March 2018	IOE thesis review
April to June 2018	<ol style="list-style-type: none"> 1. IOE ethics submission 2. NHS research ethics review 3. HEE research governance review
July to September 2018	<ol style="list-style-type: none"> 1. Interviews conducted 2. Initial drafts of chapters to supervisors
October 2018 to January 2019	<ol style="list-style-type: none"> 1. Data analysis conducted 2. Drafts of chapters and analysis shared with supervisors
February 2019 to May 2019	The final version of thesis submitted to supervisors

3.3 Conclusions

In this chapter, I have provided a detailed description of the methods utilised to conduct this research. I have explained that I am attracted to pragmatism as a framework because I regularly ask real world questions in messy settings. It has guided my choices through my doctoral journey. This paradigm is particularly suited as a framework for asking real-world questions in often messy settings where context, utility, and practicality have significance in defining methodological considerations. I have explored how these choices have generated methodological and ethical issues, and how these have in turn influenced the nature and quality of the data. In the next chapter, I present my results arising from my analytical framework.

Chapter 4: Results

4.0 Introduction

This chapter summarises the results of the data collection and analysis. The first part of this chapter will preface the results with a review of the original research questions and summarise how the data have been used to answer these. The second part of this chapter provides an outline of the key demographic, professional and educational characteristics of the participants. The third part of this chapter provides a structured synthesis and exposition of my interpretations of the data illustrated with extracts from interviews and examples (where appropriate) to showcase key elements.

4.1 Review of the original research questions

The purpose of my doctoral journey has been to understand the relationship between clinical education and its influence on the care of patients. The initial part of my journey (2012 through to 2015) focused on understanding the established evidence as to the extent to which clinical education relates to the quality of patient care. The thesis stage (2015 through to 2019) seeks to understand why the associations identified in earlier work have been observed. Therefore, the research questions are as follows:

- How and why do GPs become involved in clinical education? What are their motivators and enablers?
- How do GPs develop as a result of engagement with clinical education; both as educational and clinical practitioners?

- How do GPs perceive clinical education as influencing patient care and vice-versa? How might this influence extend across the care organisation?

4.2 Use of data

As I have previously described, the data generated are qualitative and not “measurable” thus requiring interpretation through the data collection and analysis stages of this research journey. My a priori views and theoretical framework informed my approach to the interviews and analysis – some of the data, shared as direct quotations, highlight and illustrate these deductive aspects of analysis. New insights and themes emerged from the data, and these were used to extend and enrich my current understanding of how clinical education influences patient care. Where appropriate, I have used personal narratives and examples to showcase more clearly these influences and relationships, being mindful of the need to maintain the confidentiality of those involved in the research.

The handling of data (which contained written transcripts and field notes) was approached using Framework Analysis (Ritchie and Spencer 1994). This involved a series of steps starting with the process of familiarisation with the data, moving towards identifying patterns and clusters of ideas, and then drawing out conceptual themes. The data collection and analysis approach were informed and directed by the theoretical framework itself derived from my reading of the relevant literature – the relevance of sociocultural and socio-material theories of workplace learning in how the components of a teaching organisation interact to influence patient care. The theoretical framework therefore influenced the development of the research questions, the interview schedule, and every stage of the analysis. As mentioned, thematic analysis was both deductive in seeking to answer the research questions as well as generative/inductive in finding new meanings and insights from the data (Miles

and Huberman, 2002). I maintained a reflexive approach continuously shaping and reshaping the emergent themes informed by the data, the theoretical and empirical literature, and discussions with peers. The interpretations arising from this complex and multi-layered approach to analysis of the phenomenon are mine.

My theoretical lens enabled me to 'see' some things and 'not see' others (or 'value' somethings and 'not value' others). It enabled me to focus on interactions, and the nature of those interactions. More importantly, it extended my understanding of those interactions. Focusing my analytical lens on interactions enabled me to examine the nature of interactions. One striking analytical finding, for example, was the reported influence of learners upon their educators. This is not reported in the literature and an influence I had not anticipated. I was surprised that I had not considered this beforehand.

Drawing on the work of Latour (2005) I was curious to look for evidence within my data of inter-relationships between people and inanimate objects (such as computers and other IT systems) in training practices expecting to find inter-relationships, given the focus of my theoretical framework. What emerged though was surprising – little mention was made of the influence of such objects; rather an unexpected finding emerged – the role of the engagement of the patient with the physical environment of the practice and its influence on their healthcare experience and outcomes.

In these examples, I showcase how I used the theoretical lens, literature review and data within my analysis. This helped focus my engagement and reading of the data. Having become familiar with several theories, I was able to explicitly use these in my readings of the data, helping me to 'see' and focus upon particular features. I was then able to note both the presence and absence of these in a critical, reflexive and rigorous approach.

In table 4 are demographic, biographic and role-related details of the participants involved in this study.

Table 4: Participant details

Participant ¹	Demographic	Biographic	Current post
GP01	Asian male in his mid-60s.	GP trainer for less than 10 years. as well as educational manager. PMQ ² (1978) ³ from the UK.	Longstanding and established GP partner in a small suburban practice with a registered list of 7100.
GP02	Asian male in his late 50s.	GP trainer for nearly 20 years as well as former educational manager. PMQ (1984) from outside the UK.	Established GP partner in a large suburban multi-site practice with a registered list of 21000.
GP03	Caucasian male in his early 50s	GP trainer and educator. PMQ (1994) from the UK.	Established GP partner in a small practice serving a deprived community with a registered list size of 8000.
GP04	Asian male in his early 50s.	Former GP trainer and educational manager. PMQ (1986) from the UK	Established senior partner in a large suburban single-site practice with a registered list size of 14000.
GP05	Caucasian female in her early 50s.	GP trainer and involved in clinical commissioning. PMQ (1987) from the UK	Senior partner in a large single site suburban practice with a registered list size of 18500.
GP06	Caucasian female in her mid-50s.	Recently retired from GP training; continues to work as a clinical educator. PMQ (1989) from the UK.	Recently retired from active clinical practice. Former partner in a medium sized practice with a registered list size of 9000.
GP07	Caucasian male in his late 40s.	GP trainer and educational manager. PMQ (1990) from the UK.	Salaried GP in a small practice serving a deprived community with a list size of 9000 patients.

GP08	Asian male in his early 60s.	GP trainer and former educational manager. Involved in clinical commissioning. PMQ (1982) from the UK.	GP partner in a large multi-site suburban practice with a registered list size of 14000 patients.
GP09	Caucasian female in her early 60s.	GP trainer and educational manager. PMQ (1983) from the UK.	GP partner in a single site large inner-city practice with a registered list size of 25000 patients.
GP10	Caucasian male in his early 40s.	GP trainer and clinical educator. PMQ (2004) from the UK.	GP partner in a small practice in the process of merging with two non-training practices. Registered list size of 14500 patients.
GP11	Caucasian male in his early 50s.	GP trainer and clinical educator. PMQ (1990) from the UK.	GP partner in a large suburban single-site practice with a registered list size of 14000.

As described in chapter 3, in total 11 GPs were interviewed as part of this study. Interviews ranged from 38 to 74 minutes in duration. Eight male and three female GPs were involved in the study. All the GPs interviewed qualified in the UK bar one who was from the Indian sub-continent. Eight of the GPs were Caucasian and three from an Asian background. Time since qualification from medical school ranged from 10 to 40 years. The GPs worked in practices ranging in size from 7000 to 25000 patients. I had access to complete transcripts for nine interviews. The remaining two transcripts were partial and limited by recording equipment failure. These two transcripts were supplemented by data from field notes written contemporaneously. All the GPs interviewed were active in clinical practice at the time of interview bar one who had retired in the prior six months. Two of the 11 participants worked in practices serving deprived communities. All the participants selected in the study had experience of undertaking educational and clinical quality reviews as well as being involved in the provision of GP education either as GP trainers, educational managers, or clinical educators.

Eight participants introduced GP education into their practices shortly after joining. Two of these eight moved practices and did the same again. Three of the participants started working as GP educators in established training practices. The selected participants were, therefore, able to provide unique insights into how their practices changed because of becoming an educational organisation. During the analysis, I found no significant differences in the themes arising between these two groups.

4.3 Emergent themes from analysis

The results are presented around four overarching themes that describe how clinical education mediates its influence on patient care. These four themes are: influencing through educational leadership; influencing through learners; influencing through the educational process; and influencing through educational standards. These are pictorially displayed in figure 3.

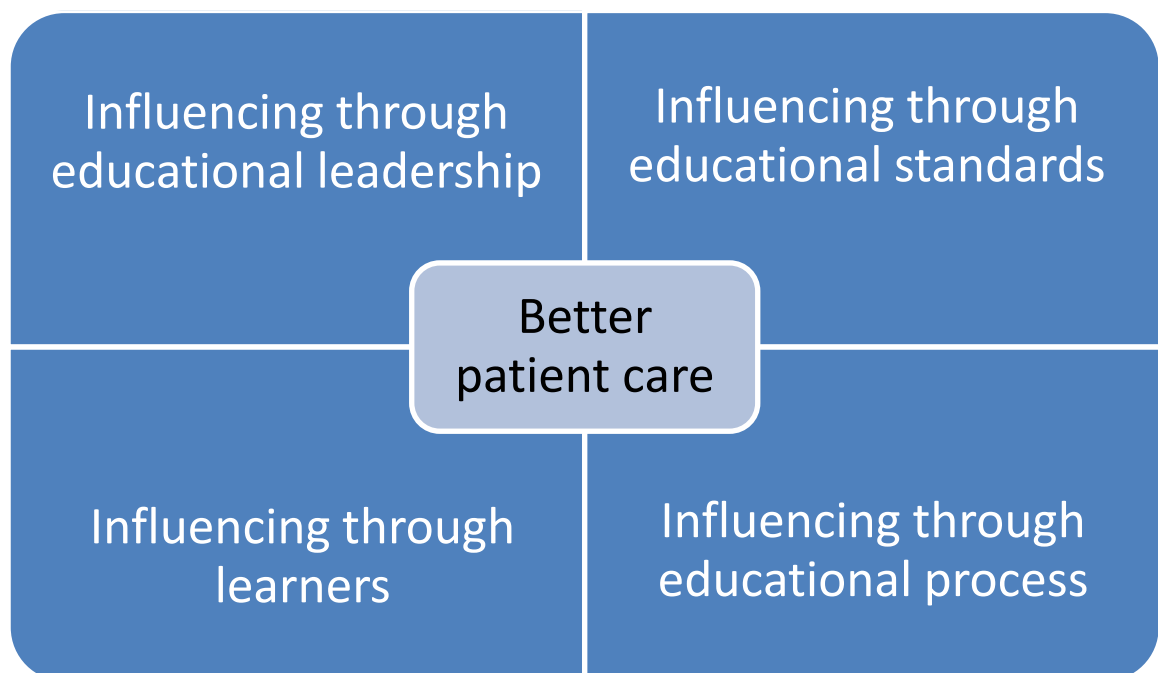


Figure 3: Themes describing the influence of clinical education on patient care

These individual themes can be further described as:

- **Influencing patient care through achieving educational standards:** becoming ready to be a venue and organisation that educates future GPs through improved record-keeping and notes summarising; development of up-to-date systems and processes; establishing clear lines of responsibility and governance; creating or using opportunities for whole team learning; development of learning materials for staff; enhanced staffing levels; and use of physical space.
- **Influencing patient care through educational leadership:** becoming an educator as well as a GP with flexible and adaptive leadership to embed clinical education in the organisation; role-modelling of behaviours to colleagues and trainees; and engagement with peer support to enhance influence within the practice.
- **Influencing patient care through learners:** getting ready for a 'front of stage performance - professional development and clinical practice of GP trainers; reshaping and modernising practice systems and processes; and up-to-date expertise to bear on patients' care directly.
- **Influencing patient care through an educational process:** changing skills levels and changing the way teams work - enhanced communication and consultation skills of clinicians; development of collectivised learning opportunities; reflective practice embedded as a norm; the creation of a less hierarchical and more open environment; and involvement of the whole team in supporting education.

4.3.1 Influencing through educational standards

During the interviews, participating GPs described their initiation as GP trainers and clinical educators. All participants had decided to participate in clinical education at an early stage in their careers. An overriding thread through the narratives was the recognition that engagement with clinical education was an important component in their continuing professional development for a lifelong career in General Practice. This was seen in the context of a career spanning over 40 years and as an opportunity to continuously evolve, prevent burnout and visualise their work in General Practice as a journey rather than a job.

GPs interviewed described a key step in improving patient outcomes as the journey taken towards becoming a training practice. Practice related factors played a part in individual decisions to become involved in GP education. GP trainees were acknowledged as additional to established workforce capacity and therefore providing much needed appointments. In addition, they are fully funded from government sources. Practices see the funding and additional capacity as clear motivators for encouraging GPs to engage with clinical education. Successful engagement with clinical education often results in other opportunities for practice related workforce development to be made available such as investment in pharmacists, nurses, and medical and nursing student education. Practices also recognised the value that GP education has for improving the quality of patient care – and is a motivator for non-training organisations to become engaged with clinical education.

“There is service commitment. If any training practice says that a trainee is supernumerary that is probably not correct.” GP08

“The perception of obviously coming through a training practice as a GP trainee but then also looking around at other training practices that had a degree of energy and enthusiasm, and reflection and that part of their educational delivery really was an ongoing commitment to evaluating the care that they provide.” GP11

Only 30% of GP practices in England are accredited as training organisations (Weston et al., 2017). Participants described several barriers to engagement with clinical education in General Practice. Pragmatic reasons included lack of physical space in cramped or poorly maintained buildings or time within the working week to dedicate to high quality clinical education over the pressure of clinical workloads. Professional barriers included needing to jump through barriers such as obtaining qualifications such as postgraduate certificates in clinical education. Other reasons included an elitist view of GP education amongst GP educators and educational managers and a lack of understanding amongst non-training practices about the benefits of clinical education on patient care.

“There will be time. There will be an understanding of or lack of understanding of why it is important. There will be (we are back to Johari’s window) a blind to why it is best practice. Not understanding the benefits and a fear of being exposed as maybe as not at the top of your game.” GP03

“Premises are a huge problem. Many practices have a problem with this and therefore do not go forward with training because of this.” GP04

“space is a huge, huge problem for us at the moment. It’s a real break on our aspirations and ambition. We have literally run out of space. So, we are having to reign back some of the educational offer we provide to trainees & graduate numbers.” GP11

“Also, I think there is still a snobbery that a training practice is a mark of excellence, rather than the norm. So, this is about the extent to which we have been able to normalise training.” GP07

To become a training practice requires an application be made to the local GP School. The GP School then undertakes an assessment (based on a written assessment and a team visit to the practice) against a recognised set of educational standards. Participants described how achieving the standards required to become a training practice had a positive effect on patient outcomes. In particular, participants described how applying for training practice accreditation and reviewing the standards required to achieve this was useful in reviewing practice performance and helped them to identify areas for further development of clinical services.

“Looking at systems, developing protocols, and the fact that you had to do that for your training accreditation visit was very helpful.” GP08

“They looked at the criteria for approval, they were surprised to see the gaps in their organisations and then spend time and energy on filling these gaps.” GP02

“I think you are less likely to offer poor care if you are a training practice because there are more checks and balances in place of that analysis of your care than there are in non-training practices.” GP03

The process of accreditation ensured that education was an activity embedded within the practice promoting a learning environment influencing aspects such as practice meetings and practice development. It ensured that clinical education was an integral part of the delivery of clinical services rather than as a separate and discrete entity and an important means through which the quality of clinical care is influenced.

“Part of the accreditation and approval of a training practice is to see that the education is embedded within the organisation and supported within the organisation. So, the training element is not just that dyad between the trainer and the trainee, it is by the nature of the training environment, it encompasses the organisation”. GP11

During the time it took for practices to achieve training practice status, participants described several key areas which they perceived as having a positive influence on the quality of patient care. These included improved record-keeping, developing and improving organisational systems and processes, reviewing governance arrangements, developing opportunities to learn together as a group, adapting learning materials for all staff groups, reviewing staffing levels, and use of physical space as important reasons for improved patient outcomes relative to non-training organisations.

Improving record-keeping

A key activity towards achieving training practice accreditation was the development of high quality clinical records. High quality clinical records promoted better patient care through ensuring effective communication between team members, better use of time in the doctor-patient consultation,

improved use of time and resources (such as clinical tests), and professional development through audit. This was particularly vocalised by GP02 but others as well who considered a review of clinical records as part of the accreditation process as offering significant learning for the potential trainer and practice.

“one of the issues that practices struggled with when they wanted to become a training practice. This required summarising (paper records) and getting them summarised to a certain standard.” GP02

“access to the notes in an easily retrievable summarised manner helps in the development of a management plan, avoids duplication, and whilst the patient is there, you are relying on what the patient is saying, you have quick access to the data in front of you to corroborate and to check that whether what the patient has told you is true or not. I think informational continuity is crucial to good patient care.” GP02

“All of those integrated data sharing will make the person going in (other than the GP) better informed about the patient. So I would expect the patient care to be more holistic.” GP01

“We used to ask “what happened here” after looking at the records. I thought that was quite useful.” GP08

“the training required it and we used the methods that we came by through training to say more than here’s a list of codes, choose the right one, etc. It was more about why you should use that one. That led to from my perspective, better notes and better records.” GP07

Improving organisational processes and systems

It was recognised that to ensure high quality patient care and be able to support learners, it was important for training practices to have well-developed organisational processes and systems in place. Examples include prescribing, immunisations, and screening amongst others. It was acknowledged that effective systems and processes are likely to be found in many non-training practices as well. However, the requirement to have these reviewed as part of practice accreditation meant that training practices would consistently embed these and provides an explanation for better patient outcomes in training practices.

“I think for a new training practice, approaching from a position of never being a training practice and not having any educators within that practice, then I could see that you would have to put systems in place to look after and to educate to ensure that the practice was fit for purpose and for education.” GP03

“Having organisational processes and systems in place makes a huge difference. When it comes to practices, often the doctors can have similar amount of knowledge but it’s the organisation within a practice which can make a difference to whether the

patient care happens or not. For example, if a system isn't in place for how prescriptions get signed, obviously there are patient safety issues." GP06

"It is clear that by having had trainees and staff changing coming from outside on a regular basis, willing to say "why are you doing things like that?"; over the years, our systems have become much better defined" GP10

Clinical governance arrangements

The introduction of clinical governance in 1997 brought with it the development of clinical guidelines by the National Institute of Clinical Excellence (NICE), national service frameworks for management of major diseases, and clinical audit. GP practices were expected to engage with this process as a mechanism for increasing the quality of care. It was acknowledged that training practices, as part of their process of educational accreditation, are expected to be explicit about their clinical governance arrangements, participate in learning related to clinical incidents (such as significant event analysis) and undertake clinical audit against national guidelines. It was also acknowledged by participants that since the introduction of QOF as well as external inspections by the Care Quality Commission (CQC) clinical governance is now well embedded within non-training practices as well.

"That is of relevance is audits and significant event analyses. Before QOF came into existence there were distinct differences between training and non-training practices when it comes to in-house training and significant event analysis." GP02

Developing opportunities to learn together

Prior to becoming a training practice, it was recognised that different clinicians in the practice team would approach similar clinical issues in different ways. The process of approval required that practices had guidelines and protocols (as described previously) but also meetings that were educational and multiprofessional. Practices used the process of accreditation to develop learning fora in which they agreed protocols and guidelines. This has the impact of reducing variation in clinical practice, increasing standardisation, and dealing with knowledge gaps amongst clinicians.

“Rather than say to somebody that they were out of date, it was easier to say let's look at this because we need to make sure that we are up to date for training standards. So, it possibly gave us an easier way to bring about those changes.” GP06

Adapting learning materials for all staff groups

Training practices are expected to develop an induction pack for newly joining learners. This induction is intended to describe the arrangements for supervision of learners, key meetings, and other such valuable information for any new starter. Adapting this for other members of the staff was a positive consequence of the process of developing education in the practice. By developing such an induction pack, particularly for locum and new doctors, it was thought to improve orientation to the practice and improving patient safety.

“the fact that we wrote our induction booklet for the registrars meant that we started looking at the practice and asking questions what computer systems we had, what screens we had. We adapted that for locums and new doctors joining as well.” GP08

Reviewing staffing levels

Another feature of training practices that has an impact on patient care is the number and type of staff. Interviewees described training practices as having “more staff” than non-training practices as well as a broader range of types of staff. It was acknowledged that one of the benefits of being a training practice was that learners provided an element of service provision thereby sharing out the workload and allowing more time for patient care. It is notable that several GPs interviewed also identified the breadth and type of staff being more diverse in training practices relative to non-training organisations. This means that patients are more likely to have a more holistic and satisfying experience from their practice.

“an element of bringing a spare pair of hands so that you do get sharing some of the workload out” GP08

“Training practices are more likely to have a nurse and practice manager” GP01

“And they you know, even, they do contribute service provision. So actually, even though the practice would be able to manage without, having them there makes it almost a little bit easier for everybody.” GP09

Use of space for education

GP trainers recognised the need for conducive spaces in the practice where education can be facilitated, whether this is with individual learners or as groups in meetings. Whilst limitations to physical space may be a barrier to expanding the amount of education conducted by a practice, it was the impact of how space is used and developed that was deemed to have an influence on patient experience.

GP trainers described how the patient's experience of their interaction with their doctor started long before entering the consulting room. The way in which the practice entrance and reception were set up was recognised as having an influence on patient perceptions. A well-designed and open space was acknowledged as placing patients at ease prior to initiating a consultation. Likewise, the interaction of patients with receptionists had an influence. Screens acting as barriers between the patient and practice staff or dark and unclean reception areas were thought to have a negative impact on patient experience. GP03 and GP07 were particularly focused on the importance of space and its role in improving patient experience.

“Just as important is the waiting area. Training practices are often in purpose built premises with nice waiting areas and notice boards etc., whilst the patient is waiting making it comfortable for them, information for them is very important. We forget that. When you go to your next practice always think that the consultation starts when the patient makes an appointment to see the doctor.” GP08

“we gave a lot of conscious thought more for the purpose of approval of the training to create a more tranquil environment. So, we ditched things like, everyone piling down at 11am if they haven’t got an appointment. We didn’t want the space to be heaving and I think that’s never changed. So, we’ve spread things out more by lengthening the appointments and we don’t always run an hour late. The building feels less like a place of stress. I suppose, that’s because we wanted to create an impression of a place that’s in control.” GP07

“So, I think maybe, in terms of accommodation, that’s one area that probably again is something that is different in training practices compared with ordinary practices. You will not be able to be a training practice if you are a lock-up shop with an outside toilet.” GP03

“I think the other way that space makes a difference is how easy is it for staff to be in contact with each other.” GP09

4.3.2 Influencing through educational leadership

The process of practice accreditation towards training status requires time and resources. This includes the engagement of all staff and partners in a process of practice and professional development, engagement with patients to manage expectations and a focus on achieving the desired outcomes. A key enabler in this context is the development of educational leadership. This leadership role in the accreditation process was most often vested in a GP most likely to become the designated trainer though not always.

The function of educational leadership related to the role of supporting the practice through the journey of accreditation towards training practice status. In addition, it also included acknowledgement and acceptance by GP trainers as peers; and an acceptance within the practice that the educational leader had expertise that was unique and contributed to the development of the practice.

Changing function of leadership

Participants described the function of educational leadership and identified that this changed over time. This was felt to be related to ensuring the practice adapted to embedding clinical education in the organisation. This included initially encouraging and convincing the key decision-makers in the practice to become a training organisation; managing and monitoring progress towards achievement of training practice status; preparing the practice for the arrival of a learner; and making sure that issues and challenges associated with learners were successfully managed. Key skills in educational leadership identified by the research participants included listening, delegating, bringing people together, and supporting through problem solving.

“The main initial challenge was getting the other partners to agree that moving towards training practice status was something they wanted. Initially, none of the partners wanted to take part in notes summarising.” GP08

Role-modelling and influencing others

Working in General Practice is acknowledged as a lonely experience and participants recognised the value of connecting with peer GP trainers through workshops and the ongoing contact with GP trainees in reducing that sense of isolation.

“I was having lots of contact with trainers most of whom I thought were fantastic people and great colleagues to have.” GP06

“we had so much out of the VTS in our time that we would not want that to happen, so we put our names in the hat to help with the course organising not expecting that we would be appointed but we were...” GP03

In turn, being recognised as a GP trainer gave credibility and influence within the practice and participants felt as if their voice was being heard in how the organisation was managed especially when it involved discussions about clinical education.

“Being the leader did provide power in the practice. It provided an external validation. You’re not just a GP working as a GP in the surgery, you’ve got an outward looking face with other people. Therefore, your partners turn to you for some form of leadership, you’re meeting with other people in other leadership roles, so it’s influencing you as a leader. Most of us learn from others doing certain roles, so you would bring that back into the practice. That does have a significant influence.” GP06

“It did have an effect on my power within the practice though. It gave me the ability to call certain shots.” GP07

Another key benefit of being an educational leader was the opportunity to role model behaviours to GP partners, members of the wider team and GP trainees. Amongst the behaviours identified included a willingness to be questioned and challenged about clinical matters, listening carefully to the views of all the team, treating colleagues with respect, keeping up-to-date and demonstrating values such as compassion with team and staff members.

“One of the incentives of being a training practice is being constantly watched by our trainees. This means having to set a good example.” GP02

“Senior doctors don’t like trainees knowing more than them about things, so if you know that they are going to have to debrief, they are going to want to make sure that they are saying appropriate clinical things and know where to signpost to. You don’t have to know everything but you should be able to signpost where further information can be sought.” GP06

“I then started a significant event booklet. I noticed I was the only one with significant events. I thought am I the only one making cock-ups. It is because my threshold was much lower. But the fact that I was doing it and it was there for everyone to see got everyone else doing it. With some of the older ones, it was the first time they were challenged by somebody about events and things and making them talk about this. It took 2-3 years. It was quite a journey.” GP08

“By discussing the cases, I am probably modelling that behaviour.” GP05

Participants were motivated to become involved in GP education through their own experience of education and its impact on their professional and personal development – a key factor being the influence of their GP trainer as a role model. Another consequence of the influence of role-models was the desire of participants to experience the sense of satisfaction and achievement gained through supporting GP trainees to become qualified GPs.

“I had just come out of training myself and I had witnessed the apparent joy that people who were teaching got. I held and still do, hold my trainer in huge esteem.”

GP06

Peers supporting GP trainers

Participants described challenges with being a GP trainer at times in their practices. A source of significant support for GP trainers was through local trainers’ workshops¹². Trainers’ workshops provided space for GP trainers where issues could be independently discussed and shared, and solutions explored. The workshops were a space where opportunities emerged for sharing best practice in clinical and educational work for GP trainers to take back to their own organisations.

¹² Trainers workshops are local networks of GP trainers’ who meet regularly to provide peer support and develop their educational skills. It is an expectation from local deaneries that GP trainers will be regular members of a trainer’s workshop.

“So, there is something in the trainers meeting together to workshop which can give you a voice when you go back to your own surgery, because you can comment & observe on good practice and you can say that you also would like our practice to have good practices.” GP06

“Entering a trainer’s workshop was quite important and suddenly you had a community that had no power over you in that sense. So, you could bring ideas from there or validation from there back into your workplace. It gave a way of seeing a new normal.” GP07

4.3.3 Influencing through learners

The participants described the presence of GP trainees in the practice as having a significant and profound impact on patient care through their influence on GPs trainers, practice systems, and directly on patients.

Learners influencing teacher professional development

GP trainers described how GP trainees influenced their professional development, and this in turn enhanced patient care. GP trainers described their interaction with trainees as being two-way and often complementary. Preparing tutorials and learning sessions, reviewing learner needs, reflecting together on each other’s communication skills and patient care, using technology to find information, and staying up-to-date to keep up with learner knowledge were identified as influencing the clinical

practice of GP trainers and therefore patient care. These perceptions were strongly expressed by GP03 and GP05, but others also recognised the influence of GP trainees on their professional development.

“I think if you are constantly having to teach and prepare stuff for tutorials or presentations or VTS or individual tutorials then you are more likely to keep your skills up to date than if you’re not.” GP03

“There is PUNS (patient unmet needs) and DENS (doctors educational needs) but there should be another term such as learners unmet needs are a GP trainers educational needs. If the learner comes to you with a question to which you do not know the answer this becomes an incentive for the teacher to find the answer.” GP02

“I think training influences patient care because it means that we don’t work in our office by ourselves. We are talking and we not only have the trainees there, I think you learn.” GP05

“It makes you start thinking what you are doing and why you are doing it. And quite often with me I often say that I am not the font of all knowledge and we should look this up together. The fact that we look things up is really helpful. That reflective practice was promoted by having somebody with you I have found quite helpful as well.” GP08

“you are constantly analysing your trainee’s consultation styles; consultation patterns and you’re doing that at the same time as sharing that learning which is shared surgeries or shared video surgeries together.” GP03

GP trainers learned from their trainees as well. The nature of the learning included the up-to-date guidance and management of disease conditions, new diagnostic tests and treatments, and methods for improving clinical care (e.g. quality improvement techniques). GP trainees were also asked to review complex patients to identify areas of relevance missed by GP trainers.

“The fact that I asked for the swap shows that even experienced GP can get stuck so you get a fresh pair of eyes looking at the patient. It makes it easier for the registrar to come to me with some of their problems. The trainee seeing some of my patients and I have looked after for months and years it’s nice to have a fresh pair of eyes and check out what is going on.” GP03

“I teach communication skills and I often think the trainee teaches me a lot of medicine, especially when they just come from the hospital. So, I’m learning at the same time (that) they are learning – it is a 2-way process.” GP05

“They’re working for their exams all the time. They’re right up to date with all the guidelines and everything, so they can say ‘Well, the guidelines says x, y and z’.” GP09

Learners’ influence on practice systems

It is an essential part of a GP trainee's postgraduate training to undertake quality improvement and audit projects. GP trainers recognised that this learning activity had the potential to influence patient care. Examples included improving prescription processes, developing and updating practice guidelines, and developing patient information and communication tools.

Perhaps more importantly, learners observed and participated in clinical practice, which stimulated reflection amongst GP trainers through questioning of established systems and processes in training practices. Such reflection led to review and often significant update of clinical systems.

"it was quite obvious that trainees would challenge not just myself but systems in the practice as well. Quite a few ideas did come from them so that was one helpful thing. Even with medical students they would ask challenging questions as well (e.g. why did you give this statin and not the other one?). The fact that as a practitioner you got that I think was really helpful. The fact that you get that really does help patient care."

GP08

"sometimes they want to make a difference and they challenge themselves with quite complex QI projects which they do and they can then bring about change to the systems within the practice. This is quite good for team working overall." GP06

"I think also there is no doubt that registrars themselves get involved in some of the hard and dirty work of system change. So, by audit and analysis of practice they will take on a project and change, like a patient leaflet or a process through the practice like a baby clinic and aspects of the patient journey." GP03

Learners' influence on patient care

GP trainers acknowledged and recognised that GP trainees have up-to-date knowledge of clinical care and guidelines which has a positive effect on patient care. In addition, trainees have more time to consult with patients – this means that they are likely to provide more comprehensive assessments (thus picking up critical symptoms and signs potentially missed by others) and patients are likely to have perceived being listened to.

“experienced GP can get stuck so you get a fresh pair of eyes looking at the patient. It makes it easier for the registrar to come to me with some of their problems. The trainee seeing some of my patients that I have looked after for months and years - it's nice to have a fresh pair of eyes and check out what is going on.” GP08

“The quality of the current cohort of trainees coming through in our area is extremely high and that in itself will have an impact because they have the training to provide good patient care, they are up to date and the pace of change in medicine is so fast, that having people that are up to date demonstrates that their knowledge is far greater. They are aware of where guidelines are and they have been brought up with them far more than some of the older doctors.” GP06

“The issue about the relationship between the quality of clinical care is an important one. By having a GP trainee, you create additional time for patients and therefore that has an impact upon the quality of clinical care.” GP08

“I think also because they spend more time with patients, partly because they need their learning to do things but actually the patients value that. I think they also go over some things with a fine tooth- comb and think about things and pick things up that sometimes we miss.” GP09

There were mixed views about the impact of having GP trainees providing care upon continuity of care and patient satisfaction. Whilst it was seen as important to instil the importance of continuity of care in GP trainees, it was also thought that diluting the experience by sharing (especially complex) patients between a GP trainer and trainee would have an adverse effect on patient satisfaction.

“each individual partner had somewhere between 1700 and 2000 patients and those of (which were) Jim’s patients were my patients as well. One fairly quickly developed continuity of care because you were so restricted with patients really. That was the beginning of my primary care calling.” GP03

“The main challenge with training is that it has an impact upon continuity of care and dilutes this for patients. This can cause significant problems for patients, and possibly effect patient satisfaction.” GP01

4.3.4 Influencing through educational process

GP trainers involved in the study noted that engagement with educational activity had an influence on their and others’ interactions with patients, other GPs, practice staff, and the wider primary healthcare team. This influence was mediated through enhanced communication and consultation skills; reflection on clinical care (with individuals and teams); collectivised learning characterised by a

safe space to share and learn; involving the whole team in clinical education; and team working characterised by a less hierarchical and more open environment.

Enhanced communication and consultation skills

Trainers described the significant influence of enhanced communication and consultation skills on patient care. Involvement in clinical education required GP trainers to enhance and maintain communication skills. This in turn improved patient care by uncovering patient ideas, concerns and expectations thereby improving patient satisfaction and concordance with medical advice and treatment. Improvements were not purely related to the quality of communication and consultation skills – it was acknowledged that the importance of time for patients to be listened to was appreciated.

“My theory for better patient satisfaction is that in training practices doctors are generally better at communication. If the GP is good at communication the patient feels listened to, the hidden agenda is often uncovered, and explanation involvement and engagement in the management of a problem is better achieved. This process is ingrained in all training activity and is therefore likely to have a direct impact on the way people do their work is GPs thus having a positive impact upon patient care. Outcomes will be better because better information has been gathered through the communication process, and patients feel listened to.” GP02

“GPs in training practices are more adept at exploring the ideas, concerns, and expectations of patients and this can have the effect of improving patient satisfaction.” GP01

“For example, we would be very clear that the consultation event for the trainees was longer and that we were in no hurry to get down to 10 minutes. The other doctors also moved towards that. So, spending more time with patients - I could see that aspect changing.” GP07

It was also acknowledged that excellent communication skills are an essential requirement for effective interaction with learners.

“So, I realised that I can do the doctoring elements and I can listen to patients and explore their ideas & concerns and apply the same principle to education. So, it’s not a massive change in direction, it’s just enhancing the skills which you already have.” GP06

“Many of the skills are similar. For example, you sort of nurture your patients. You nurture them to get well again and you nurture your learners so that you can get the best out of them. You want them to become independent, so you want your patients to go and do healthy exercise and stop smoking. You would want your learners to read books and pass exams.” GP06

Enhanced communication skills developed and maintained through educational activity positively influenced interactions with the practice team and the consultations of non-training GPs with patients in their practice.

“Communication skills is more than consultation models. It is about communicating within the team as well. The fact that you talk a lot more in a flatter structure will improve that bit. The greater the communication in general is going to improve that consultation approach even amongst non-trainers.” GP08

“Also, with the non-trainers, they may well be exposed to the registrar sitting in and giving feedback on consultations etc. We ensure that all trainees sit in with all the doctors in the practice. The non-trainers also sit in with video analysis tutorials. Even if this is once a year that is great. There is something about the fact that non-trainers in a training practice will get exposed to communication skills.” GP08

“Now, I do internal appraisals for all salaried doctors and part of that is going through consultations. I sit in with the salaried doctors...” GP05

Less hierarchical and more open environment

Several GP trainers described how becoming involved in GP education resulted in a change in the hierarchical nature of their practices. This resulted in a greater ability to challenge one another, shifted the focus of the organisation towards improved quality of care, and altered relationships with receptionists and other staff.

“that one or two senior partners at the other organisations have held power far more tightly and it’s far harder for other individuals within their organisations to have changed practice. Whereas, we have something here where we are fairly willing to challenge one another and even junior members of staff can get their point across. Now, that could be an issue and says something about the training attitude of the organisation.” GP10

“For better or worse, it’s certainly reduced the ‘shop-keeper’ mentality and the money linking. That was no longer the sole concern. That quality, care and being an educational organisation was foregrounded.” GP07

Enhanced communication in the practice arising from involvement in education was associated with a less hierarchical structure within training practices. Breaking down barriers between receptionists and GPs was particularly relevant to patient care. It meant that when a receptionist was concerned about a patient they were encouraged to contact a GP sooner rather than later thus preventing their condition getting worse. It also meant that patients would experience an improved and individualised service resulting in enhanced satisfaction whilst preventing confrontation at the front desk and complaints.

“there was a much more flat structure in training practices and much more hierarchical structure in non-training practices. For example, the receptionists make tea for the doctor and take it to them. In a lot of training practices doctors make tea for the receptionists.” GP08

“There was perhaps a drop-in formality. So how we addressed each other changed and I guess it forced me to have a relationship with reception, in a way that I didn’t before or may/may not have otherwise had.” GP07

“As a practice, we had already made the decision to tell receptionists to call us by our first names.” GP06

“So receptionists come to mind. They are the first point of call. They will get a phone call saying, “I am getting a bit of indigestion type pain”. That could be an MI or indigestion. For them to feel how can they channel that through quickly and get the appropriate response. It may well be that they need an urgent appt with the GP that morning.” GP08

Efforts to reduce barriers between staff were not limited to receptionists but involved other staff as well. The influence of reduced barriers to communication and flatter hierarchies between staff was also noticed in collectivised learning as a practice.

“but we try and ensure in our practice that everyone from the reception team through to healthcare assistants and nurses, psychologists, summary GPs, GP registrars, partners - all has a voice, have voices around the meeting table and have equal voices. So, from that point of view, our hierarchy is still hopefully flat. Some opinions are often still firmly held but I think we have been together long enough to be able to challenge those opinions.” GP03

Collectivised learning

All GP trainers involved in the study highlighted the influence of involvement in clinical education on collectivised learning in training practices. Skills learned and utilised in education (such as communication and facilitating reflection) were thought to be important in creating team meetings that were inclusive and safe for individuals to share narratives without fear.

“The fact that we talked a lot more formally in clinical meetings and record significant events and discuss them without fear of being blamed. Feedback from other members of staff and putting them into practice as well. Staff having their own meetings. These things did not happen when I first arrived there.” GP08

“Generally speaking training practices are more inclusive of all team members in their meetings. There is a lot of shared learning that takes place in training practices. In non-training practices GPs tend to work in isolation from the rest of the team.” GP02

“Well I think probably, I guess in terms of consultation skills and communication skills, those are transferable to meeting situations. So, I can see that when I go to meetings be that at the practice or be it in a wider context, you can usually pick people who are more facilitative and constructive in meetings because they have learnt skills that have allowed them to learn meetings skills which are more effective.” GP03

Learning together in this manner was seen to have significant benefits for patient care. Bringing together different perspectives (from different members of the team) meant that misconceptions were minimised, team interactions were more effective, and sensitive information more likely to be shared. Overall care was more likely to be holistic. Meetings were also deemed not to be swayed by influences such as drug sponsorship and more likely to follow best practice such as guidelines developed by NICE.

“So before training it might’ve been someone who offered to attend from a company if we provided lunch. Whereas we became more needs focussed as a surgery. Although it didn’t change the actual content of the meeting itself, it changed who actually came to the meeting. Also, we probably challenged people more to meet our learning needs.” GP06

“All of those integrated data sharing will make the person going in (other than the GP) better informed about the patient. So I would expect the patient care to be more holistic.” GP01

“As a consequence of becoming training organisation, members of staff spend more time with each other talking about difficult cases, GP trainees ask difficult questions from more members of the team, and team’s work better together as a result of the development of the practice as learning and teaching organisation. As a consequence patient care is improved. One trainer told me how useful she found it to become an educator as it dramatically improved her communication skills with her own patients.” GP02

Another influence on patient care was the recognition that by learning together, errors and mistakes in patient care are more likely to be picked up. Shared learning experiences are also likely to result in gaps in knowledge being identified and addressed thus preventing patient harm.

“If a mistake happens in a training practice this is more easily picked up. Because we learn together issues are brought up.” GP02

“Having better relationships with people makes it much easier to pick up the phone and make a query to someone that you actually know rather than an anonymous individual, note or address on a piece of paper. From a pharmacy point of view that relationship grew from strength to strength. That very often did result in improved patient care. Such as we would check that they had a particular drug in stock before prescribing it. For example, before sending them around the corner for their Acyclovir. The pharmacist was able to suggest an alternative if that drug was out of stock. That did make a difference to patient care.” GP06

Learning together had other benefits such as team members getting to know and value each other; as well as improving their understanding of each other’s roles and limitations. This was considered vital to improving patient care.

“If we are all valued as members of the team, then we are all doing our job and feel better about what we’re doing. So, they (we) give better care.” GP05

“if you’re put in a situation where you can actually get to know people in a better way, you are talking about how you all put into a patient or in a group and then you can understand roles more and what peoples values are and how they tick & function. So, I think if you’re in that sort of situation- which often happens if you’re discussing patient-based things or a significant event analysis- if it’s well facilitated or critical incident or particularly when things go wrong it’s a huge amount of learning.” GP09

Reflective practice

Developing reflective practice amongst learners was a key function of being a GP trainer. However, it was also acknowledged that reflective practice in the training practice was a powerful driver for improving patient care.

The collective benefit of enhanced communication skills, a less hierarchical and more open environment, and collectivised opportunities for learning were key elements in enhancing team-based reflection within the practice. All participants regarded this as essential for good patient care.

“It makes you start thinking what you are doing and why you are doing it. And quite often with me I often say that I am not the font of all knowledge and we should look this up together. The fact that we look things up is really helpful. That reflective practice was promoted by having somebody with you that could be medical students who I have found quite helpful as well. In that context, it is that challenge bit when they are making you think.” GP08

“In my first practice one of the partners was not prepared to show the consultation. He was not even prepared for a trainee to sit with him to observe him. This was the same partner used to get the maximum number of complaints from patients. It isn’t enough to reflect on clinical practice, it also requires clinicians to change their behaviour as a consequence of reflective practice. If people do not reflect how can they change, how can they improve their clinical practice? Is there something that the doctor knows about themselves which they do not wish to confront or change?” GP02

“So, the constant stimulus of teaching is a little nudge to review where you are at, what best practise is, etc. Quite whether non-training practices get the same nudge, I don’t know. Clearly, it’s not just training practices that have that nudge but it’s more striking.” GP11

Involving the whole team in the delivery of clinical education

It is an expectation that training practices involve the whole team in the delivery of clinical education. This involves receptionists, nurses, and other non-training GPs delivering or supporting clinical education. GP trainers interviewed described the involvement of others in the practice in engaging with learners as having benefits for patient care.

GPs in the practice who were not the designated trainer frequently were involved in giving tutorials, providing feedback on clinical matters and consultation skills, and support with audit and quality

improvement projects. Involvement in these activities meant that the GPs needed to update themselves whilst preparing presentations or providing advice/feedback on a clinical matter. It was also noted that non-training GPs had to review and consider communication skills when they had a learner sitting in with them on consultations.

“whether that is the shared tutorial or practice meeting, whether it is audits or whether it’s projects, whether it’s the practice nurse doing some teaching around practical procedures - those are the things that would go on in a training practice, that maybe wouldn’t go on in a non-training practice.” GP03

“Well, the fact that someone is supposed to be giving clinical talks means they go and read up stuff they otherwise might not have done if she was not giving a tutorial or talk. The fact is that she is updating herself when she might otherwise would not have done so.” GP08

The need for robust educational and clinical supervision with GP learners is essential to ensure safe clinical care. GP trainers recognised that arrangements for supervision resulted in improved patient care. The act of observing a trainee’s clinical practice enhanced performance.

“They are very similar in that you are trying to pick up, from what your trainee is struggling with and what your patient is struggling with. So, you listen more attentively and you look for more cues that the patients give. You look at them from your trainee and you teach your trainee communication skills and consultation skills, that you actually more likely to apply them for yourself.” GP06

“supervision arrangements have to be so good that the impact upon patients is generally minimal or actually has the impact of improving patient care.” GP01

Seeking and sharing best educational practice

Several trainers described how being involved in education resulted in bringing best educational and clinical practice from other organisations back to their practices. Whilst it was recognised that being involved in the training accreditation of another organisation was an essential requirement, other opportunities were also identified.

“I used to use my patient scenarios for writing cases, but more importantly, I learned from the patient scenarios that I used as well- Oh you know what I don’t fully do that. That has been really helpful in updating my knowledge as well.” GP08

“I feel that training practices are innovative and it’s interesting when you hear another practice benefitting from something and you want to benefit from it as well or you want a change. That’s good, why can’t we implement that change? So, they are much more outward looking, forward thinking and proactive.” GP06

“Most people do training visits because they want to share good practice or borrow or steal or bring back good practice!” GP03

“So actually, here are people whose practices I could look at are saying that’s how I would like my practices to be and then they would be talking about this is what I am doing and this is the next stage to the exciting things and these are the things that are happening out there and thinking how can I relate that to what I’m doing.” GP09

4.4 Summary of findings

To interrogate the nature of the association between training practices and improved outcomes and to address my specific research questions, I undertook a series of semi-structured interviews with a purposive sample of GP educators involved in front-line education and with experience of the assessment of quality of clinical and educational practice. Participants described how their personal and practice engagement with, and participation in, clinical education started early in their clinical careers and extended over significant periods of time. They described complex personal and organisational reasons for becoming involved in clinical education, including their own positive experiences of training and role-modelling; overcoming the loneliness and isolation of clinical practice; accessing workforce and financial resources for their practices; and because of the perceived benefits on patient care.

Participants recognised their educational journey towards becoming a GP trainer and, as part of this, the practice achieving training status, as having positive influences on patient outcomes. This was partly related to achieving the standards required for accreditation as a training practice. This process required collective effort on the part of the whole practice to ensure that education was embedded within the fabric of the practice and seen as an essential component in the delivery of high quality

services. Key areas identified by participants as having a positive influence on patient outcomes as a consequence of being a training practice included improved record-keeping, developing and improving organisational systems and processes, reviewing governance arrangements, developing opportunities to learn together as a group, adapting learning materials for all staff groups, reviewing staffing levels, and use of physical space.

The emergence of educational leadership within a predominantly clinical environment was described by the participants as being significant. The function of that educational leadership in introducing and embedding clinical education in the practice, shifted over time. During this time of transition, the function of leadership was also to maintain a focus on the value of education on patient care. It was recognised that GP trainers, through their educational leadership role, influenced others and acted as role-models; bringing the ideas, values, tasks, and practices of education to their practices. Being recognised as a GP trainer offered significant influence within their practice. The value and importance of peer support for GP trainers lay in empowering them through acknowledgement of their educational expertise.

GP trainees when practising and learning in training practices were recognised by participants as having a profound influence on patient care through their effect on patients directly, through improving practice systems, through the professional development of their GP trainers, and through wider influences on the behaviours and practices of the healthcare team. At the heart of this influence was the curious nature of learners aligned in an environment that responded constructively to their questioning and challenge. Participants described how trainees came with up-to-date knowledge about clinical issues and had more time to spend with patients. They also questioned practice systems and undertook projects to improve the quality of areas identified by the practice as requiring review and development as part of their own development and learning. Participants described how their

interaction with their trainees was a two-way learning process with each bringing different aspects to the relationship. Trainees influenced their trainer's (and often other doctors and nurses in the practice) professional development, and this in turn improved their care of patients. The influence of GP trainees on patient continuity of care was unclear from this study with varying views outlined.

Engagement with educational activity had an influence on participants' and other's interactions with patients, other GPs, practice staff, and the wider primary healthcare team. The influence of educational ideas, values, skills, and practices was mediated through enhanced communication and consultation skills of clinical and non-clinical staff; reflection on clinical care (with individuals and teams); collectivised learning characterised by safe spaces to share and learn; involving the whole team in clinical education; and team working characterised by a less hierarchical and more open environment.

Participants reflected on the barriers to engagement with clinical education in General Practice. They described pragmatic issues such as lacking appropriate physical space or lacking clinical capacity to provide high quality education. Other factors included barriers to engagement with clinical education such as requiring university qualifications and an elitist view of training amongst educators.

4.5 Conclusions

In this chapter, I have identified how these clinician-educators perceive clinical education in General Practice as a mediating influence on patient care. These themes have been generated by listening to and interpreting the narratives of participants in this study. Whilst the results of previous quantitative research have highlighted the association between clinical education in General Practice and better

patient care, the results of this research show us how this might be achieved. In the following chapter I explore these findings with respect to the established empirical and theoretical literature; develop an understanding of how these findings influence my work as an educator and the field of medical education more generally.

Chapter 5 Discussion

5.0 Introduction

This chapter starts by identifying how the established empirical literature and theoretical concepts concerning workplace learning can be used to interpret these findings; and where theory needs to evolve to better understand this phenomenon. There is an exploration of the implications of this work for clinical educators, medical education policy and my own work as an educational leader and manager. I shall build on the methodological issues outlined in chapter three and explore how choices in this study have contributed to our understanding of the phenomenon and identify further areas for research in the future. The chapter ends with an exploration of the impacts of my research journey.

5.1 Summary of the results

In the previous chapter are outlined the findings generated and interpreted from an analysis of semi-structured interviews with GP educators. The results indicated that patient care in training practices is influenced through: achieving educational standards; educational leadership; the presence of learners; and embedding educational process.

5.2 Relationship to the empirical and theoretical literature

In chapter two I set out the current literature (empirical and theoretical) related to and shaping the overarching questions in this study: *does GP education influence the quality of clinical care and how is this influence mediated?* In this section I identify how the findings from this work resonate with the

established empirical and theoretical literature, where they add new insights and what understandings can be gleaned.

5.2.1 Identity formation and agency in GPs as educational leaders

Jonathan Lake's (2013) doctoral work described the relationship between the clinical and educational practice of GP trainers where key skills are used interchangeably between these two areas of activity. He also identified that GP trainers reconstructed their identities through teaching. Similarly, Smith et al (Smith et al., 2018) studying clinicians' educational and clinical practice in a United States residency programme found that skills required were similar for both patient-physician and learner-teacher relationships. The learnings from this study are consistent with that of Lake (2013) and Smith et al (2018). Study participants clearly described the development of their communication and consultation skills through training; the importance of GP trainees in challenging and progressing their clinical diagnostic thinking; their role in influencing the nature of relationships in the practice as well as collectivised learning; and their development and influence as educational leaders in their practices.

"One trainer told me how useful she found it to become an educator as it dramatically improved her communication skills with her own patients." GP01

"I often think the trainee teaches me a lot of medicine, especially when they just come from the hospital. So, I'm learning at the same time (that) they are learning – it is a 2-way process." GP05

I was labelled as the educational lead. It was concerned with motivating the team, delegating, listening to people to hear their concerns. GP06

The development of GP trainers as leaders in their practices is associated with a sense of agency that has the potential to significantly influence patient care. I assert that this offers a powerful mechanism for explaining how patient care is improved by GP trainers beyond the individual consultation with their own patients to all care delivered within training practices. Celia Whitchurch's work on the development of professionals in third spaces suggests that traditional assumptions, beliefs and practices are challenged and reviewed. In the third space new ways of thinking and practices may emerge. Whitchurch (2008) suggests that the third space is a transformative one. In this study, the development of participants as educational leaders in their practices opened the gateway for them to introduce new ways of thinking (engagement with innovation); values (changes to the way training practices learn and engage with patients); and practices (modernised systems and processes).

The findings from this research therefore resonate with Celia Whitchurch's (2008) work on professionals at interfaces of practice (in this case clinical and educational). This study suggests that GPs becoming trainers (and the environment in which they work) undergo a significant transformation and become different. This transition shifts individuals to becoming clinician-educator-leaders. However, it is unclear **how** GPs starting at the interface between clinical and educational practice develop their identities as clinician-leaders. Sfard and Prusak's theory of identity formation (Sfard & Prusak, 2005) suggests that individuals evolve by seeking to bridge the gap between who they are and who they want to be. This is an area where further ethnographic work following the development of new GP trainers, and their interactions within their practice, would elucidate the mechanisms and means by which they develop their competencies and identities as clinician-educator-leaders.

5.2.2 Learners and their influence on learning and clinical environments

Pearson (2010) described key elements required for maximising the learning potential of GP trainees in a practice. These included the recognition of learners as legitimate members of the team and having a right to be in the practice, respect for their needs as learners, offering relevant experiences for their learning, and engagement at an emotional level to support their development. Similarly, Blaney (2005) determined that GP trainees' self-identified educational needs drove their learning and the contribution of the GP trainer related to the promotion of self-reflection and the development of a facilitative learning environment. Immersion within the learning environment and facilitated reflective practice alongside individually driven learning on the part of GP trainees was described as the mechanism by which they become increasingly socialised in their practice.

For Pearson and Blaney, in common with much of the established literature on GP education, there is a significant focus on the influence of the learning environment as a space for the development of GP trainees as professionals. Their work chimes well with literature from undergraduate medical education (Miles and Leinster, 2007) and university students (Lizzio et al 2002). However, based on the empirical literature, it is unclear how and to what extent GP trainees (or for that matter other learners) influence the learning environment and patient care. By contrast, findings from this study highlight that GP trainees had a significant effect on the learning environment in General Practice. Influences included making improvements to practice systems and processes; influencing trainer professional development; and directly on patients. This research, therefore, proposes a shift in focus towards the interplay between learners and their learning environment as being far more bi-directional and important than often considered in apprenticeship models of training (Swanwick, 2005).

McLaren et al (2013) in their study of the experience of GP trainers managing trainees in difficulty, first identified the significant impact of learners on practice staff, patients and clinicians in their training practice. Findings from my research affirm that GP trainees have a significant influence on patients, practice systems, and their GP trainers. The research also identifies how this influence is mediated. GP trainees bring up-to-date knowledge of clinical practice and guidelines and have more time for consultations – they identify issues critical to improving the care of their patients. They question and challenge GP trainers – such a challenge is a significant driver for professional development and improved patient care. GP trainees question established and historic practice processes and systems, often using their insights to change these for better patient care.

GP trainers described how the process of accreditation acted as a catalyst to prepare the practice as a learning environment. They described changes to practice systems and processes; collectivised learning (such as practice meetings); and the engagement of all staff for supporting the arrival of a learner. These changes to training practices ensured that education was an activity embedded within the practice and was regarded as an integral part of the delivery of clinical services rather than as a separate and discrete entity. These activities clearly signal the importance and legitimacy of the presence of GP trainees in the life of the practice.

“Part of the accreditation and approval of a training practice is to see that the education is embedded within the organisation and supported within the organisation. So, the training element is not just that dyad between the trainer and the trainee, it is by the nature of the training environment, it encompasses the organisation”. GP11

Lave and Wenger (1991, 1998) describe legitimate participation of new entrants into communities of practice. A training practice can be regarded as a community of practice and a GP trainee as a legitimate participant in the life of the practice. The empirical findings from my work therefore align with this theoretical perspective. Lave and Wenger also theorised that learners have significant influence on the community of practice. This influence increases as they become more central to the community of practice through the learning of routines, rules and attitudes their influence increases. The GP trainers in this study confirmed the influence and importance of GP trainees on the practice. My work with GP trainers did not identify whether the influence of learners on the practice was immediate or involved a period of assimilation. Further research tracking the development and assimilation of GP trainees in their training practice will usefully provide insights on the conditions that maximise their influence.

O'Brien and Teherani (2011) explored the use of workplace learning in improving patient care. They proposed two mechanisms for achieving this. The first is through change driven by learners and the second from externally mandated change. They suggested that learners are "change agents" and that the nature of the knowledge exchanged between old-timers and new-timers is bidirectional not unidirectional (as is often portrayed in the established literature). They hypothesised that bidirectional exchange of knowledge in turn changes the practice of old-timers and the practice.

Participants involved in the interviews valued GP trainees' "up-to-date" clinical knowledge and their potential to offer patients the "latest" in clinical care. They also described how being challenged by trainees encouraged them to keep up-to-date with the latest clinical guidelines and protocols. Participants also described how they used their experience to help GP trainees resolve difficult issues and teach them consultation skills.

“I teach communication skills and I often think the trainee teaches me a lot of medicine, especially when they just come from the hospital. So, I’m learning at the same time (that) they are learning – it is a 2-way process.” GP05

This work empirically confirms O’Brien and Teherani’s (2011) view that there is a two-way exchange of learning between GP trainer and trainee. It also confirms that this two-way exchange of learning has an influence on the clinical practice of GP trainers and patient care. In that sense, GP trainees can be seen as “change agents”. However, O’Brien and Teherani are silent on the nature of the exchange of learning between the two. This study extends our understanding of the exchange of knowledge that takes place between GP trainer and trainee.

Eraut’s work offers useful insights into the development of early career professionals and the role of types of work; the resources for learning; and factors that influence learning. Eraut also describes the types of knowledge acquired by professionals – codified, cultural and personal. Blaney (2005) describes how GP trainees arrive with de-contextualised codified knowledge and through immersion in the learning environment and supported by the GP trainer to reflect on their learning, develop context-specific cultural and personal knowledge.

GP trainers in this study identified trainees codified or propositional knowledge as valuable to patient care and their professional development. In return, GP trainers offered experiential learning opportunities based on patient related issues, opportunities to reflect on their clinical work, and development on relational and communication aspects of care. The theoretical and empirical literature gives us no clues as to why GP trainers value such de-contextualised knowledge in GP trainees (particularly in the early months of their time in the training practice); especially given that

GP trainers tend to have high levels of personal and cultural knowledge particularly relevant to the nature of General Practice work.

Looking beyond medicine, the imposter phenomenon has been described in psychological literature. In this phenomenon, high achieving individuals believe they cannot live up to the expectations of others. The imposter phenomenon is thought to be widespread in society. It is thought to be more common amongst women, students, and those from ethnic minorities. The fear of failure and high levels of stress caused by such self-doubt are considered a driver (Parkman, 2016). In the face of such uncertainty it is possible that individuals turn to rationalism (in which knowledge is decontextualised and sanitised) in the belief that that it offers a superior and more concrete representation of reality, particularly in the face of the messiness associated with their own lived experience (Phelan, 2004). This raises the possibility that GP trainers are seeking out concrete and propositional knowledge to alleviate their anxiety. This is an area for further exploration through research.

5.2.3 Clinical education and workplace learning

Smith and Wiener-Ogilvie (2009) described the characteristics of a postgraduate training practice that influence learning from the perspective of GP trainees based on a focus group study. These included the practice environment (relationships, flexibility in adapting to their needs, ethos and physical facilities), the role of the trainer (skills, knowledge, feedback and personal attributes), learning (perspectives, identification of learning needs and level of autonomy) and stress (workload, supervision and support, and clinical uncertainty). Their study described the often-intangible aspects of the environment for learning (e.g. importance of relationships) that are difficult to describe, measure and observe e.g. the importance of relationships. Whilst Wiener-Ogilvie's (2009) work involved GP trainees and my own research was related to GP trainers, many similarities can be drawn between the findings around the learning environment. These include: enhanced communication and

consultation skills; opportunities for reflection on clinical care (with individuals and teams); collectivised learning characterised by safe spaces to share and learn; involving the whole team in clinical education; and team working characterised by a less hierarchical and more open environment. My research also supported Wiener-Ogilvie's work (2014) that suggested developing inclusive learning environments has positive benefits for preparing GP trainees in their future role as GPs.

"but we try and ensure in our practice that everyone from the reception team through to healthcare assistants and nurses, psychologists, summary GPs, GP registrars, partners - all has a voice, have voices around the meeting table and have equal voices. So, from that point of view, our hierarchy is still hopefully flat. Some opinions are often still firmly held but I think we have been together long enough to be able to challenge those opinions." GP03

"whether that is the shared tutorial or practice meeting, whether it is audits or whether it's projects, whether it's the practice nurse doing some teaching around practical procedures - those are the things that would go on in a training practice, that maybe wouldn't go on in a non-training practice." GP03

Smith and Ogilvie-Wiener (2009) and Ogilvie-Wiener (2014) emphasised the importance of the component elements (the trainer, practice and learning) of the whole system being optimised to enhance the learner experience. They treated each as separate without examining the inter-play between the components as part of a whole complex system. By contrast, Stacey (2000) proposes that it is the interactions between the component parts of a complex system that are relevant to the functioning of the whole system. O'Brien and Teherani (2011) propose that seeing learners as change

agents requires a significant amount of work on the part of a practice. They suggest the introduction of learners:

“requires a major shift in entrenched hierarchies, beliefs, and practices. It requires explicit attention to the role of learners as change agents so that change is normalized and integrated into daily practice...” (e12)

The participants in this study described a disruption to their practices when they introduced notions of becoming a training practice.

“The main challenge with training is that it has an impact upon continuity of care and dilutes this for patients. This can cause significant problems for patients, and possibly affected patient satisfaction.” GP01

“There will be time. There will be an understanding of or lack of understanding of why it is important. There will be (we are back to Johari’s window) a blind to why it is best practice. Not understanding the benefits and a fear of being exposed as maybe as not at the top of your game.” GP03

Stacey (2000) proposes that such disruption to the equilibrium of a complex adaptive system (e.g. a GP practice) generates the potential for new ways of interacting and doing things to emerge – the shift towards a new equilibrium arises. The arrival of a GP trainee (or for that matter any other learner), in a similar manner, acts as a disruption to the equilibrium of a practice and the emergence of new ways of doing things.

“I then started a significant event booklet. I noticed I was the only one with significant events. I thought am I the only one making cock-ups. It is because my threshold was much lower. But the fact that I was doing it and it was there for everyone to see got everyone else doing it. With some of the older ones, it was the first time they were challenged by somebody about events and things and making them talk about this. It took 2-3 years. It was quite a journey.” GP08

The emergence of new ideas, ways of doing things, and challenge to traditional approaches influences GP trainers, practice staff, and patients in unknown and unpredictable ways. Newcomers (learners) do not merely bring new, often propositional, knowledge and improve care through a bidirectional exchange of knowledge with old-timers, they also enter “communities of practice” or “complex adaptive systems” that anticipate disruption and potential instability that influences patient services.

“Rather than say to somebody that they were out of date, it was easier to say let’s look at this because we need to make sure that we are up to date for training standards. So, it possibly gave us an easier way to bring about those changes.” GP06

“It is clear that by having had trainees and staff changing coming from outside on a regular basis, willing to say “why are you doing things like that?”; over the years, our systems have become much better defined” GP10

As previously mentioned, the introduction of a learner to a social environment generates disruption and new possibilities which Engeström (1987) described as expansive learning opportunities. Stacey (2000) suggests that the nature and diversity of communicative interaction; power relations (turn-taking and turn-making); and development of norms and rules within a complex adaptive system (such

as a practice) add to the disruption of learning. Whilst Lave and Wenger describe how learners gain legitimate entry into a learning environment, Stacey's (2000) theoretical work on complex systems offers insights for understanding how communication between individuals and power relations are inter-connected. Stacey (2000) suggests that one feature of complex responsive processes (e.g. interactions between people) is the notion of gesture-response cycles: various verbal and non-verbal gestures require a response for communication to take place. The repeated gesture and response between individuals continually modifies the evolving narrative. Communicative interaction of this nature does not arise in a vacuum - it emerges through the historic gesture-response cycles that have occurred before the present, and such interaction has a history. Communicative interaction requires turn taking, and this in turn generates power relations that have the impact of inclusion and exclusion from the conversation.

In my research, engagement with clinical education altered the nature of communication and power relationships. Participants in my research described changes to the way individuals communicate in their practices because of their engagement with clinical education. These different kinds of conversations had an impact on the whole practice and how staff communicated both with each other and patients.

Communication skills is more than consultation models. It is about communicating within the team as well. The fact that you talk a lot more in a flatter structure will improve that bit. The greater the communication in general is going to improve that consultation approach even amongst non-trainers." GP08

"Having better relationships with people makes it much easier to pick up the phone and make a query to someone that you actually know rather than an anonymous individual, note or address on a piece of paper. From a pharmacy point of view that

relationship grew from strength to strength. That very often did result in improved patient care. Such as we would check that they had a particular drug in stock before prescribing it. For example, before sending them around the corner for their Acyclovir. The pharmacist was able to suggest an alternative if that drug was out of stock. That did make a difference to patient care.” GP06

They also described learning opportunities where diversity of thought and the flow of communication between members of a team is enhanced. Opportunities to explore concerns and anxieties, deal with difficult patient or practice issues, challenge and be challenged in a safe manner, collaborate on patient care and practice development projects, and develop a sense of belonging (enhancing staff recruitment and retention) were described by GP trainers.

“As a consequence of becoming training organisation, members of staff spend more time with each other talking about difficult cases, GP trainees ask difficult questions from more members of the team, and team’s work better together as a result of the development of the practice as learning and teaching organisation. As a consequence, patient care is improved. One trainer told me how useful she found it to become an educator as it dramatically improved her communication skills with her own patients.”

GP02

Stacey’s work, therefore, offers a mechanism for understanding how the pattern of turn-taking and turn-making in conversations may be altered through engagement with clinical education, thus reducing hierarchy and evening the balance of power in otherwise uneven conversations such as the domination of doctors in healthcare interactions with patients and other workers.

“It is the ideological thematic patterning of turn-taking/turn-making that enables some to take a turn while constraining others from doing so” (page 148)

Evolving gesture-response cycles of communication can also lead to the development of emerging and abstract ideas and concepts, which in turn can be used to generate norms and rules. It has been argued that the interaction between individuals generates themes and knowledge, and repeated interaction of this nature leads to the formation of professional identity amongst groups.

“Of particular importance to the whole process is the emergent reproduction of themes and variations that organise communicative actions into membership categories. These tend to be themes of an ideological kind that establish who may take a turn, as well as when and how they may do so.” (page 148)

Thus, according to Stacey (2000) group and professional identity (e.g. within a training practice) is developed and maintained through a process of repeated interaction between members and with those from outside the group.

“There was perhaps a drop-in formality. So how we addressed each other changed and I guess it forced me to have a relationship with reception, in a way that I didn’t before or may/may not have otherwise had.” GP07

Participants described a more evenly balanced dynamic between GPs and other staff members resulting in a less hierarchical environment.

“that one or two senior partners at the other organisations have held power far more tightly and it’s far harder for other individuals within their organisations to have changed practice. Whereas, we have something here where we are fairly willing to challenge one another, and even junior members of staff can get their point across. Now, that could be an issue and says something about the training attitude of the organisation.” GP10

There is the vexed question of what comes first – is it that practices offering high quality care can adapt to the requirements of becoming a training unit or that the act of introducing education to a practice improves the quality of care? I think that such a dichotomy is superficial. It is likely that many non-training practices have the capability to respond to the disruption generated by the introduction of a learner (or for that matter any new member of a team or employee) and harness emergent knowledge to improve patient outcomes. The participants in this study identified the journey (over time) and circumstances (applying educational accreditation standards, emergence and influence of educational leadership, presence of learners, engagement with educational activity) that nudged their practices towards achieving better patient care.

5.2.4 Training practices as complex educational eco-systems

Love and Burton (2005) studied consultation patterns in General Practice and determined that these followed the properties of a complex system. General Practice is an environment where patients, staff, doctors and learners are socially connected to each other. Influences such as fluctuations in demand for appointments, levels of staffing, new learners, and even weather patterns generate instability and disruption in the way a practice responds. Critical to responding to these influences are the interactions between the components and how these responses can be routinised into the social life of a practice.

Training practices can be conceived as complex educational eco-systems that are characterised by the interplay between the different components, as discussed above. A distinction between my research and previous empirical work is that previous work has not focused on patient outcomes within such a complex system. My work has been specially looking to identify the influence of training practices on such patient outcomes. A theme to emerge from my research is that engagement with clinical education takes the role of being a facilitator for changing the ways in which practices respond to the internal and external factors that generate instability and cause disruption.

Traditional GP training is viewed as an apprenticeship model in which there exists a central one-to-one relationship between GP trainer and trainee. My research extends this thinking to propose that GP trainees (as learners) enter a complex educational eco-system recast as participant observers and alter the dynamic that exists between differing components of the system.

“it was quite obvious that trainees would challenge not just myself but systems in the practice as well. Quite a few ideas did come from them so that was one helpful thing. Even with medical students they would ask challenging questions as well (e.g. why did you give this statin and not the other one?). The fact that as a practitioner you got that I think was really helpful. The fact that you get that really does help patient care.”

GP08

Opportunities for learning, therefore, emerge through accessing knowledge distributed across all the components (human and artefactual) of the eco-system that is a training practice. Learning occurs through both observing and participating in the interactions between the component parts of the whole system.

“need to work with the sum of the parts as well as the whole; require linear as well as non-linear descriptions of the world; acknowledge that reality is emergent rather than fixed; and that we cannot be observers without being participants in the act that we are seeking to observe.” (Ahluwalia & Launer, 2012).

5.2.5 Responding to instability

In Foundations of Professionalism (an introductory module as part of the doctoral programme) I explored the impact of performativity on medical professionalism and clinical services (Ahluwalia 2012). Stephen Ball (2012: page 29) describes performativity as *“a technology that links effort, values, purposes and self-understanding to measures and comparisons of output.”* Performativity privileges the application of externally developed standards to a situation. It can be considered that performativity approaches in GP education include competency-based curricula (RCGP, 2009), assessment standards for recruitment (Patterson et al., 2000) and exit from training (Swanwick & Chana, 2005).

Participants described the importance of going through the process of accreditation to training practice status, and particularly, its benefit to patient care. Key areas influenced through the accreditation process were improved record-keeping, developing and improving organisational systems and processes, reviewing governance arrangements, developing opportunities to learn together as a group, adapting learning materials for all staff groups, reviewing staffing levels, and use of physical space. They also described their practices assessing their current state of readiness relative to that of the standards expected for training status. It turns out that such performative elements in education appear to be important in improving care – something I had not previously considered.

“Looking at systems, developing protocols, and the fact that you had to do that for your training accreditation visit was very helpful.” GP08

“They looked at the criteria for approval, they were surprised to see the gaps in their organisations and then spend time and energy on filling these gaps.” GP02

Argyris and Schön (1974) suggest that individuals develop their “theory in use” (an incomplete understanding of their organisation) and continually compare this against an external “espoused theory”. In this case, external standards for accreditation to training practice status could be viewed as an “espoused theory” and practice partners collective views’ on their readiness to do so as their “theory in use”. Their work assumes that organisations react to an adverse situation. However, becoming a training organisation in General Practice is not a reaction to adverse circumstances, it is a proactive choice – this being a recognised weakness of Argyris and Schön’s work.

Performative technologies are one end of a spectrum, the other being occupied by complexity science. Taken together these different epistemological approaches highlight the challenge and often contradictory situations faced by GP practices. In my FOP studies (Ahluwalia 2013), I offered a typology of complex and non-complex systems (table 5) highlighting their differing characteristics. Performativity is a non-complex system and has its greatest utility when applied to situations where there is a high degree of certainty about cause and effect relationships, and high degree of agreement about the actions needed to be taken amongst the actors involved. By contrast, complex situations arise when the cause and effect relationships are unclear, and there are multiple means by which a situation can be handled. For the latter, no clinical guideline or protocol can truly provide an adequate answer or range of answers to such complex situations. Interestingly, in this study GP trainers

described the benefits of applying performative tools (e.g. applying accreditation standards) as well as strategies designed to tackle more complex situations (e.g. introducing and embedding educational processes) as a mechanism for improving patient care thereby extending my understanding of the challenges facing GP practices and supporting the potential utility of such a typology.

Non-complex systems (e.g. performative tools)		Complex systems (e.g. patient centred care)
External	Observers	Part of the system
High	Predictability	Low
Linear	Relationships	Non-linear
Parts dominate	Systems view	Whole dominates
Low	Challenge	High
High	Process emphasis	Low
Agreement and certainty high	Best	Agreement and certainty low

Table 5: Characteristics of complex and non-complex systems

Stacey (1996) suggests that organisations face both types of challenges. An organisation’s response depends upon the degree to which the challenge creates instability. When the degree of instability created by demand or challenge is low rational approaches tend to be adopted (objective setting, action planning and monitoring). Situations likely to create significant instability generate a different response where technical-rational approaches are not enough, political ones come into action. Power relations, communication, collaboration and narratives dominate designed to reduce the level of instability and threat for the organisation.

Stacey's work builds on Argyris and Schön's thinking about mental models. It can be surmised that training practices as complex educational eco-systems respond to the level of instability generated by both internal and external challenges – whether reactive or proactive. In this research, the participants overwhelmingly thought applying accreditation standards to their organisations was beneficial to patient care. The introduction of educational tools, values and know-how by GP trainers (as educational leaders) influences how practices respond to significant threats and their impact on patient care.

5.2.6 The use of time and space in clinical education

In chapter two I introduced ideas taken from Fenwick (2014) about socio-materiality and the role of inanimate elements of the workplace and context for learning and patient care. An exploration of this through the interviews in this study identified several perceived differences between training and non-training practices. Participants described how the patient experience with healthcare starts long before a patient enters the doctor's room. Participants also identified that patient experience can be influenced, and that positive change in experience can have a similar effect on patient outcomes.

“Just as important is the waiting area. Training practices are often in purpose built premises with nice waiting areas and notice boards etc., whilst the patient is waiting making it comfortable for them, information for them is very important. We forget that. When you go to your next practice always think that the consultation starts when the patient makes an appointment to see the doctor.” GP08

Whilst my research identified the use of space in the learner and patient experience, I struggled to identify other potential areas where material actors may influence learning such as the role of computers, telephones, the layout of a consulting room. I explore this further in the section on methodological reflections.

Hawe et al (2009) proposed that systemic changes occur over time and that clinical education and its influence can be as such. A number of participants described the importance of time in encouraging educational changes to embed within their practice and colleagues to adjust to different ways of doing things.

“With some of the older ones, it was the first time they were challenged by somebody about events and things and making them talk about this. It took 2-3 years. It was quite a journey.” GP08

“So, my TTT journey was probably 3 or 4 years and I joined the trainers’ workshop long before I became a trainer. So, it was about being networked into all of those things that were there and beginning to become part of a community and practice even before I was part of it - so I was periphery part of it.” GP09

This research did not (and could not) identify the sequencing of activities required to become a training organisation, nor how the introduction of clinical education over a period of time influences patient outcomes. Such an exploration is useful but will require more sophisticated techniques that are beyond the scope of this research.

5.2.7 Summary

The findings of this research affirm the dual role of GPs as clinicians and educators using their skills interchangeably. Their development as educational leaders in their practices is associated with a sense of agency with the potential to influence patient care. GP trainers introduce new ways of thinking (engagement with innovation); values (changes to the way training practices learn and engage with patients); and practices (modernised systems and processes).

This research proposes a shift in focus towards the inter-play between learners and their learning environment as being far more bi-directional and important than often considered in apprenticeship models of training. Findings from my research affirm that GP trainees have a significant influence on patients, practice systems, and their GP trainers. The participants in this research offer first-hand evidence of O'Brien and Teherani's view of GP trainees as "change agents". GP trainees joining can be seen to disrupt the equilibrium of a training practice. Power relations, diversity of communicative interaction, and norms and rules influence how training practices respond to such a disruption to their equilibrium.

As described, traditional GP training is viewed as an apprenticeship model in which there exists a central one-to-one relationship between GP trainer and trainee. This research proposes an alternative view – one in which GP trainees (as learners) enter a complex educational eco-system recast as participant observers and alter the dynamic that exists between differing components of the system.

5.3 Implications of this research for my practice

Since 2016 I have been responsible for the commissioning and management of just over 4000 doctors in education to become medical specialists or general practitioners. This role involves operational management for the recruitment, placement and assessment of these doctors as well as quality management of learning placements in hospitals and GP practices. In addition, I support several regional and national priorities including development for key workforce groups, introduction of new clinical roles within healthcare provision and innovations in postgraduate medical education. The research from this thesis has several important implications for how I approach my work as a commissioning practitioner and a policy maker and for the wider community of GP educators and education researchers.

5.3.1 The well-being of junior doctors

Recent research into career destinations of foundation doctors has demonstrated that increasingly the proportion going straight into speciality training has continued to drop year-on-year since 2010. In 2018 fewer than 50% of foundation doctors entered speciality training down from over 75% in 2010 (Moberly 2018). When questioned junior doctors identified several factors that have encouraged them to “step-off” the training ladder. The significant factors included re-balancing their lives and work; fear of burnout because of the intensity of the work environment; and a desire to gain further experience before making a life-long career commitment. Whilst the trend towards dropping off the training ladder is apparent, it is not the case that doctors are leaving medicine – they instead take up roles providing service. The majority re-enter postgraduate training after a break that lasts between one to three years.

HEE (2018a), working with partners across the NHS, has initiated a wide-ranging reform of postgraduate medical education across England intended to address the significant concerns of junior doctors. These include initiatives addressing perceived inequities in the way their training is managed; increased flexibility in training trajectories that can last between five to fifteen years; reducing the burden of assessment; and developing curricula that support a generalist programme of training.

Postgraduate medical education takes place in workplace environments (including but not limited to hospital wards and GP consulting rooms). Despite the significant activity underway to support the experience of junior doctors the trend towards taking a break from clinical training appears to continue unabated. The experience of the NHS workforce is similar – there is a significant workforce gap (between demand and need) through fewer individuals joining the service and an increased attrition rate. The reasons for this trend include an ageing population placing pressure on the NHS; financial pressures forcing a drive towards greater productivity; shifts in the ways technological advance influences how services are delivered; and the burden of healthcare policy and regulation on individuals and organisations.

In my role, I can influence the educational provision within a unit or an educational provider. There are several mechanisms available to achieve this (HEE, 2018b). Given that medical education and workplace learning are inseparable there is a strong implication that individuals within my organisation find ways to ensure service providers deal with the non-educational issues that are impacting on the junior doctor and workforce well-being. I was involved in a high-profile situation in 2016 (NHS Improvement, 2018) that led to the recognition of the value of learner feedback on patient care and changes to national structures and decision-making. Given the significant contribution of

junior doctors highlighted in this research to the workplace, it is imperative that there are changes to the way they are listened too and valued, not just by educational managers such as I, but service providers as well. The NHS Long-Term Plan (NHS England, 2019a) and the development of the associated workforce implementation plan (NHS England, 2019b) offer a significant opportunity to address this.

5.3.2 Issues with assessment

Competency-based medical education (CBME) has dominated the landscape of postgraduate clinical education since the mid-2000s. Its significant achievement has been to require evidence (through a sampling of trainee clinical work) against which to base judgements about learner progression and achievement. However, legitimate concerns have been raised about the burden of assessment on learners and faculty, as well as the atomistic and reductionist nature of CBME on professional development, particularly for the generalist professions in medicine.

This research recasts GP trainees as change agents entering a complex system where learning and knowledge creation are unpredictable, emergent, and non-linear. By contrast, competency assessments tend to be retrospective and assume that once competence is acquired it predicts future performance. Curricula need to evolve to capture the holistic, and often difficult to measure, role of GP trainees on improving patient care beyond the traditional categories of having undertaken a quality improvement project or writing retrospective reflections about learning. Key areas such as the development of professional judgement, managing clinical uncertainty, managing people and relationships, systems thinking, and working in teams would benefit immensely from a change in curricula and assessment. Indeed, the importance of this issue is so great that a colleague and I (Tate

and Ahluwalia, personal correspondence) are in the process of writing on this topic for an education journal.

It has been proposed that the shift towards entrustable professional attributes (Frank et al, 2010; Touchie and ten Cate, 2016) offers a means by which CBME can step back from its retrospective, atomistic and reductionist start towards a more forward-facing, holistic and systems-oriented approach. The GMC has recommended the move towards all curricula adopting a capability approach. Such a move will require a significant development on the part of medical education planners to develop appropriate curricula, assessment methods and tools, and support faculty development in making such a shift.

5.3.3 The value of GP training and patient care

Reform of payments to training practices (HEE, 2018c) has been mooted by the Department of Health and Social Care for several years. Reasons cited include increasing transparency, building equity with other parts of the healthcare system, promoting team-based learning, and improving efficiency.

The cost and effectiveness of postgraduate training have been a subject of debate especially during this time of austerity. Discussions about the expense of postgraduate training for one group over others have tended to take place without comparative data that takes into consideration the cost-effectiveness of government investments in this area. I believe there is a need for robust and sophisticated economic evaluations of GP training and its impact on patient care. Developing such models can inform decision-making and policy development about training resources and account for factors such as the geographic spread of the workforce, patient factors (such as deprivation, disease

burden, demography and ethnicity). Such evaluation also needs to take into account the influence of GP trainees on patient outcomes to ensure that unintended consequences (and a deterioration in patient care) are avoided.

5.3.4 Is GP training an apprenticeship or not?

GP training has been conceived as an apprenticeship in which preparation for occupational work takes place through engagement with patient care under the close supervision of a GP trainer. This traditional vision of GP training underplays two key issues – the relationship of GP trainees with the workplace and their influence on GP trainers.

Whilst the one-to-one relationship is still regarded as the cornerstone of GP training this research make clearer than before, that this is in no way one-sided. By contrast, the value and role of a trainee relates to the professional development of the GP trainer as well as reducing the isolation that is perceived by many working in General Practice. But the nature and role of the GP trainer is also different to the traditional model – away from a master of his or own craft showcasing how to do things towards one that facilitates learning and encourages immersion in the life of the practice.

GP trainees also influence the practice through their presence. Legitimate entry to the community of practice means being able to access all aspects of the service, learning from such access, and in turn influencing how services are shaped and developed. The relationship between learners and their learning environment is also two-sided. Practices being prepared to welcome learners and engage with them in ways that permit this two-way relationship to evolve is a key function of the process of selection and licensing of GP practices as training units.

Modernising Medical Careers (Donaldson and Britain, 2002) introduced curricula and competency-based medical assessment. This has generated a tension between spending time in a practice in preparation for a life as a GP and focusing on topic-based learning driven through educational approaches (e.g. classroom and online learning). Whilst focusing the learning of GP trainees and permitting their tracking against the curriculum, it has also detracted from the role of the workplace as a space for learning. Morris et al (2010) suggest that curricula can be related to either the product or process of learning with the workplace as the curriculum.

What therefore emerges is a complex and modern conceptualisation of the apprenticeship model where the relationship between trainee and their trainer and workplace is two-sided. The GP trainer takes on the role of facilitating a learner's participation in the life of the practice, and the workplace is developed to facilitate the learners' entry and participation. The tension between the workplace and classroom as a place to learn needs careful management to ensure that professional development, identity formation and lifelong learning are enhanced.

5.3.5 Capacity and quality of learning in the workplace

Changes to the provision of care over the past 15 years have encouraged a shift towards all learners being offered the opportunity to take placements in primary care. This process has accelerated over the past few years. Foundation doctors, undergraduate medical and nursing students and pharmacists have entered the GP workplace as learners. There are now calls for the medical performers list (a regulatory tool to monitor and manage the medical workforce in General Practice) to be abolished so

that speciality doctors can enter the workplace for their professional development and support service provision.

Whilst undoubtedly a welcome step forward in terms of patient care, there is a need to carefully manage the issue of capacity of training in General Practice and the potential knock-on consequence to the quality of training but also patient care. The immediate anxiety may be related to the availability of skilled supervisors. However, this research demonstrates that learners generate dis-equilibrium within the clinical environment. The presence of multiple learners is likely therefore to have a significant impact, and without careful planning and thought, there is a risk to patient care.

In my work, I (working with others) have developed networks of training organisations (community-based education networks) that bring together providers from a geographic patch to support cross-organisational and inter-professional learning and working (Ahluwalia et al, 2013c). The ability to manage clinical placement capacity, support the development of new learning environments, monitor quality, and develop a multiprofessional faculty are key functions of these networks. This approach has recently been endorsed within the NHS England Long-Term Plan.

5.3.6 The connection to organisational resilience

Organisational resilience has been defined as *“the ability of an organization to anticipate, prepare for, respond and adapt to incremental change and sudden disruptions in order to survive and prosper”* (Denyer, 2017). Whilst this thesis was not specifically designed to explore the means by which practices respond to external and internal threats as well as adapt and flourish, it seems to be useful to draw the link between organisational resilience and clinical education.

This research proposes that engagement with clinical education empowered practices to contend with the challenge of introducing learners into the workplace and improve patient outcomes. The introduction of educational standards, leadership, learners, and processes has the potential therefore to support organisational resilience for events and challenges beyond that of clinical education itself. The RCGP and NHS England has estimated significant numbers of GP practices across England as vulnerable without support and investment. Further research would be useful in determining if clinical education undertaken by a larger number of practices reduces vulnerability and improves resilience.

This research highlighted the motivations for GP trainers to become involved in clinical education as well as certain barriers to their doing so. In particular, infrastructure issues such as lack of room space were regarded as being significant.

“Premises are a huge problem. Many practices have a problem with this and therefore do not go forward with training because of this.” GP04

However, there are other barriers highlighted that I believe can be successfully tackled. The requirement that many areas have for completing a postgraduate certificate in clinical education, and, the formality of undertaking written assessment and essays was deemed to be a barrier. For clinicians who are many years out of university, such activities are challenging. Furthermore, the added value of such formal programmes is unclear. Several areas in England (including the geographical area in which I have responsibility for GP training) have stepped away from requiring such formal qualifications, instead replacing these with a short-facilitated programme of faculty development designed to enhance workplace education. It is unclear what impact such a shift away from university

based formal programmes of faculty development will have on GP trainer and trainee development. However, this study highlights the importance of developing faculty development curricula and courses that encourage the development of educational leadership, an understanding of educational process, and learner engagement on improving patient outcomes. It also remains to be seen if this approach will influence the number of practices engaged in clinical education and improved organisational resilience.

5.4 Methodological reflections

In this study I explored the relationship between clinical education and patient care in General Practice. The sample size was 11. I used semi-structured interviews. I analysed the data using framework analysis. The strengths of this approach are that I studied the phenomenon from the perspective of participants with lived experience of GP education and its influence on patient care; I developed a deeper understanding with rich and thick descriptions of the phenomenon generated from participants; I adopted a transparent and clearly defined stepwise approach to the analysis of data; and issues related to rigour and trustworthiness were described and dealt with through approaches such as participant validation, peer debriefing, and using electronic software to handle the data. Limitations of this approach included the small number of participants challenging the generalisability of the findings of this research; the use of my own self for generating and analysing the data which may mean that my own personal biases influenced the research process; and the use of interviews to explore the lived experience of participants meaning that key findings were dependent upon cognitive and emotional responses from participants rather than through observation, thus generating a degree of subjectivity into the interpretations. On balance, I believe that the approach described and adopted has been helpful in generating answers to the questions

posed even considering the limitations of the study approach. By being explicit about the strengths and limitations of this approach it is my anticipation that the reader will form their view on the appropriateness of the methods and interpretations generated. I explore a number of these issues in greater detail in this section.

A key critique of my work through the course of the doctoral programme has been my sustained failure to engage with the theoretical literature in a meaningful way. This was feedback provided following my Methods of Enquiry and Institution-Focused Study submissions. This critique is partly a consequence of my prior positivist education and my lack of appreciation of the inter-relatedness between phenomena, their contextual frames and the place of theory within this. Neal¹³ (2016) helpfully suggests that phenomena of interest are broader than frameworks, and these in turn are broader than theories. I have found for my thesis stage that an appreciation of all three levels is required context to assist with planning the approach to my research and interpreting the value of the results. My phenomenon of interest (and context for my whole doctoral journey) has been the influence of clinical education in the care of patients. My framework has been the professional and situational context of General Practice and its training alongside the relevant empirical and theoretical literature. Theoretical perspectives have been drawn from Bleakley's (2006) helpful approach to workplace learning as related to reproduction of knowledge versus participation in the development of knowledge.

In this research I have chosen to use Bleakley's view of participatory workplace learning as the theoretical lens to inform my methods, analysis and reflections I have used Engeström (1988) to describe the disruptive influence of learners; Lave and Wenger (1991, 1993) to describe legitimate

¹³ Neal (2016) suggests that the purpose of frameworks is to offer broad description. Quoting Jason et al (2016) she suggests that a *framework* "informs researchers of the types of elements that are considered important avenues of investigation". Theories by contrast are narrower and Neal describes these as being nested within frameworks. The goal of theories is "describing, explaining, and predicting phenomena" (Jason et al., 2016).

entry into a community of practice; and Stacey (2000) to explore human interactions in a complex adaptive system. Bleakley (2006) identifies these three theoretical perspectives as promoting workplace learning and I view them as complementary rather than competing.

I also introduced Latour's (2005) ideas of socio-materiality to further explore our understanding of workplace learning. However, my sense is that my research did not really generate significant learnings using this theoretical approach beyond the potential for use of space as an influence on patient experience. In particular, the influence of digital technologies in clinical education and patient care remains poorly understood. There are several potential explanations for this. It could be that the role of material actors in education is not something that GP trainers have considered in their educational work. Alternatively, it may well be that there are features of General Practice that are difficult to observe, experience and describe – interviews may not be the most appropriate approach to exploring socio-materiality in this specific context. It seems to me that the use of ethnography offers a more appropriate methodology for understanding the interaction between inanimate and animate actors within the workplace. The focus on studying an environment or culture through immersion within it has the potential to yield learnings about how space and inanimate objects as well as differences between training and non-training practices influence learning and patient care.

In section 3.2.6 I considered the approach to ensuring trustworthiness and rigour in the research. This research has been conducted with 11 participants with thought given to how rigour and trustworthiness can be developed and maintained through the recruitment, data collection, and analysis stages. In my view it is for readers of this work to determine whether or not the findings have utility for understanding the influence of clinical education on patient care beyond the experiences of the participants. There are however further steps that can be taken to enhance the generalisability of this research and these include using alternative methodological approaches (such as ethnographic

work), listening to the voices of others including non-training GPs, non-clinical staff, and patients to further deepen and develop our understanding.

In collating significant amounts of data from a small number of individuals, I was forced to make choices about which “bits” of the data to use in developing my understanding of how clinical education influences patient care. My own stance on clinical education and workplace learning has influenced these choices, both in terms of the questions I have asked, and the way I have chosen to conduct this research. My particular “lens”, however, is not unique. There are several other “legitimate” (e.g. organisational learning and health services research amongst others) means for interrogating the phenomenon which would result in different messages and learnings emerging.

In this study, I used peer debriefing to test the appropriateness of my methodological approach and interpretations. I selected individuals from a similar background with expertise in clinical education and qualitative research. I found the interaction and engagement with colleagues in this manner particularly engaging and challenging. It stretched my understanding of the phenomenon under study and, in places, forced me to reflect and develop my thinking further. Nonetheless, I do believe that given a different set of peers (with their alternative backgrounds, experiences and expertise) it is likely to have resulted in different emphases emerging from the research.

5.5 Contribution to the research area

Dr David Jewell, emeritus editor of the British Journal of General Practice (personal correspondence, 2009), bemoaned the absence of theoretical frameworks in much of the qualitative research published by the journal. The same is, broadly speaking, true of medical education research published in

scientific journals. This research takes a socio-cultural theoretical lens, and in doing so, joins the increasing body of work informing our understanding of medical education in General Practice.

Much of the literature in medical education and General Practice focuses on GP trainees as learners, practices as learning environments, and GP trainers' development as educators. I could not find any empirical literature in postgraduate GP education prior to 2014 that identified its influence on patient care. This is therefore an under-reported and studied aspect in medical education research and the proportion of studies reporting patient outcomes remains remarkably low (Prystowsky and Bordage, 2001). Uniquely, this research seeks to make the importance of patient care central to medical education research.

This research adds to our understanding about how GP trainees themselves influence patient care. Their active role in influencing clinical care is mediated through challenging and influencing their GP trainers and practices, as well as directly in their interactions with patients. This research also suggests that clinical education influences patient care beyond the direct influence of learners – it identifies the role of educational standards for accreditation; educational processes for collaborative and peer-based learning; and educational leadership for supporting system change as well.

This research reveals the role of GP trainees in relation to their GP trainers and training practices. Rather than the traditional model of their being passive recipients of learning, GP trainees are actively engaged in an exchange of learning and information with both benefitting from each other's expertise and experience. The nature of the learning is also clarified – GP trainees offer up-to-date propositional knowledge to exchange with GP trainers; in turn GP trainers share their experiential and problem-solving strategies.

Prior research has focused on the qualities of the learning environment that influence learner engagement with the process of their education. This research extends the notion that learners actively influence their learning environment and that practice preparedness for that potential disruption influences learners, practice staff, GP trainers, and patient care. Practice preparedness for disruptive change (not merely from learners) is enhanced by the introduction of clinical education into practices.

This research makes contributions to the theoretical understanding of how clinical education influences patient care using the socio-cultural lens on workplace learning. Training practices are conceived as complex educational eco-systems in which learners are disruptive change agents. Introducing learners changes the equilibrium of the training practice creating new and unpredictable opportunities to learn. This research confirms the importance of learners legitimately entering the learning environment and learning through opportunities arising from the whole educational eco-system.

5.6 Future research directions

I have made several suggestions for extending this research throughout the section 5.2. Building on the findings of this study by using ethnographic approaches and understanding the phenomenon from the perspective of learners, co-workers of GP trainers, and patients are clearly valuable in extending our understanding of the influence of clinical education on patient care.

GP education has a cost attached to it. Simplistic perceptions and formulations of cost need to be informed by evaluations that consider the impacts on patient care – this research suggests that such benefits are not merely related to the development of a future workforce – they have influences on patient outcomes as well.

Clinical education in General Practice fulfils the criteria associated with a complex intervention (Campbell et al., 2000). Using a socio-cultural theoretical lens, there is a role for developing intervention studies that identify the components of the “black box” of the training practice that maximally influence patient care and outcomes – the ultimate purpose of healthcare delivery in the NHS.

In this study I have touched upon the development of professional identity and role duality amongst GPs as clinicians and educators. Longitudinal qualitative approaches are particularly valuable in understanding the journey towards developing and changing identities – these learnings are important if we are to improve faculty development courses for GP educators.

5.7 Conclusions

In this chapter I have explored how the findings from this study relate to the established literature. I have reviewed the relationship between GP education and patient care through the theoretical lens of socio-cultural theories; from this I have drawn new ways of conceptualising this phenomenon. Implications for my work are highlighted in relation to education and workforce policy. I consider the strengths and limitations of this study as well as identifying future directions for further research.

Chapter 6 References, acknowledgements and appendices

6.1 References

- Acheson, D. (1998). Inequalities in health: Report on inequalities in health did give priority for steps to be tackled. *BMJ: British Medical Journal*, 317(7173), 1659.
- Ahluwalia, S. (2012). *Foundations of Professionalism: The changing natures of professionalism in general medical practice - a personal reflective journey*. UCL, London.
- Ahluwalia, S. (2013a). *Methods of Enquiry 1: Exploring the relationship between GP training practices and patient outcomes*. UCL, London.
- Ahluwalia, S. (2013b). *Methods of Enquiry 2: Understanding the influence of GP training on patient care: a qualitative pilot study*. UCL, London.
- Ahluwalia, S. (2015). *Institution Focused Study: A retrospective study comparing patient related clinical outcomes between training and non-training GP surgeries in England*. UCL, London.
- Ahluwalia, S., & Launer, J. (2012). Training for complexity and professional judgement: beyond 'communication skills plus evidence'. *Education for primary care: an official publication of the Association of Course Organisers, National Association of GP Tutors, World Organisation of Family Doctors*, 23(5).
- Ahluwalia, S., & Launer, J. (2014). Complexity and uncertainty in healthcare. *Education for Primary Care*, 25(4), 181-183.
- Ahluwalia, S., Sadak, M., & Ashworth, M. (2018). Antimicrobial prescribing in post-graduate training practices: a cross-sectional study of prescribing data in General Practices in England. *Education for Primary Care*, 1-5.

- Ahluwalia, S., Tavabie, A., Spicer, J., & Chana, N. (2013). Community-based Education Provider Networks: An opportunity to unleash the potential for innovation in primary care education. *Education for Primary Care* 24 (6), 394-7.
- Ashworth, M., & Armstrong, D. (2006). The relationship between General Practice characteristics and quality of care: a national survey of quality indicators used in the UK Quality and Outcomes Framework, 2004–5. *BMC Family Practice*, 7(1), 68.
- Ashworth, M., Schofield, P., Durbaba, S., & Ahluwalia, S. (2014). Patient experience and the role of postgraduate GP training: a cross-sectional analysis of national Patient Survey data in England. *British Journal of General Practice*, 64(620), e168-e177.
- Ashworth, M., Seed, P., Armstrong, D., Durbaba, S., & Jones, R. (2007). The relationship between social deprivation and the quality of primary care: a national survey using indicators from the UK Quality and Outcomes Framework. *The British Journal of General Practice*, 57(539), 441.
- Au, A. G., Padwal, R. S., Majumdar, S. R., & McAlister, F. A. (2014). Patient outcomes in teaching versus nonteaching general internal medicine services: a systematic review and meta-analysis. *Academic Medicine*, 89(3), 517-523.
- Ayanian, J. Z., & Weissman, J. S. (2002). Teaching hospitals and quality of care: a review of the literature. *Milbank Quarterly*, 80(3), 569-593.
- Baker, R. (1985). Comparison of standards in training and non-training practices. *The Journal of the Royal College of General Practitioners*, 35(276), 330.
- Baker, R. (1996). Characteristics of practices, general practitioners and patients related to levels of patients' satisfaction with consultations. *British Journal of General Practice*, 46(411), 601-605.
- Baker, R., & Streatfield, J. (1995). What type of General Practice do patients prefer? Exploration of practice characteristics influencing patient satisfaction. *British Journal of General Practice*, 45(401), 654-659.

- Baker, R., & Thompson, J. (1995). Innovation in General Practice: is the gap between training and non-training practices getting wider? *The British Journal of General Practice*, 45(395), 297.
- Ball, S. J. (2012). The making of a neoliberal academic. *Research in Secondary Teacher Education*, 2(1), 29-31.
- Beach, K. (1999). Chapter 4: Consequential transitions: A sociocultural expedition beyond transfer in education. *Review of research in education*, 24(1), 101-139.
- Berwick, D. M., Nolan, T. W., & Whittington, J. (2008). The triple aim: care, health, and cost. *Health affairs*, 27(3), 759-769.
- Bhabha, H. (1990). The Third Space: Interview with Homi Bhabha. *Identity: Community and Culture Difference*, ed. Rutherford/Jonathan (London: Lawrence and Wishart, 1990), 207-21.
- Billett, S. (2002). Critiquing workplace learning discourses: Participation and continuity at work. *Studies in the Education of Adults*, 34(1), 56-67.
- Black, D., Morris, J., Smith, C., & Townsend, P. (1980). Inequalities in health: report of a Research Working Group. London: Department of Health and Social Security, 19.
- Blaney, D. (2005). The learning experiences of General Practice registrars in the South East of Scotland. <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.440802>. Accessed 20th February 2019.
- Bleakley, A. (2006). Broadening conceptions of learning in medical education: the message from teamworking. *Medical education*, 40(2), 150-157.
- British Medical Association (2003). Investing In General Practice. London: British Medical Association.
- Boendermaker, P. M., Conradi, M. H., Schuling, J., Meyboom-de Jong, B., Zwierstra, R. P., & Metz, J. C. M. (2003). Core characteristics of the competent General Practice trainer, a Delphi study. *Advances in health sciences education*, 8(2), 111-116.

- Boor, K., Scheele, F., Van Der Vleuten, C. P., Teunissen, P. W., Den Breejen, E. M., & Scherpbier, A. J. (2008). How undergraduate clinical learning climates differ: a multi-method case study. *Medical education*, 42(10), 1029-1036.
- Bruner, J. S. (2009). *The process of education*: Harvard University Press.
- Cameron, R. (2011). Mixed methods research: the Five Ps framework. *Electronic Journal of Business Research Methods*, 9(2), 96-108.
- Campbell, M., Fitzpatrick, R., Haines, A., Kinmonth, A. L., Sandercock, P., Spiegelhalter, D., & Tyrer, P. (2000). Framework for design and evaluation of complex interventions to improve health. *British Medical Journal*, 321(7262), 694-696.
- Collings, J. (1950). General Practice in England Today. A Reconnaissance. *Lancet*, 555-585.
- Cook, D. A., & West, C. P. (2013). Perspective: Reconsidering the focus on “outcomes research” in medical education: a cautionary note. *Academic Medicine*, 88(2), 162-167.
- Cotton, P., Sharp, D., Howe, A., Starkey, C., Laue, B., Hibble, A., & Benson, J. (2009). Developing a set of quality criteria for community-based medical education in the UK. *Education for Primary Care*, 20(3), 143-151.
- Care Quality Commission (2017). *The state of health care and adult social care in England 2016/17*. London: CQC.
- Creswell, J. W. (2003). A framework for design. *Research design: Qualitative, quantitative, and mixed methods approaches*, 9-11.
- Creswell, J. W. (2013). Steps in conducting a scholarly mixed methods study. <https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1047&context=dberspeakers>. Accessed 22nd February 2019.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*: Sage publications.
- Curwen, M. (1964). “Lord Moran's Ladder”: A study of motivation in the choice of General Practice as a career. *The Journal of the College of General Practitioners*, 7(1), 38.

- Darzi, A. (2007). *Healthcare for London: a framework for action*. London: NHS London.
- Darzi, A. (2008). *A High Quality Workforce: NHS Next Stage Review*. London: Department of Health. Accessed from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_085840.
- Davenport, J. (1993). Is there any way out of the andragogy morass? *Culture and processes of adult learning*, 109-17.
- De Silva, D., & Bamber, J. (2014). *Improving Quality in General Practice*. London: The Health Foundation.
- Denyer, D. (2017). *Organizational Resilience: A Summary of Academic Evidence*. Business Insights and New Thinking. BSI and Cranfield School of Management: Cranfield, UK.
- Denzin, N. K. (1997). *Interpretive ethnography: Ethnographic practices for the 21st century*: Sage.
- Dewey, J. (1938). *Education and experience*. In: New York: Simon and Schuster.
- Department of Health (1983). *The Medical Act*. London: HMSO.
- Department of Health (2010). *The NHS outcomes framework 2011/12*. London: HMSO.
- Department of Health (2012). *The Health and Social Care Act*. London: HMSO.
- Donaldson, L., & Britain, G. (2002). *Unfinished business: proposals for reform of the senior house officer grade: a paper for consultation*: Department of Health London.
- Drenkard, K. (2010). The business case for Magnet®. *Journal of Nursing Administration*, 40(6), 263-271.
- Easterby-Smith, M., Araujo, L., & Burgoyne, J. (Eds.). (1999). *Organizational learning and the learning organization: Developments in theory and practice*. Sage.
- Elwyn, G., Rhydderch, M., Edwards, A., Hutchings, H., Marshall, M., Myres, P., & Grol, R. (2004). Assessing organisational development in primary medical care using a group based assessment: the Maturity Matrix™. *Quality and safety in health care*, 13(4), 287-294.

- Engeström, Y. (2014). *Learning by expanding*. Cambridge University Press.
- Eraut, M. (2004). Informal learning in the workplace. *Studies in continuing education*, 26(2), 247-273.
- Flick, U. (2006). *An introduction to qualitative research*. Sage Publications Limited.
- Francis, R. (2013). Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry. Retrieved from London: <https://www.gov.uk/government/publications/report-of-the-mid-staffordshire-nhs-foundation-trust-public-inquiry>. Accessed 8th April 2019.
- Frank, J. R., Snell, L. S., Cate, O. T., Holmboe, E. S., Carraccio, C., Swing, S. R., ... & Harden, R. M. (2010). Competency-based medical education: theory to practice. *Medical teacher*, 32(8), 638-645.
- Fraser, S. W., & Greenhalgh, T. (2001). Coping with complexity: educating for capability. *British Medical Journal*, 323(7316), 799-803.
- Friedman, V. J., Lipshitz, R., & Popper, M. (2005). The mystification of organizational learning. *Journal of management inquiry*, 14(1), 19-30.
- Freidson, E. (1970). *Professional dominance: the social structure of medical care*: Atherton Press.
- Gagné, R. M. (1965). *Conditions of learning*.
- General Medical Council (2012). *The state of medical education and practice in the UK: 2012*. Retrieved from <http://www.gmc-uk.org/publications/13887.asp>.
- Grant, A., Prout, H., Hawthorne, K., Jones, T. L., & Houston, H. (2010). Some effects of teaching undergraduate medical students on general practitioner thinking and learning. *Education for Primary Care*, 21(2), 97-104.
- Goodwin, N., Dixon, A., Poole, T., & Raleigh, V. (2011). *Improving the quality of care in General Practice*. Kings Fund London.
- Hammersley, M., & Atkinson, P. (2007). *Ethnography: Principles in practice*. Routledge.

- Harding, A. (2017). Actor-Network-Theory and Micro-Learning Networks. *Education for primary care: an official publication of the Association of Course Organisers, National Association of GP Tutors, World Organisation of Family Doctors*, 28(5), 295-296.
- Hawe, P., Shiell, A., & Riley, T. (2009). Theorising interventions as events in systems. *American journal of community psychology*, 43(3-4), 267-276.
- Heath, I. (1995). *The Mystery of General Practice*. London: Nuffield Provincial Hospitals Trust.
- Health Education England (2018a). *Improving Junior Doctors Working Lives: a progress report*. <https://www.hee.nhs.uk/sites/default/files/documents/Enhancing%20junior%20doctors%20working%20lives%20-%20a%20progress%20report.pdf>. Accessed 19th March 2019.
- Health Education England (2018b). *Quality*. <https://www.hee.nhs.uk/our-work/quality>. Accessed 19th March 2019.
- Health Education England (2018c). *Proposed changes to currencies for education and training placements*. <https://www.hee.nhs.uk/sites/default/files/documents/Proposed%20changes%20to%20currencies%20for%20education%20and%20training%20placements%20-%20Invitation%20for%20feedback%20from%20stakeholders.pdf>. Accessed 19th March 2019.
- Heidegger, M. (1962). *Being and time*, trans. J. Macquarrie and E. Robinson. In: New York: Harper & Row.
- Hoellein, A. R., Feddock, C. A., Wilson, J. F., Griffith III, C. H., Rudy, D. W., & Caudill, T. S. (2007). Student involvement on teaching rounds. *Academic Medicine*, 82(10), S19-S21.
- Houghton, G., Wall, D., Norton, B., & Wyatt, S. (2006). Do GP training practices achieve higher QOF points? A study of the Quality and Outcomes Framework in Birmingham and the Black Country. *Education for Primary Care*, 17(6), 557-571.
- Howe, A., & Carter, Y. H. (2003). The general practitioner as a teacher. *A celebration of General Practice*. Oxon, UK: Radcliffe Publishing, 105-116.
- Husserl, E., & Moran, D. (2001). *Logical investigations (Vol. 1)*: Routledge.

- Joint Committee for Postgraduate Training in General Practice. (1993). Report of summative assessment working party. London: JCPTGP.
- Jones, T., McPherson, A., Jamieson, M., & Sackin, P. (2011). Round up. *Education for Primary Care*, 22(2), 118-123.
- Kalanithi, P. (2016). *When breath becomes air*: Random House.
- Kelly, K. (1999). From encounter to text: collecting qualitative data for interpretive research. *Research in practice: Applied methods for the social sciences*, 379-397.
- Kennedy, I. (2001). *Learning from Bristol: the report of the public enquiry into children's heart surgery at the Bristol Royal Infirmary*. London: HMSO.
- Kilminster, S. M., & Jolly, B. C. (2000). Effective supervision in clinical practice settings: a literature review. *Medical education*, 34(10), 827-840.
- Kohn, L. T., Corrigan, J., & Donaldson, M. S. (2000). *To err is human: building a safer health system* (Vol. 6). Washington, DC: National academy press.
- Kolb, D. A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, N.J.: Prentice-Hall.
- Kossarova, L., Blunt, I., & Bardsley, M. (2015). *Focus on: International comparisons of healthcare quality*. The Health Foundation and Nuffield Trust Report.
- Kuhn, T. S. (1962). *The structure of scientific revolutions*. In: Chicago: University of Chicago Press.
- Kvale, S. (2008). *Doing interviews*: Sage.
- Lake, J. (2013). *Teaching Doctors: The Relationship Between Physicians' Clinical and Educational Practice*.
<https://ore.exeter.ac.uk/repository/bitstream/handle/10871/8002/LakeJ.pdf?sequence=1>.
Accessed 2nd March 2019.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*: Oxford university press.

- Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*: Cambridge university press.
- Lave, J., & Wenger, E. (1998). communities of practice. *Encyclopedia of Informal Education*.
- Love, T., & Burton, C. (2005). General Practice as a complex system: a novel analysis of consultation data. *Family practice*, 22(3), 347-352.
- Lewin, K. (1951). *Field Theory in Social Science*. New York: Harper Row.
- Lincoln, Y. S., & Guba, E. G. (1985). Establishing trustworthiness. *Naturalistic inquiry*, 289, 331.
- Lizzio, A., Wilson, K., & Simons, R. (2002). University students' perceptions of the learning environment and academic outcomes: implications for theory and practice. *Studies in Higher education*, 27(1), 27-52.
- Mainz, J. (2003). Defining and classifying clinical indicators for quality improvement. *International Journal for Quality in Health Care*, 15(6), 523-530.
- Marmot, M. G., Allen, J., Goldblatt, P., Boyce, T., McNeish, D., Grady, M., & Geddes, I. (2010). *Fair society, healthy lives: Strategic review of health inequalities in England post-2010*.
- Maslow, A. H., & Murphy, G. (1954). *Motivation and personality*: New York : Harper.
- Mathers, N. J., Fox, N. J., & Hunn, A. (1998). *Using interviews in a research project*. NHS Executive, Trent.
- McLaren, P., Patel, A., Trafford, P., & Ahluwalia, S. (2013). GP trainers' experience of managing a trainee in difficulty: a qualitative study. *Education for Primary Care*, 24(5), 363-371.
- Mead, G. H. (1934). *Mind, self and society* (Vol. 111). University of Chicago Press.: Chicago.
- Mehay, R. (2012). *The essential handbook for GP training and education*. R. Mehay (Ed.). London,: Radcliffe Publishing.
- Mercer, J. (2007). The challenges of insider research in educational institutions: *Wielding a double-edged sword and resolving delicate dilemmas*. *Oxford review of education*, 33(1), 1-17.

- Miles, M., & Huberman, A. (1984). *Qualitative Data Analysis: An Expanded Sourcebook*. (2nd edition ed.). London: Sage Publishing.
- Miles, S., & Leinster, S. J. (2007). Medical students' perceptions of their educational environment: expected versus actual perceptions. *Medical education*, 41(3), 265-272.
- Millerson, G. (1964). *The qualifying associations: A study in professionalization*: Routledge & Paul.
- Moberly, T. (2018). Data chart: what do trainees do after completing foundation training? *BMJ*, 361, k1753.
- Molyneux, J. (2001). Interprofessional teamworking: what makes teams work well? *Journal of interprofessional care*, 15(1), 29-35.
- Morris, C., Blaney, D., & Swanwick, T. (2010). Work-based learning. *facilities*, 25, 26.
- Morse, J. M., Swanson, J., & Kuzel, A. J. (2001). *The nature of qualitative evidence*: Sage.
- Munro, N., Hornung, R., & McAleer, S. (1997). What are the key attributes of a good General Practice trainer: a Delphi study. *Education for General Practice*, 9, 263-270.
- Neal, J.W. (2016). Phenomenon of Interest, Framework, or Theory? Building Better Explanations in Community Psychology. *Global Journal of Community Psychology Practice*, 7(2), pages 1-6.
- NHS England (2019a). The NHS Long-Term Plan. <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/01/nhs-long-term-plan.pdf>. Accessed 17th March 2019.
- NHS England (2019b). A Comprehensive Workforce Implementation Plan. <https://www.longtermplan.nhs.uk/online-version/chapter-4-nhs-staff-will-get-the-backing-they-need/1-a-comprehensive-new-workforce-implementation-plan/>. Accessed 17th March 2019.
- NHS Improvement (2018). System response to quality concerns in providers. <https://improvement.nhs.uk/news-alerts/nmuh-learning-review/>. Accessed 19th March 2019.

- NHS Institute for Innovation and Improvement (2012). Productive General Practice. Retrieved from http://www.institute.nhs.uk/quality_and_value/productivity_series/the_productive_series.html.
- Nicolini, D., & Meznar, M. B. (1995). The social construction of organizational learning: conceptual and practical issues in the field. *Human relations*, 48(7), 727-746.
- Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-based nursing*, 18(2), 34-35.
- National Recruitment Office (2010). Research & Evaluation Of The GP Selection System. Retrieved from <http://www.gprecruitment.org.uk/ev2010/index.html>
- Papanikolaou, P. N., Christidi, G. D., & Ioannidis, J. P. (2006). Patient outcomes with teaching versus nonteaching healthcare: a systematic review. *PLoS medicine*, 3(9), e341.
- Parboosingh, J. T. (2002). Physician communities of practice: where learning and practice are inseparable. *Journal of continuing education in the health professions*, 22(4), 230-236.
- Parkman, A. (2016). The imposter phenomenon in higher education: Incidence and impact. *Journal of Higher Education Theory and Practice*, 16(1), 51.
- Parliament (1858). An Act to Regulate the Qualifications of Practitioners in Medicine and Surgery. London, United Kingdom.
- Parliament (1911). National Insurance Act. London, United Kingdom.
- Patterson, F., Ferguson, E., Lane, P., Farrell, K., Martlew, J., & Wells, A. (2000). A competency model for General Practice: implications for selection, training, and development. *The British Journal of General Practice*, 50(452), 188.
- Patterson, F., Tavabie, A., Denney, M., Kerrin, M., Ashworth, V., Koczwara, A., & MacLeod, S. (2013). A new competency model for General Practice: implications for selection, training, and careers. *British Journal of General Practice*, 63(610), e331-e338.

- Pearson, D. J., & Lucas, B. J. (2011). Engagement and opportunity in clinical learning: findings from a case study in primary care. *Medical Teacher*, 33(12), e670-e677.
- Pearson, D. J. (2010). Exploration of clinical learning in general medical practice: a case study.
- Phelan, A. M. (2004). Rationalism, complexity science and curriculum: a cautionary tale. *Complicity: An international journal of complexity and education*, 1(1).
- Piaget, J. (1970). Piaget's theory,|| Carmichael's manual of child psychology.
- Pringle, M. (1984). Minimum standards for training practices. *British Medical Journal (Clinical research ed.)*, 288(6427), 1353.
- Prystowsky, J. B., & Bordage, G. (2001). An outcomes research perspective on medical education: the predominance of trainee assessment and satisfaction. *Medical Education*, 35(4), 331-336.
- Royal College of General Practitioners (1972). *The future general practitioner: Learning and Teaching* (RCGP, London).
- Royal College of General Practitioners (2008). *Standards for GP Specialty Training: Guidance to Deaneries*. Retrieved from London: <http://www.rcgp.org.uk/gp-training-and-exams/~media/Files/GP-training-and-exams/Information%20for%20deaneries%20trainers%20supervisors/qmts-GP-Specific-Training-Standards-dec08.ashx>
- Royal College of General Practitioners (2009). *The Learning and Teaching Guide*. Retrieved from <http://www.rcgp.org.uk/gp-training-and-exams/~media/Files/GP-training-and-exams/Current%20curriculum%20docs%20June%202012/curr-The-Learning-and-Teaching-Guide-mar09.ashx>
- Royal College of General Practitioners (2012). *Research Ready*. Retrieved from <http://www.rcgp.org.uk/clinical-and-research/research-opportunities-and-awards/~media/Files/CIRC/Research%20Ready%20and%20Research%20Governance/RCGP-RR-Flyer-31-January-2013.ashx>

- Royal College of General Practitioners (2013). Practice Accreditation and Quality Practice Award. Retrieved from <http://www.rcgp.org.uk/revalidation-and-cpd/practice-accreditation-and-quality-practice-award.aspx>
- Rhydderch, M., Edwards, A., Elwyn, G., Marshall, M., Engels, Y., Van den Hombergh, P., & Grol, R. (2005). Organizational assessment in General Practice: a systematic review and implications for quality improvement. *Journal of Evaluation in Clinical Practice*, 11(4), 366-378.
- Richards, L. (1999). *Using NVivo in qualitative research*: Sage.
- Ritchie, J., & Lewis, J. (2003). *Qualitative research practice: A guide for social science students and researchers*: Sage.
- Ritchie, J., & Spencer, L. (1994). Qualitative data analysis for applied policy research. In A. Bryman & R. G. Burgess (Eds.), *Analysing Qualitative Data* (pp. 173-194). London: Routledge.
- Robson, C. (2002). *Real world research: A resource for social scientists and practitioner-researchers* (Vol. 2): Blackwell Oxford.
- Rogers, C. R., & Freiberg, H. J. (1994). *Freedom to learn*.
- Rowe, R., & Calnan, M. (2006). Trust relations in health care: developing a theoretical framework for the "new" NHS. *J.Health Organ Manag.*, 20(5), 376-396.
- Sanfey, J., & Ahluwalia, S. (2016). Re-awakening professional identity: the path to a self-correcting NHS. In: *British Journal of General Practice*.
- Sanfey, J., & Ahluwalia, S. (2018). Lifting the dead hand on General Practice. In: *British Journal of General Practice*.
- Schofield, T., & Hasler, J. (1984a). Approval of trainers and training practices in the Oxford region: evaluation. *BMJ*, 288(6418), 688-689.
- Schofield, T., & Hasler, J. C. (1984b). Approval of trainers and training practices in the Oxford region: assessment. *BMJ*, 288(6417), 612-614.
- Schofield, T., & Hasler, J. C. (1984c). Approval of trainers and training practices in the Oxford region: criteria. *BMJ*, 288(6416), 538-540.

- Schön, D. A. (1983). *The reflective practitioner: how professionals think in action*. New York: Basic Books.
- Sfard, A. (1998). On two metaphors for learning and the dangers of choosing just one. *Educational researcher*, 27(2), 4-13.
- Sfard, A., & Prusak, A. (2005). Identity That Makes a Difference: Substantial Learning as Closing the Gap between Actual and Designated Identities. *International Group for the Psychology of Mathematics Education*, 1, 37-52.
- Silverman, D. (2000). *Doing qualitative research. A practical guide*. London: Sage.
- Simon, H. (1991) Bounded rationality and organizational learning, *Organization Science*, 2(1), 125-134.
- Silverman, D. (2010). *Qualitative research*: Sage.
- Skinner Burrhus, F. (1938). *The behaviour of organisms*. Appleton-Century-Crofts, Nueva York.
- Smith, J. (1996). Semi-structured Interviewing and Qualitative Analysis. In Smith, J., Harre, R. and Langenhove, L. (eds). *Rethinking Methods in Psychology*. London. Sage.
- Smith, C. C., Newman, L. R., & Huang, G. C. (2018). Those Who Teach, Can Do: Characterizing the Relationship Between Teaching and Clinical Skills in a Residency Program. *J Grad Med Education*, 10(4), 459-463. doi:10.4300/jgme-d-18-00039.1
- Smith, J. (2005). Shipman: The Final Report. Retrieved from <http://www.the-shipman-inquiry.org.uk/finalreport.asp>
- Smith, J., Bekker, H., & Cheater, F. (2011). Theoretical versus pragmatic design in qualitative research. *Nurse researcher*, 18(2), 39-51.
- Smith, J., & Firth, J. (2011). Qualitative data analysis: the framework approach. *Nurse researcher*, 18(2), 52.
- Smith, V. (2004). A learner-centred model of training practice inspection: in-depth interview study of GP registrars' perceptions of the learning climate of their training year. *Education for Primary Care*, 15(3), 361-369.

- Smith, V. C., & Wiener-Ogilvie, S. (2009). Describing the learning climate of General Practice training: the learner's perspective. *Education for primary care: an official publication of the Association of Course Organisers, National Association of GP Tutors, World Organisation of Family Doctors*, 20(6), 435.
- Spencer-Jones, R. (1997). Why do trainers train? What motivates trainers and does it affect the training that they offer? *Education for General Practice*, 8, 31-39.
- Stacey, R. (2003). Learning as an activity of interdependent people. *The learning organization*, 10(6), 325-331.
- Stacey, R. D., Griffin, D., & Shaw, P. (2000). Complexity and management: Fad or radical challenge to systems thinking? [Ebrary Reader version]. *Retrieved from Ebrary database*.
- Starfield, B., Shi, L., & Macinko, J. (2005). Contribution of primary care to health systems and health. *Milbank quarterly*, 83(3), 457-502.
- Starr, S., Ferguson, W. J., Haley, H. L., & Quirk, M. (2003). Community preceptors' views of their identities as teachers. *Academic Medicine*, 78(8), 820-825.
- Stenfors-Hayes, T., Kalén, S., Hult, H., Dahlgren, L. O., Hindbeck, H., & Ponzer, S. (2010). Being a mentor for undergraduate medical students enhances personal and professional development. *Medical Teacher*, 32(2), 148-153.
- Sterrett, S. E. (2015). Interprofessional Learning as a Third Space: Rethinking Health Profession Students' Development and Identity through the Concepts of Homi Bhabha. *Humanities*, 4(4), 653-660.
- Stone, S., Ellers, B., Holmes, D., Orgren, R., Qualters, D., & Thompson, J. (2002). Identifying oneself as a teacher: the perceptions of preceptors. *Medical Education*, 36(2), 180-185. doi:10.1046/j.1365-2923.2002.01064.x
- Svensson, L. (1997). Theoretical foundations of phenomenography. *Higher Education Research & Development*, 16(2), 159-171.

- Swanwick, T. (2005). Informal learning in postgraduate medical education: from cognitivism to 'culturism'. *Medical education*, 39(8), 859-865.
- Swanwick, T., & Chana, N. (2005). Workplace assessment for licensing in General Practice. *Br.J.Gen.Pract.*, 55(515), 461-467.
- Tesch, R. (1990). *Qualitative research: Analysis types and software tools*: Routledge.
- Thorndike, E. (1905). *The elements of psychology*. New York, NY, US: AG Seiler. In.
- Todd, A. (1968). Report of the Royal Commission on Medical Education. *Lancet* i, 809-814.
- Toon, P. D. (1994). What is good General Practice? A philosophical study of the concept of high quality medical care. Occasional paper (Royal College of General Practitioners), (65), i.
- Touchie, C., & ten Cate, O. (2016). The promise, perils, problems and progress of competency-based medical education. *Medical education*, 50(1), 93-100.
- Van de Wiel, M. W., Van den Bossche, P., Janssen, S., & Jossberger, H. (2011). Exploring deliberate practice in medicine: how do physicians learn in the workplace? *Advances in health sciences education*, 16(1), 81-95.
- Walker, M. (1988). Training the trainers: socialisation and change in General Practice. *Sociology of Health & Illness*, 10(3), 282-302.
- Waters, M., & Wall, D. (2007). Educational CPD: how UK GP trainers develop themselves as teachers. *Medical teacher*, 29(6), e160-e169.
- Waters, M., & Wall, D. (2008). Educational CPD: an exploration of the attitudes of UK GP trainers using focus groups and an activity theory framework. *Medical teacher*, 30(8), e250-e259.
- Watson, J. B. (1913). Psychology as the behaviorist views it. *Psychological review*, 20(2), 158.
- Wearne, S., Dornan, T., Teunissen, P. W., & Skinner, T. (2012). General practitioners as supervisors in postgraduate clinical education: an integrative review. *Medical Education*, 46(12), 1161-1173.

- West, M. A., & Borrill, C. S. (2002). Effective human resource management and lower patient mortality. Birmingham: University of Aston.
- Weston, C., Ahluwalia, S., Bassett, P., Lock, J., Durbaba, S., & Ashworth, M. (2017). GP Training practices in England: a description of their unique features based on national data. *Education for Primary Care*, 28(6), 313-318.
- Wiener-Ogilvie, S., Bennison, J., & Smith, V. (2014). General practice training environment and its impact on preparedness. *Education for Primary care*, 25(1), 8-17.
- Whitchurch, C. (2008). Shifting identities and blurring boundaries: The emergence of third space professionals in UK higher education. *Higher Education Quarterly*, 62(4), 377-396.
- Whitty, G. (2000). Teacher professionalism in new times. *Journal of In-Service Education*, 26(2), 281-295.
- World Organisation of Family Doctors. (2002). The European definition of General Practice/family medicine. Barcelona: WONCA Europe.

6.2 Acknowledgements

There are many who I must thank for their contribution to my doctoral journey: Tim Swanwick and Diana Hamilton-Fairley for convincing me to step on to this road; Chris Pike for his willingness to share his expertise in multivariate analysis and undertake sophisticated statistical work; and the research team at Kings College London for their expertise and support for the analyses undertaken that formed the basis of the IFS.

To my supervisors – Mark Newman, Deborah Gill, and Bryan Cunningham for their unconditional positive regard. For their time, patience, humour and calm when dealing with my anxieties and life changes. My thanks are due to the 2012 IOE cohort I started with, and who, seven years later remain a source of great support and friendship. I would particularly like to acknowledge Mark Ashworth's passion for education, wisdom about research in primary care, sharing of his time and expertise for little in return, and being a role-model. I would like to thank Lynis Lewis and NOCLOR for supporting my research journey with advice and guidance about research governance as well as funding support when required.

I would like to acknowledge the support of my employer, Health Education England in supporting this work with time and resource. I thank Liz Hughes for acting as my research sponsor through the last three years. John Spicer and Anita Patel have been brilliant peers in gently shaping this work and offering intellectual challenge – their contribution has been supreme. This work could not have taken place without the wonderful GPs who agreed to participate in this study – for their time, expertise and wisdom my heartfelt thanks.

Finally, I thank my family who have endured this marathon at the same time. They have been my safe harbour during times of stormy weather.

6.3.1. Appendix 1 Participant Information Leaflet

Information Sheet for Research Participants

You will be given a copy of this Information Sheet.

Study title:

Understanding the relationship between GP education and patient outcomes: Qualitative study of GP educators

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with colleagues and friends. Please ask if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part.

You are free to withdraw at any time without explanation. Thank you for reading this.

What is the purpose of the study?

GP training has produced excellent results with regards to learner satisfaction. Evidence has demonstrated an association between greater patient satisfaction and better clinical outcomes in training versus non-training practices.

The purpose of this qualitative research is to study the perceptions of GP educators like yourself on how engagement with GP training influences patient care.

What will happen to me if I take part?

A researcher trained in interviewing people will interview you. This will be audio recorded and subsequently transcribed onto paper. The interview will last about half an hour at a place convenient to yourself e.g. your work or office or by telephone. The questions can be obtained in advance from the researcher should you choose to see this.

At no stage do you have to answer any questions you feel uncomfortable with, though anything you say shall remain anonymous and shall only be used for the purposes of the research in question. Once the interview has been transcribed, it will be sent back to you for further comments, and to ensure that you are happy with the contents. Subsequent analysis will be sent back to you, should you wish, as well for further comments and feedback. Please note all themes will be anonymised when compiled so that no individual can be identified.

Will my taking part in this study be kept confidential?

All information which is collected about you during the course of the research will be kept strictly confidential. Any information about you which is utilised will have your name and address removed so that you cannot be recognised from it.

What will happen to the results of the research study?

The results of the study should be available within 12 months from the start of the study. These will be available from the investigator. Apart from feedback and copies of transcripts, which you receive, you are welcome to contact the primary investigator for any further information you may need.

Who is organising and funding the research?

This study is being conducted as part of an award towards a higher degree in education. It has received no external funding from a pharmaceutical agency or other such organization.

Who has reviewed the study?

Ethics committee approval has been obtained from the UCL Institute of Education research ethics committee.

Contact for Further Information

Dr Sanjiv Ahluwalia, Watling Medical Centre, 108 Watling Avenue, Burnt Oak, HA8 0NR.

6.3.2 Appendix 2 Consent form

CONSENT FORM

Understanding the relationship between GP education and patient outcomes: Qualitative study of GP educators

Name of Researcher:

I confirm that I have read the information sheet dated for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.

I understand that the information collected about me will be used to support other research in the future and may be shared anonymously with other researchers.

I agree to take part in the above study.

Name of Participant	Date	Signature
---------------------	------	-----------

Name of Person taking consent	Date	Signature
-------------------------------	------	-----------

6.3.3 Appendix 3 Interview Schedule

Themes to be explored in interviews

- Motivators and barriers to becoming a trainer and training practice
- The journey (over time) to taking up training
- How did you change and develop? How did it affect others?
- How did this influence patient care?
 - Physical
 - Educational
 - Systems/processes
 - Leadership
 - Other
- In what ways do GP trainees influence patient care?
- How do training practices differ from non-training practices?
- How might these differences influence patient care?
- What are the potential barriers to spreading training to non-training practices?

6.3.4 Appendix 4 Excerpt from an interview

I: Interviewer R: Respondent

I. Can you give me a brief description of your development as an educator?

R. In 1991 I became a course organizer and having spent 3 years doing genetics. I landed as a course organizer after seeing the single-handed course organizer asking him if I could attend his VTS. He turned around and said, well why don't you join anyway and we could use your genetics skills. I spent the next 5 years trying to make my practice a training practice. I became a trainer in 1996. In 1993 Paddy McAvoy's book on training the future GP came out. For me that was a landmark reading thing really. It was really helpful because I must say I was I was learning from the master but it was still a sense of winging it and that is why Paddy's book came out at the right time. It was really helpful for me.

From the training perspective, it is interesting; my partners at that time wanted to be a training practice for the free labour but didn't want to do any of the work required. That is why it took so long.

I. How did you end up as an associate director?

R. I was a course organiser and at the turn of the millennium, a colleague was suggesting to me you should think about AD work. I said no no I enjoy course organising work a lot. But I noticed that from when I first started (when I was close to them in age) that I was getting more distant and greyer, I thought this VTS needs to change and I think for me the critical one was the VTS approval visits someone asked the question "whose VTS is it" and I said "it is mine" and I thought I have put my mark on it. At that stage I thought now it is time to go. It is very difficult if you have been in that thing for so long, you do lose sense that it is the trainees VTS not yours. So that was a wake up moment for me. Then I applied for the one in NW and did not get it. The one in NE came and I got that post. For the first couple of years I missed the trainee the teaching bit the reflective sessions we used to have in the second half etc. Then I got busy with other things the fresh start scheme with people from the performance unit. Then my boss asked if I would be interested in the returners' scheme and that was really fantastic as well. So I suppose those sort of roles helped me break into the patch work. The patch work was a bit bitty initially because I was getting different perspectives of what people were doing and it was interesting how much the differences were.

I. For how long have you been a GP trainer?

R. Since 1996.

I. That is nearly 17 years now?

R. That is correct. The other role I forgot to mention is that of examiner. You might say well what is that to do with patient care? Well actually, I think it has a lot to do with patient care particularly because I was always involved with the simulated surgery and so I used to use my patient scenarios for writing cases, but more importantly, I learned from the patient scenarios that I used as well. Oh you know what I don't fully do that. That has been really helpful in updating my knowledge as well.

I. How long you been doing that as well?

R. Since 1996 as well.

I. The next question is about the differences between training and non training practices that have an impact upon patient care. What are the factors that you consider important?

R. Training practices bring the challenge and reflection that students and practitioners need. One of the things was that when I was patch AD in Romford I was encouraging more non training practices, particularly the smaller practices to take up training. When I became a trainer in my XXXXXXXX practice it was quite obvious that trainees would challenge not just myself but systems in the practice as well. Quite a few ideas did come from them so that was one helpful thing. Even with medical students they would ask challenging questions as well (e.g. why did you give this statin and not the other one?). The fact that as a practitioner you got that I think was really helpful. The fact that you get that really does help patient care. If you are not a training practice it is very easy to go on auto-pilot and do just what you have always done. In fact as Sackett wrote in his evidence based stuff that a lot of doctors quote EBM that they use but it is actually the stuff they learned as students because they don't get time to update themselves on the latest stuff. So I think the challenge bit and an element of bringing a spare of hands so that you do get sharing some of the workload out. I remember in the mid-90s there were lots of GPs without appointment systems and lots of single handed practices. In our teaching practice by contrast we had 10 minute consultation times etc. So I suppose in that way patient care improved. Looking at systems, developing protocols, and the fact that you had to do that for your training accreditation visit was very helpful. You would get your notice board cleaned up. Auditing one's notices every three months was actually a task you know. You had to be on your best behaviour. I suppose one thing I do miss in the quality visits, which I used to do as a trainer in XXXXXXXX was to look at records. We used to ask "what happened here" after looking at the records. I thought that was quite useful and we have lost that ability now. There are pros and cons for it because in some ways a trainer should not fear to talk the talk but should be able to provide good patient care and demonstrate it. I am not sure how much of that demonstration we do get nowadays.

I. You talked a little about trainees offering challenge? Could you expand on how that has an impact upon patient care.

R. It makes you start thinking what you are doing and why you are doing it. And quite often with me I often say that I am not the font of all knowledge and we should look this up together. The fact that we look things up is really helpful. That reflective practice was promoted by having somebody with you that could be medical students who I have found quite helpful as well. In that context, it is that challenge bit when they are making you think. The trouble with General Practice is that you could be well versed with the latest guidance and protocols and not much else. You can hide it by referring it. So the variability of medical knowledge can be much greater amongst GPs than specialists in certain things.

I. When you give up training how do you think not having that challenge from students or trainees will have an impact upon you?

R. I am not sure I will ever give up mainly because we encourage trainees to sit in with all of us so I will probably still have but not to the level as a trainer. When I missed being a course organiser for a couple

of years I am also going to miss being a trainer, checking the e-portfolio, discussing cases. Case discussions have been fantastic in furthering my own knowledge actually. I have been very lucky with some good registrars. Even if they are good I make them write out their case based discussions the weekend before our chat. I make them look up the evidence etc. That is where it makes me think much more. I suppose there is an issue I might get stale. What will keep me going are running MRCGP CSA course which keeps me up on the evidence and keeping being an examiner. If I give up these things I could see myself stagnating me. I am hoping that my partners will challenge me. But yes I can easily see that you can stagnate.

I. What you are referring to is the notion of reflective practice really. The interaction with learners of a reflective nature that requires an examination of past experience (what Schön would call reflection-on-action). You also touched upon the system of systems and processes being different. Could you please expand upon that?

R. I am not sure about the difference. I am sure that there are some very good non-training practices that have systems that I do not know about. But the fact that we are a training practice you have to demonstrate. For example, when I was in XXXXXX, just the fact that we wrote our induction booklet for the registrars meant that we started looking at the practice and asking questions what computer systems we had, what screens we had. We adapted that for locums and new doctors joining as well. I know that this was not done until we became a training practice. The fact that someone comes and checks it is quite useful. The other thing is that visiting other practices as a trainer (and myself as an AD) is that you nick ideas from other people. So there is that cross-fertilisation and sharing best practice by those training visits. I know many trainers do not like going on them because of time. However, as an AD I have found there are lots of great systems out there. I ask them if you mind me nicking them.

I. What kinds of systems do you think have an impact upon patient care? I am not looking to explore how this impacts upon trainees because we know this already. It is more about the systems that impact upon the patient experience or the clinical care provided by an organisation.

R. Let's have a think. Can we come back to that question I can't think of think it through.

I. The other thing you mentioned about the issue of a spare pair of hands. What were you referring to?

R. There is service commitment. If any training practice says that a trainees supernumerary that is probably not correct. Small practices where the list size is small I frequently have discussions about making sure that GP trainees get enough clinical exposure for their training needs. The in the out of hours service we pick sessions where they are busy enough to get enough exposure rather than seeing on patient every half an hour. That clinical exposure allows two things. One is about time management. The other is actually seeing patients and discussing where they have got difficulties.

I. Having a spare pair of hands allows for additional trainer capacity which makes a difference to the quality of clinical care that is provided?

R. Trainees spend a lot more time than when they first start then an established GP trainer work. Some of the complex patients are actually feel listened to and so there is a lot more time spent with them. The other thing is, and again what I used to find helpful with my own registrars, if I have been seeing

someone two or three times for a complex problem I might say to the registrar let us swap. The fact that I asked for the swap shows that even experienced GP can get stuck so you get a fresh pair of eyes looking at the patient. It makes it easier for the registrar to come to me with some of their problems. The trainee seeing some of my patients and I have looked after for months and years it's nice to have a fresh pair of eyes and check out what is going on.

I. Getting a second opinion, a triangulation is helpful?

R. From somebody who is not pressed for time.

I. The issue about the relationship between the quality of clinical care is an important one. By having a GP trainee you create additional time for patients and therefore that has an impact upon the quality of clinical care.

R. Yes correct.

I. Training practices themselves offer better care experience to patients. Not every GP in a training practice is a trainer. There is something about the practice itself which is influenced by becoming a training practice that has an influence on patient care.

R. Most training practices have clinical meetings. If I did a straw poll of non-training practices they may not have the drive, enthusiasm, or interest in having a clinical meeting. We meet once a month in our own practice with the whole team including nurses, non trainers etc. The point is that even though the junior GPs in our practice are not trainers they are often asked for advice by trainees and give tutorials so the fact that you are actually doing some teaching as a non-trainer helps as well.

I. How does that help patient care?

R. Well, the fact that someone is supposed to be giving clinical talks means they go and read up stuff they otherwise might not have done if she was not giving a tutorial or talk. The fact is that she is updating herself when she might otherwise would not have done so.

I. In terms of the relationships between practice members, are there differences between training and non-training organisations?

R. This is a hell of a generalisation. I met a lot of non-training practices when I was doing some quality work under the old HA in the late 1990s. What I noticed, and subject to sampling error, was that there was a much more flat structure in training practices and much more hierarchical structure in non-training practices. For example, there receptionists make tea for the doctor and take it to them. In a lot of training practices doctors make tea for the receptionists. Because of the existence of protocols on urgent conditions and other conditions the receptionists etc are less likely to make mistakes and therefore ensure patients are seen in appropriate settings (e.g. calling 999 etc).

I. How does hierarchy have an impact upon patient care?

R. If there is a hierarchical structure, the people at the bottom of the pyramid are not going to challenge or ask the people at the top. I come back to the issue of challenge. It is about challenging each other in a friendly non-destructive way. It is to make people think. If you never challenge the emperor of that organisation you are always going to do the same thing and never change. What I

have been impressed with by a lot of practices is actually the reception meetings and having anonymous ideas given for discussion so that no one has to feel that if it is not accepted it is not their fault. The management are much more listening to the receptionists in training practices. By listening the staff feel empowered and the staff want to do a better job. For example, receptionists are the shop window. So if your receptionists are listening to patients and are focused on their needs it gives patients a good experience. For me the consultation starts not in the consultation room but when patients make a decision to see a doctor.

I. How does the notion friendly challenge improve patient care?

R. It is meant to get the recipient to think about what they are doing and justify to themselves (rather than everyone else). It is about reflection again. I don't think any doctor wants to do a bad job and if they are able to be challenged without having to justify to everyone else that will improve their approach to patients. For example, the comment to a GP "that patient did not leave very happy with you". That might trigger the question "why was that patient not happy" etc.

I. Reviewing different approaches to care and reviewing actions taken that have taken place, and thinking through alternative actions is what makes a difference?

R. Yes. Asking the question is there another way to do it. There are many ways of skinning a cat and I frequently find that in our clinical meetings there are many ways of resolving a problem. The discussion makes people think about those alternatives and what might be most appropriate for patients rather than becoming defensive.

I. What are the conditions that promote a friendly challenge? What makes for good conditions that is permissive of friendly challenge?

R. I think it is the culture of the practice that is very important to get that challenge. I am great believer in that. In the CCG in the last 3 months the main work I have been doing is looking at the culture and how to change that to a learning organisation. Any organisation that is learning is that reflective organisation that will be responsive to change so it is really from that perspective.

I. What aspects of culture are of relevance to creating that environment for friendly challenge?

R. A sense of flat structure rather than hierarchy. If a cleaner can ask the same questions as a colleague and feel just as valued that is important. Everyone needs to be just as important as the top people. In my own practice, I always tell the receptionists that they are important and that they are the shop window. We need to know what makes the job difficult so that we can make it easier. It is usually the fact that it is the doctors not being available or whatever so there are ways of helping each other.

I. Hierarchies being flat and a shared understanding of what we are trying to do together.

R. Also being valued so that they do feel able and wanting to offer challenge. A challenge in such a way that the receptionists feel willing to challenge again the next time. I think the recipients should always do that. They should say "thanks for that" rather than defensive.

I. What is it about the nature of protocols being different between training and non-training practices? How does this make a difference upon patient care?

R. Well it provides clarity for staff who may not be as medically trained as others. So receptionists come to mind. They are the first point of call. They will get a phone call saying "I am getting a bit of indigestion type pain". That could be an MI or indigestion. For them to feel how can they channel that through quickly and get the appropriate response. It may well be that they need an urgent appt with the GP that morning. There need to be systems in the practice that allow them to do that rather than saying "I will give you an appointment in 2 weeks time" and miss something more serious. However, if there are other ways that a patient has been booked into an urgent appointment we can have the chat and challenge in a pleasant way about "what was it that the patient said to you" that made the patient go off protocol. So it is a 2 way challenge.

I. What about the concept of anonymous ideas? It made me think what you mean by that? How does that have an impact upon patient care?

R. We asked people to give ideas etc. Some of the best ideas came from the quieter receptionists who would not normally speak up. They did not want to be labelled as the originators of ideas (because of politics amongst receptionists). We asked for ideas for change to be submitted without any names etc. We never got to know who originated the ideas. But we were able to have a good discussion about those ideas. However, flat the structure of the practice there will always be an element of power politics that mean people feel challenged to say what they want and not fear repercussions.

I. What I am hearing is that it is more likely that an anonymous idea is likely to surface in a training rather than non-training practice? Is that correct?

R. Yes. But this is because training practices tend to have receptionist meetings, tend to encourage feedback from all members of the team. And this is one of the things I particularly did as a patch AD get under the skin of the practice managers to see how they did that? That was much more important to see how the system worked as a practice rather than the trainer themselves as part of the review process.

It is a skewed sample though as there may be non-training ones that do the same but I have not come across those.

I. The "shop-front" having an impact upon practice experience. The way the shop-front is set up appears to have an impact on experience?

R. Yes. The shop-front is important as well as what is in the shop-front. For example if you have big barriers in front of the patients separating staff from patients. This is already a barrier. What we did in my old practice was to revamp the surgery. I was speaking to the architect. We were worried about violence towards staff. He said the best way to deal with that is to widen the desk rather than have a screen in front. That made me think. That is exactly what we did. We widened the desk so that patients could not assault staff but it gave the sense that there were no barriers between the patients and staff. In my practice currently, there are no glass barriers at all. It sends a message. When I have been to non-training practices a lot of them have Perspex barriers.

Just as important is the waiting area. Training practices are often in purpose built premises with nice waiting areas and notice boards etc. Whilst the patient is waiting making it comfortable for them, informative for them is very important. We forget that. When you go to your next practice always think that the consultation starts when the patient makes an appointment to see the doctor.

If a patient has been treated badly by a receptionist, and the reception area is dirty and cold, they are going to come into the consultation with the doctor in a bad temper and things are going to start off on the wrong foot. So much of it is about preparation. That is where the reception staff are very important to set the tone of collaborative working with patients rather than a one-sided approach.

I. So what you are suggesting is that there may be differences between training and non-training practices in the way they engage with patients even before the consultation with a doctor that has an influence on the patient experience. What about the emphasis in training upon consultation skills? Does this have an impact upon patient experience?

R. In some ways I sigh there. I see trainees in OOH. I am amazed at the number of trainees who have read about models of consultations without an understanding. I am now famous for my sermons on consultations. One of the issues we need to impart to learners is that actually consultation models are ways to help them get to the nub of the problem and manage problems well within the constraints of limited time. Time management is very much improved through the framework of a model. One of the things I find is that they have read the five steps in Neighbour but not really understood what it all is about or means. The other problem is trainers are not as enthused about it and tell the trainees to go and read Cambridge-Calgary or Neighbour when what they want is to get trainees interested in it. They should give them a simple book to read so that they get the start of it (e.g. Peter Tate's book).

The fact that trainees even think about consultation models will improve patient care. They are going to have to think what type of person they are dealing with etc. The problem is that some trainees become more mechanistic by following these checklists. And that is the downside of it. That is why I often talk about the consultation models as riding the bike. You have your stabilisers on. I want them to ride that bike for fun not to do it as a paper round chore. I think we need to get people a lot more enthused with the application of consultation models. We need to do this by role-modelling ourselves. We need to be able to say, "look this makes me more effective within that short time frame by using these models". Trainers could do a lot more.

I. In most training practices, not everyone is a trainer. So, a lot of GPs work in training practices who do not get exposed to the wide range of communication skills training required to become a trainer. Nonetheless, patients registered with such practices have a much better experience of their healthcare. So, my tentative notion was actually that communication has a role to play but is not the complete answer to better patient experience.

R. Yes. You are probably right. Communication skills is more than consultation models. It is about communicating within the team as well. The fact that you talk a lot more in a flatter structure will improve that bit. The greater the communication in general is going to improve that consultation approach even amongst non-trainers. Also, with the non-trainers, they may well be exposed to the registrar sitting in and giving feedback on consultations etc. We ensure that all trainees sit in with all the doctors in the practice. The non-trainers also sit in with video analysis tutorials. Even if this is once a year that is great. There is something about the fact that non-trainers in a training practice will get exposed to communication skills. In a training practice it is in the air and we are having to talk about it the COTs etc. I am encouraging the non-trainers to do a COT or 2 with the registrar for their own development. Once they get a taste of it they might become trainers and I want everyone in my practice to become a trainer. Not because we want trainees for everybody. You can then help each other, and it allows some to take time away from training if needed.

I. So non-trainers being exposed to communication skills may be the engine that makes a difference to patient care. I would like to move the conversation on to thinking about your experience of being a non-training to training organisation in XXXXXX?

r. The main initial challenge was getting the other partners to agree that moving towards training practice status was something they wanted. Initially, none of the partners wanted to take part in notes summarising. As a result, I met a lay person who followed a clear protocol I developed on summarising of notes and with this it became clear that one did not need to doctor or nurse to undertake this role.

The other thing was trying to get this idea meeting up to discuss cases etc even before we became a training practice. This was quite hard because I discussed my cases, but others did not feel the need for this. Once we started we met monthly at a clinical meeting over lunch and I led by example by bringing cases where I did not do so well. That actually opened up the door for further things. I then started a significant event booklet. I noticed I was the only one with significant events. I thought am I the only one making cock-ups. It is because my threshold was much lower. But the fact that I was doing it and it was there for everyone to see got everyone else doing it. With some of the older ones, it was the first time they were challenged by somebody about events and things and making them talk about this. It took 2-3 years. It was quite a journey.

There was also this attitude, "oh yes he is doing teaching this is not real work". I used to have tutorials between surgeries. We did not have protected time for this. Because I was the only trainer no one really understood where I was. Maybe I did not push it but I did feel put upon that I was doing it in between surgery times and all the other things I was doing. I was keen to do it anyway. Things changed a lot when one of the other partners became a trainer and then she said "this hard work. We need to say this to the other partners." When I got this critical mass of 2 trainers helping I got the protected time I needed for tutorials. I used to go to exam conferences and they used to say he has gone on a bit of a jolly. When the other trainer started coming along to the exam conferences she came to me and said, "now I know why you call it your prozac for the year". Those other non-trainers do not really see the joy of it unless it is rammed home. There were a lot of barriers to this journey.

I. Could you identify the barriers for me? One you have identified is time, the other is your senior partners.

R. On reflection I should have spent a lot more time writing a discussion paper highlighting the benefits of training. If I spent a bit more time getting them bought into the idea I would have saved years of turmoil. I suppose I am activist- I just did it. On reflection if I had spent a few more months bringing them around to the idea. If I had my time again, I would spend about 6 months talking to them about the work involved in becoming a training practice, highlighting that for the others the workload would be minimal. I think I started on the wrong foot by giving each of them a dozen notes to summarise. I was young and wanted to change the world in seconds.

If I had prepared the ground it would have been a lot easier. Talking about improving patient care would not have gone down well with them because they all felt they were doing a good job anyway. I would probably have to use other ways such as decreasing the work etc. And actually, giving a better patient experience by having more time to spend with patients and that they are free labour as well. Also, that there is a trainers grant that would pay for time out to do protected teaching. I could have thought all that through before I did it.

Another thing they said was that trainees seeing patients was not the same as partners seeing them. I said that this was not the point of becoming a training practice. The whole point is that patients can get a better experience from a trainee because trainees will have more time, but also because trainees can ask for advice. And it is about imparting some of your experience to them. I would not say it is about knowledge because I know that they have more knowledge than we do. Once training started in the practice, the ones that resisted the most are the ones who found it most helpful for themselves.

I. How did you know what you needed to achieve to become a training practice?

R. I had read about the process for becoming a training practice and I used to go to course organiser conferences so I was one of the few COs who was not a trainer. I used to talk to them about what we needed to do etc. I must say I did not approach the patch AD for advice like now I would encourage them to do. This was all in the early 1990s. But I learned a lot from the trainers who were also course organisers.

I. So, peer support was quite important?

R. I think so. The trainers workshop was a really good place. My first trainee were a few problems. I was not going to sign her up. I had to write a report. For me that was a baptism of fire. So I used the trainers workshop for bringing the case and discussing it. There were a couple of trainers "why are you bothering, just sign her up and she will find her own level". I thought "this is wrong". But the majority of trainers were really fantastic. It was helpful to discuss that amongst the trainers.

I. So what actually did you do within the practice to go from being a non training to a training practice. What actually changed within the practice itself?

R. Notes were better summarised. We had a better layout of our notices and waiting room. Protocols for receptionists that they could use to give more appropriate advice. We had induction booklets for registrars and other new members of staff and locums. We had to ensure there was an up-to-date bag for the registrars. It also made us think about the drug bag. I was more mindful of the records and that I need to demonstrate patient care in this way. But most importantly we used to talk to each other once per month in a clinical meeting.

I. You said you kept better records as a results of being a trainer. Is that correct?

R. I was consciously thinking about my records, whether they are better or not. If you audit something you always improve what you have audited because your practice has been looked at.

I. How did thinking about better records make a difference to better patient care?

R. One of the things we all agreed on as partners was that a good medical record was not the length of it but rather the quality of it that handed over to another doctor. So what you would get is continuity of care by the organisation rather than by the individual. So being able to look at each others clinical records and see what was discussed and what the plan is what needs to go into the record. We spent a lot of time discussing this at the clinical meetings about what makes a good clinical record. The only consensus we got was that it provided a record of what was discussed and the management plan agreed was. There were some distractions like we needed to cover our butts with medicolegal stuff like names of chaperones etc. The essential thing was ensuring continuity of care by the organisation.

I. We have covered issues such as record-keeping, continuity of care, organisational development, more resources, and structures changing, hierarchies changing as well as a consequence of this journey. What aspects do you think had an impact upon patient care?

R. The fact that we talked a lot more formally in clinical meetings and record significant events and discuss them without fear of being blamed. Feedback from other members of staff and putting them into practice as well. Staff having their own meetings. These things did not happen when I first arrived there. They did talk in corridors etc but no formal way. Some people would say we do it anyway but my suggestion is that unless it is formal it is not helpful. The other thing was recording them, and they were very mindful of recording them. I suggested that we could then look back and say that we discussed this issue three months ago. The recording of things was not bureaucratic.

I. How soon do think patient care started becoming impacted through this journey?

R. Difficult question. They had good care already I am sure. Until we had the registrars joining us and then we had the theory put into the practice. We could have had it before though- it is difficult to say exactly when. Logically it would suggest to me it happened in a gradual manner. We have not got there yet in my new practice. There is much we could do. The turning point was when we started to talk to each other much more frequently.

I. You were doing a lot of organisational development before you got a registrar. Do you think patients started noticing a difference?

R. I think we noticed a difference as soon as we had computerised records with summaries. Cost savings were seen before we had a registrar. Also with clearing up the reception area and notice boards. However, it was the summarising of the records that made a significant difference. The summary sheet really did help and that improves care as it makes you make sense of a patient's life history very quickly.

I. I think I am at the end of this interview. Thank you very much for your time. Do you have any final thoughts.

R. Anecdotally, we always say that training practices offer better care. But we must not forget the sterling work that single handers and other non-training practices provide. I am mindful of that really. The corollary that non-training practices provide poor care is not true in my mind.

6.3.5 Appendix 5 Examples of data coding to themes

Socio-cultural and socio-material theories	Components	Coding	Emergent themes describing systems and processes
<p><i>Activity theory</i></p> <p><i>Communities of Practice</i></p> <p><i>Complexity theory</i></p> <p><i>Actor Network theory</i></p>	<p><i>Developing teachers</i></p> <p><i>Developing teams and organisations</i></p> <p><i>Developing learners</i></p> <p><i>Organising materials and resources for learning</i></p>	<p><i>Data coded from transcripts with descriptions of the interactions between the components- both a priori and emergent</i></p> <p><i>Please see example below</i></p>	<p><i>Educational standards</i></p> <p><i>Educational leadership</i></p> <p><i>Learners influencing practices and patient care</i></p> <p><i>Educational processes</i></p>

Example: Physical space in a training practice and patient care

Identified in interviews with GP07, GP06, GP11, GP04, GP05, GP03, GP09

Coded to: Lack of space as a barrier to engagement with education

Notes

- This was an a priori element I had set out to explore
- Physical space as a barrier to expanding educational capacity
- Influences the quality of learner experience

GP07

Reference 1

One is really simple which is estates. When I go to areas where I would want more trainees in, I often get the feedback “Well, we haven’t got the room. Give us a room and we’ll do it”. I know that we were in a similar situation, where we would’ve quite happily taken 3 or 4 trainees but we just didn’t have the room to physically put them in.

GP06

Reference 1

So, space was a barrier. If you haven’t got enough rooms, you can’t put them in them

GP11

Reference 1

That has quite an impact really. It is an interesting aspect to pull out, having been abstract and philosophical then get to the bread and butter, which is for us, space is a huge, huge problem for us at the moment. It’s a real break on our aspirations and ambition. We have literally run out of space. So, we are having to reign back some of the educational offer we provide to trainees & graduate numbers. We met with one of the leads on trainee nurse placements in general practice a few weeks ago and actually we couldn’t take that any further because physically we did not have the space to do it.

GP04

Reference 1

Premises are a huge problem. Many practices have a problem with this and therefore do not go forward with training because of this.

Coded to the importance of space for better patient care

Notes

- Design and quality of physical reception space important for patient satisfaction and experience of healthcare
- Differences between training and non-training practices noted
- Identification of training standards flagged
- An element that first emerged in discussion with GP08 and I subsequently explored in latter interviews (note the interviewee tags are not in time order)

GP08

Reference 1

Yes. The shop-front is important as well as what is in the shop-front. For example if you have big barriers in front of the patients separating staff from patients. This is already a barrier. What we did in my old practice was to revamp the surgery. I was speaking to the architect. We were worried about violence towards staff. He said the best way to deal with that is to widen the desk rather than have a screen in front. That made me think. That is exactly what we did. We widened the desk so that patients could not assault staff but it gave the sense that there were no barriers between the patients and staff. In my practice currently, there are no glass barriers at all. It sends a message. When I have been to non-training practices a lot of them have Perspex barriers.

Just as important is the waiting area. Training practices are often in purpose built premises with nice waiting areas and notice boards etc. Whilst the patient is waiting making it comfortable for them, informative for them is very important. We forget that. When you go to your next practice always think that the consultation starts when the patient makes an appointment to see the doctor.

If a patient has been treated badly by a receptionist, and the reception area is dirty and cold, they are going to come into the consultation with the doctor in a bad temper and things are going to start off on the wrong foot. So much of it is about preparation. That is where the reception staff are very important to set the tone of collaborative working with patients rather than a one-sided approach.

GP07

Reference 1

we gave a lot of conscious thought more for the purpose of approval of the training to create a more tranquil environment. So, we ditched things like, everyone piling down at 11am if they haven't got an appointment. We didn't want the space to be heaving and I think that's never changed. So, we've spread things out more by lengthening the appointments and we don't always run an hour late. The building feels less like a place of stress. I suppose, that's because we wanted to create an impression of a place that's in control. So, occasionally you would walk-in and there wouldn't be anyone there sometimes. People would say, you're quiet today and we'll say no. We're just as busy as usual but we've spread it out a bit.

GP05

Reference 1

We were very lucky because the lease was coming up for renewal. So, we said to the landlord, that he's got another 25 years to do it up. We had a small grant. We had a new consultant and this used to be the big meeting room. We've got an extra room here and the middle can be an extra room and then another room. We got a very small grant for that but actually, it worked out quite well for us.

In terms of patient care – what does that mean for patients?

Patients enjoy coming somewhere that looks nice, clean and hygienic. NHS England came a few weeks ago and did a health & safety check on us and we're doing quite well because the new sinks are good but the old sinks are not so good. Patients come in a it feels like a healthcare giving environment.

Why is that important, XXXXX?

I've always thought that it was important. If you're delivering healthcare particularly in primary care, it should be... you should look professional. I am very keen on the way people should dress properly, that doctors should look professional and that's quite important to me.

It might be important to you but why is that important to patients?

It increases their trust and I suppose, it's about (having) a tidy mind and things like that. I don't know. People come in here and say that it's a nice space. Part of the reason, I'm in this room is because it's in the corner and it's away from everybody and the gynae stuff is there. I feel that area of the room is quite private and patients feel more comfortable there. Therefore, I suppose they will be more open about what's wrong with them.

GP03

Reference 1

So, I think maybe, in terms of accommodation, that's one area that probably again is something that is different in training practices compared with ordinary practices. You will not be able to be a training practice if you are a lock-up shop with an outside toilet.

GP09

Reference 1

I think they were just the space of making people feel welcome. So, something about the waiting area, the space there and how you do that

Reference 2

I think people have felt that they are valued, if the space where they wait is attractive and we've had a very interesting manager working with us who basically he loves decorating. Equally he says why should people in Woolwich have anything worse then they would have in Hampstead or somewhere

posh? So, he'd go completely over the top at Christmas for example putting all sorts of beautiful beads and interesting designer things and make sure that that space is always as attractive as it can be I think that's really important. I think the other way that space makes a difference is how easy is it for staff to be in contact with each other.