

Understanding the relationship between GP training and improved patient care – a qualitative study
of GP educators

Sanjiv Ahluwalia, John Spicer, Anita Patel, Bryan Cunningham, Deborah Gill

Abstract

Previous research has highlighted the benefits of receiving care in a postgraduate GP training practice including improved patient satisfaction, more appropriate secondary care usage, cancer diagnosis, and antibiotic prescribing. Whilst the influence of being registered in a postgraduate GP training practice on patient outcomes is modest relative to other factors such as deprivation, disease burden, demography, and ethnicity, the reasons for this benefit is not clear. This study explores how GP trainers perceive engagement with clinical education influences patient care.

Socio-cultural theories were used as a framework for guiding the research. Semi-structured interviews were conducted with 11 GP educators. Interviews were recorded and transcribed verbatim. Data analysis involved thematic analysis.

GP educators identified four overarching themes that, for them, seemed to explain how clinical education mediates its influence on patient care. These included: influencing through educational leadership; influencing through learners; influencing through the educational process; and influencing through educational standards. Findings suggest that GP trainees have a significant effect on the learning environment, professional development of GP trainers, and patient care. The nature of the relationship between GP trainers and trainees appears far more bilateral than acknowledged in the apprenticeship model.

Further exploration of the perceptions of trainees, patients and other staff on how the presence of learners in the GP setting impact patient outcomes could further our understanding of this phenomenon.

Introduction

Postgraduate GP training in the UK is well-regarded for producing high levels of learner satisfaction amongst GP trainees¹. More recently empirical evidence, using multivariate analytical methods, has emerged suggesting engagement with GP training is also associated with improved patient outcomes for patients registered in training practices^{2,3,4}.

Data from the UK General Practice Patient Survey has shown patients registered with GP training practices reported greater satisfaction in consultations with their GPs compared to patients in non-training practices. GP training practice status was found to be a predictor of positive responses to questions about consultations with doctors as well as overall satisfaction of care. Patients registered with GP training practices rated the 'doctor care domain' questions between 0.7–1.1% higher than patients registered with non-training practices and rated the 'overall satisfaction' questions 1.5–2.0% higher². Weston *et al*³ found patients registered at training practices reported higher satisfaction in three domains: access, communication, and overall patient experience but had lower levels of satisfaction with continuity of care. Training practices were also characterised by significantly higher cancer detection and referral rates. Findings included lower cancer conversion rates (a lower proportion of urgent cancer referrals eventually diagnosed as cancer), probably as a consequence of a higher referral rate in these practices³. Ahluwalia *et al*⁴ also demonstrated that GP training practices prescribe fewer antibiotics overall and fewer broad-spectrum antibiotics. However, whilst training practice status appears to influence measures of patient outcome, the size of this effect was modest relative to the effect of factors such as deprivation, disease burden, demographics, and ethnicity.

The empirical literature on postgraduate GP training offers few insights into *how* engagement with clinical engagement influences patient care in training practices. Lake⁵ described the relationship

between the clinical and educational practice of individual GP trainers where key skills are used interchangeably between these two areas of activity potentially influencing patient care. Blaney ⁶ and Pearson ⁷ highlighted the importance of the learning environment on the professional and clinical development of GP trainees; and Smith and Ogilvie-Weiner ⁸ and Ogilvie-Weiner et al ⁹ highlighted the characteristics of the GP learning environment considered important for maximising learner engagement and development. These studies suggested that the learning environment may influence patient care but without explaining how that might happen. Also missing from existing research is an understanding of how clinical education can affect the *whole organisation* and influence the quality of care that all parts of the organisation provides. Hence, the aim of this study was to explore how GP trainers perceive engagement with educating future GPs influences patient care.

Bleakley ¹⁰ proposes a theoretical model that might have some explanatory power. He suggested professional learners are but another part of a social system accessing knowledge distributed across persons and artefacts. Learning is non-linear and situated in the local context; the distinction between learning and working being artificial. He proposed that learners joining a practice, are in effect, entering a community of practice or complex adaptive system, and in doing so change it. Bleakley ¹⁰ further suggests that the socio-cultural theories of learning such as Engeström's ¹¹ ideas on expansive learning; Lave and Wenger's ^{12, 13} descriptions of participation in communities of practice; and Stacey's ¹⁴ notions of processes of individuals relating in complex adaptive systems offer a powerful lens for understanding how clinical education in the context of a training organisation influences patient care.

Methods

Research design

In this study we have used a socio-cultural theoretical frame to understand how interactions between practice staff, educators, trainees and patients are influenced through engagement with clinical education. Semi-structured interviews were conducted with GP educators involved in front-line postgraduate GP education.

Sample

A purposive sample of 11 GP educators working as GP trainers who also have experience in assessing the quality of clinical and educational practice were recruited. Participants were initially approached via email and a participant information leaflet and consent form explained the nature and purpose of the study.

Data collection

An interview schedule was developed by three authors (SA, DG, BC) to support the data collection process. This schedule focused on areas suggested in both the theoretical and empirical literature highlighted above that may have some explanatory power. The interview schedule evolved as issues arose from the ongoing analysis; highlighting further areas of exploration and shifts in emphasis where appropriate. Interviews were conducted at a place and time convenient for the research participants and methods included telephone, skype and face-to-face interviews. All interviews were conducted by SA, a clinical educator, and lasted between 38 to 74 minutes. Interviews were

recorded then transcribed verbatim. Field notes were taken during the interviews to capture non-verbal data and were used alongside the interview transcript as data.

During the interviews participants were invited to share their journey of engagement with clinical education; their reasons for engagement with GP education; challenges and barriers in doing so; the observed influence of GP education on their teams and practices; and their perceptions of how this influenced patient care.

Data analysis

An initial stage of data analysis was conducted by AW, AS and AP: all GP educators with prior experience of conducting qualitative research. Thematic analysis was undertaken informed by the framework approach ¹⁵. This iterative framework had clear stages, was inductive and allowed for emerging concepts as the analysis progressed. Data were managed and coded using NVivo 7 software ¹⁶. Data collection and analysis were undertaken concurrently so that emerging concepts could be incorporated and explored in subsequent interviews.

A second stage of data analysis was conducted by SA, DG, BC; identifying wider themes and connections between the emerging themes and the empirical and theoretical literature both within GP education and beyond.

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.

Results

Sample characteristics

Eight male and three female GPs were involved in the study. Participant characteristics can be seen in table 1. All the GPs interviewed qualified in the UK bar one who gained their primary qualification from India. 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. All the GPs interviewed were active in clinical practice at the time of interview bar one who had retired in the previous six months. Two of the 11 participants worked in practices serving deprived communities. All GPs had extensive experience as GP educators and were also clinical managers with a focus on assessing quality. Eight participants had introduced GP education in their practices shortly after joining. Two of these eight moved practices and introduced GP education again in their second practice. The remaining three worked as GP educators in established training practices. The participants were, therefore, able to provide unique insights into how their practices changed because of becoming an educational organisation. During the analysis, no significant differences were found in the themes arising between these two groups.

Participant	Demographic	PMQ	Practice list size
GP01	Asian male mid-60s	PMQ (1978) UK	7100
GP02	Asian male late 50s	PMQ (1984) IMG	21000
GP03	Caucasian male early 50s	PMQ (1994) UK	8000
GP04	Asian male early 50s.	PMQ (1986) UK	14000
GP05	Caucasian female early 50s	PMQ (1987) UK	18500
GP06	Caucasian female mid-50s	PMQ (1989) UK	9000
GP07	Caucasian male late 40s	PMQ (1990) UK	9000
GP08	Asian male early 60s	PMQ (1982) UK	14000

GP09	Caucasian female early 60s	PMQ (1983) UK	25000
GP10	Caucasian male early 40s	PMQ (2004) UK	14500
GP11	Caucasian male early 50s	PMQ (1990) UK	14000

Emergent themes from analysis

The results suggested four overarching themes that describe how clinical education is experienced as mediating its influence on patient care: influencing through educational leadership; influencing through learners; influencing through the educational process; and influencing through educational standards.

1. Influencing through meeting educational standards

The term educational standards relate to the standards of clinical care and organisation expected of becoming and remaining a training practice. Participants described how achieving the standards required to become a training practice had a positive effect on patient outcomes. Reviewing accreditation standards required the practice to identify areas for further development and this was perceived to enhance practice performance. 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.

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

Key areas perceived as having a positive influence on the quality of patient care included improved record-keeping, developing and improving organisational systems and processes (e.g. prescribing, immunisations, and screening amongst others), reviewing governance arrangements, developing opportunities to learn together as a group, adapting learning materials for all staff groups, reviewing staffing levels, and effective use of physical space as important reasons for improved patient outcomes.

“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

Participants identified that the positive patient experience of their practice started before entering the consulting room. They described how the manner in which the practice entrance and reception were setup influenced patient experience. 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.

2. Influencing through educational leadership

The development of educational leadership in the practice was considered important in successfully achieving training practice accreditation. Arguing for resources, engaging staff and partners in the process of practice and professional development, engaging patients and managing expectations

were identified as critical leadership roles. This leadership role was most often vested in a GP likely to become the trainer, though not always. Apart from managing the process of practice accreditation, the role of the educational leader included acknowledgement and acceptance by other 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

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.” GP06

Another key benefit of being an educational leader in the practice 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.

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 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 associated with being a GP trainer at times in their practices. A source of significant support for GP trainers was through local trainer’s workshops. These workshops provided space for GP trainers where issues could be independently discussed and shared, and solutions explored as well as reducing clinical and educational isolation. 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 organisation.

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

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.

"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. 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

The 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.

"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

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.

“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

Participants 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). Patients are likely to have perceived being listened to more fully as a consequence.

“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

There were mixed views about the impact of having GP trainees upon continuity of patient care and 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.

4. Influencing through educational process

GP trainers involved in the study noted that engagement with educational activity influenced patient care through enhanced communication and consultation skills; reflection on clinical care; 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

Involvement in clinical education required GP trainers to enhance and maintain communication skills. Trainers described the significant influence of enhanced communication and consultation skills on patient care, learner experience, and staff engagement.

“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

Less hierarchical and more open environment

Enhanced communication within the practice was associated with a less hierarchical structure. 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. Breaking down barriers between receptionists and GPs was particularly relevant to patient care.

“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

The influence of reduced barriers to communication and flatter hierarchies between staff was also noticed in collectivised learning as a practice. The skills used in facilitating learning of trainees were also found to be helpful in creating team meetings that were inclusive and safe for individuals to share narratives without fear. 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 have been swayed by influences such as drug company sponsorship and more likely to follow best practice such as guidelines developed by NICE. 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.

“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.” 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.

Reflective practice

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.

“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

In training practices, the whole team is involved in some way with the delivery of clinical education. Non-training GPs were frequently 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...”

GP03

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.

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

Discussion

Summary of main findings

A range of factors associated with GP training were felt to impact on the quality of patient care and outcomes. The achievement of the educational standards required for accreditation as a training practice was seen to improve practices, behaviours and outcomes. The development of GP trainers as educational leaders and their developing sense of agency were also an important mechanism 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 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.

The findings from this study reinforce what many trainers have long held: that engagement with GP education encourages development of the learning and clinical environment, supports the development of team-based working and learning, and that trainees keep them up to date. This research also extends our understanding of the learning and development involved in postgraduate GP education: the relationship of trainees with their trainers and training practices is bi-directional, unlike that of traditionally held views about the apprenticeship model. The research also extends our understanding of how the bi-directional nature of this relationship is mediated.

Comparison with existing literature

a) The role-duality of GP trainers

Findings from this study suggest that GP trainers develop their communication and consultation skills (and that of other staff) through engagement with GP training; their clinical diagnostic thinking through challenge from their trainees; they influence the nature of relationships and collectivised learning in the workplace; and their influence in the practice as educational leaders. These findings are consistent with the work of Lake ⁵ who studied the dual role of GPs as educators and clinicians. Similarly, Smith et al ¹⁷ 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.

b) Bi-directional relationship between GP trainees and their trainers

Pearson ⁷ described key elements required for maximising the learning potential of GP trainees in a practice which included the legitimacy of learners as 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 ⁶ 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. Their work chimes well with literature from undergraduate medical education ¹⁸ and university students ¹⁹.

Findings from this study highlight that GP trainees have 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 ²⁰. McLaren et al ²¹ 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.

This research also identifies how this influence is likely to be 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.

c) Clinical education and workplace learning

Smith and Wiener-Ogilvie ⁸ described the characteristics of a postgraduate GP 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 ⁸ work involved GP trainees and this study 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. This study also supported Wiener-Ogilvie's work ⁹ that suggested developing inclusive learning environments has positive benefits for preparing GP trainees in their future role as GPs.

Strengths and weaknesses

The strengths of this study are that the research was conceptualised and designed within a theoretical framework and data analysis was conducted concurrently with data collection – this allowed for new themes to be tested as they emerged. Semi-structured interviews were used for data collection and allowed for an in-depth exploration of the lived experience of participants. Data analysis was conducted by a team of educators with expertise in GP training and qualitative research. The main weakness of the study is that the number of participants in this study was relatively small and this may impact upon the generalisability of these results. However, no new themes emerged from the analysis of later interviews.

Implications for future research or clinical practice

This work describes the processes and mechanisms that provide explanatory potential for the relationship between engagement with clinical education and patient care in General Practice. There is a need to further develop and study the themes identified in this research. Further work could interrogate which of the influences identified in this study have maximal impact on patient outcomes, and how these practices can be encouraged in non-training organisations for maximal

patient benefit. Questions also remain about whether trainees and other practice staff share these views. Given our evolving understanding of the influence of learners on professional and organisational development and patient care, interrogating how this influence can be maximised may also provide insights into the untapped potential of training practices on improving patient care.

Statement on ethics

Ethical approval was obtained from the UCL Institute of Education ethics committee. In addition, research governance approval was sought and obtained from Health Education England and NOCLOR to conduct this research.

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