

A competency model for general practice: implications for selection, training, and development

FIONA PATTERSON

EAMONN FERGUSON

PAT LANE

KATHLEEN FARRELL

JOY MARTLEW

ALISON WELLS

SUMMARY

Background. The role of the general practitioner (GP) has changed significantly over the past decade. This problem is compounded by growing concern over postgraduate attrition rates from medicine, with current estimates as high as 19%.

Aim. To define a comprehensive model of the competencies required for the job role of GP.

Method. Three independent studies were conducted to define GP competencies including (1) critical incidents focus groups with GPs, (2) behavioural coding of GP-patient consultations, and (3) critical incidents interviews with patients. Study 1 was conducted with GPs ($n = 35$) from the Trent region. Study 2 involved observation of GP-patient consultations ($n = 33$ consultations), and Study 3 was conducted with patients ($n = 21$), all from a Midlands-based medical practice.

Results. The data collected from the three studies provided strong evidence for a competency model comprising 11 categories with a summary of the associated behavioural descriptions. Example competencies included empathy and sensitivity, communication skills, clinical knowledge and expertise, conceptual thinking, and coping with pressure.

Conclusions. Triangulation of results was achieved from three independent studies. The competencies derived imply that a greater account of personal attributes needs to be considered in recruitment and training, rather than focusing on academic and clinical competency alone. The model could be employed for future research in design of selection techniques for the role of GP.

Keywords: general practitioners; competency; training; recruitment.

Introduction

THE role of general practitioner (GP) has changed significantly over the past decade. This change has been associated

F Patterson, PhD (Psychol), lecturer; E Ferguson, PhD (Psychol), senior lecturer; K Farrell, MSc, researcher; J Martlew, MSc, researcher; and A Wells, MSc, researcher, Department of Psychology, University of Nottingham. P Lane, FRCGP, director of postgraduate general practice education, Office of Postgraduate General Practice Education, School of Medicine, University of Sheffield.

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with (i) difficulty in recruitment to general practice in many areas,¹ (ii) a falling popularity of general practice as a career (among undergraduates),² (iii) significant problems recruiting to GP vocational training schemes,³ and (iv) a 9% reduction of the certificates (satisfactory completion of prescribed or equivalent experience) issued by the Joint Committee on Postgraduate Training for General Practice.⁴ This problem is compounded by growing concern over postgraduate attrition rates from medicine, with current estimates as high as 19%.⁵ One of the possible contributing factors to such a high attrition rate may be that applicants have an unrealistic perception of the role of the GP. Furthermore, given recent changes in the role of the GP, there is a need to more clearly define the skills required for the role, both to guide career choice and to more accurately specify appropriate selection techniques. In response to this need, this paper reports research conducted over the past two years to develop a model of the competencies required for the occupation of GP.

In referring to the previous literature on GP competencies, it is apparent that attempts to examine such competencies have been very limited with regard to the range of behaviours examined and the variety of methodological approaches adopted.⁶⁻⁹ Furthermore, few researchers have employed a multi-method approach to analyse the behaviours associated with successful performance and to triangulate findings. For this reason alone, results must be drawn into question.¹⁰ It is also surprising to note that no research has attempted to incorporate the perspective of both the job holders and the 'user group' (i.e. GPs and patients). Such an approach is endorsed by numerous researchers.¹¹⁻¹³ Indeed, no studies have been reported that include the patient's perspective of the GPs competencies. Finally, previous studies lack ecological validity, since the behaviours associated with successful performance tend to have been chosen *a priori* by the researchers rather than by the GPs and patients themselves.¹⁴

To enhance the validity of findings, many researchers have advocated the use of qualitative research methodologies^{11,13} and the triangulation of these findings.¹⁰ One important qualitative approach for developing a competency model is the Critical Incident Technique (CIT¹⁵), which has been strongly recommended for use in medical settings.^{16,17} Only two studies have been reported using CIT to examine the competencies required for GPs,^{18,19} and, in both studies, results suggested three broad skill areas: (1) interpersonal, (2) diagnostic, and (3) management skills. However, results were weak for three reasons. First, they were based on only one sample of *inexperienced* GPs; secondly, no other methods were employed in an attempt to *triangulate* and validate these findings; and thirdly, the patient perspective was not included. The results from previous studies have also lacked behavioural specificity. To address these short-comings, three independent studies were conducted (GPs on their own, patients on their own, and GP-patient interactions) to develop a competency model for the role of the GP. A multi-method qualitative approach was used, involving behavioural observations, CIT interviews, and CIT focus groups representing best practice in qualitative research.¹⁰ The studies were intended to deliver the

following benefits:

1. To provide potential applicants with a realistic job preview of the skills required of a successful GP, thereby improving *self-selection*,
2. To inform the development of medical *selection* procedures relevant to the job role, and
3. To construct a framework for use in designing future *training* and *development* activities.

Method

Three independent studies were conducted and results of each were used to triangulate findings with the aim of deriving a competency model. In each study, different sets of raters and judges were used. The studies conducted were (1) critical incidents focus groups with GPs, (2) behavioural observation of GP–patient consultations, and (3) critical incident interviews with patients. The methods for all three studies are reported below, and the corresponding results are presented in the results section.

Study 1: Critical incident focus groups with GPs

A sample of experienced GPs ($n = 35$) from Trent Region were invited to participate in the study by being nominated by fellow practitioners as being good GPs — specifically, GPs whom they would recommend to friends and relatives. This constituted a network sampling procedure. For practical reasons, the sample was split into three groups, one from each deanery, with between 10 and 13 in each group. Each group involved two stages:

1. elicitation of behavioural descriptions, and
2. clustering of behavioural descriptions into meaningful groups.

1. *Elicitation of behavioural descriptions:* A quasi-critical incident approach²⁰ was used to elicit behavioural descriptions. A facilitator instructed GPs to write, on separate cards, two incidents that they had either witnessed or experienced in their role as GP. One incident was to constitute an example of excellent GP practice and the other an example of poor GP practice. Cards were then collected by researchers and displayed to the group on presentation boards. In turn, each incident was discussed by the group. The researchers encouraged participants to describe the knowledge, skills, and abilities associated with each incident in order to generate behavioural descriptions, and recorded these in positive terms. Example descriptions included, ‘was sensitive to patient needs’, ‘demonstrated lateral thinking’. Participants were asked to comment further on these so as to elicit a comprehensive list.

2. *Clustering of behavioural descriptions:* Having elicited a comprehensive list of behavioural descriptions, an independent panel of coders ($n = 7$) were asked to cluster similar descriptions into mutually exclusive categories. Descriptions of these categories were then sent to all the GPs who took part in the focus groups, to ask for comments on the accuracy and range of the competencies elicited. This was to provide initial cross-validation on the categories. This step ensured that the structure of the competencies was an accurate reflection of how experienced GPs perceive their job, and were not just specific to the judges used.

For further validation purposes, all behavioural descriptions were formulated into a statement and used as items for a validation questionnaire. The intention here was to ask a larger sample of GPs to rate each description in terms of perceived impor-

tance to the job. The results would help indicate the internal validity of the behaviours identified. Specifically, behavioural descriptions were attached to a six-point Likert-type rating scale (where 1 = not important and 6 = very important to the role of the GP) and a total of 46 statements were included. This questionnaire was sent to 300 GPs from different areas of the Trent Health Authority.

Study 2: Behavioural observation and coding of GP–patient consultations

Three GPs from a Midlands-based practice were invited to participate. This was a convenience sample. Having gained consent from both GP and patient,¹¹ consultations per GP were videotaped ($n = 33$ consultations). Two researchers from the research team began by independently observing three randomly-selected videotaped consultations and recorded behavioural descriptions that best indicated the actions of the GPs throughout the consultation. Having independently derived a set of behavioural descriptions for each consultation, the researchers combined them to create an exhaustive behavioural checklist to be used for observing the remaining consultations ($n = 30$). This collaborative strategy was intended to force the researcher to justify the inclusion of each code and to ensure that an exhaustive list of behavioural descriptions was recorded.²¹ The resultant behavioural checklist was then used to code GP behaviour in the remaining 30 GP–patient consultations.

Study 3: Critical incident interviews with patients

Two hundred patients were randomly selected from the patient list of the practice used in Study 2 and were invited to attend an interview concerning the effectiveness of GPs at the medical centre. It was stressed that all information would be treated in the strictest confidence. Of the 200 invitations, 21 patients agreed to be interviewed (response rate of 10.5%; males = 6, females = 15; age range = 30 to 80 years). Of those that declined, the reasons given included the interview being conducted during working hours and that individuals invited to participate were unable to attend for practical and/or domestic reasons. During the interview, participants were asked to describe incidents when they had witnessed highly effective GP behaviour and incidents when they had witnessed highly ineffective GP behaviour. Having recorded all the incidents on cards, the interviewer elicited patient views about the skills necessary for both effective and ineffective GP performance; e.g. ‘in that incident, what skills did the GP display?’ The researcher recorded all information. The behavioural descriptions were then transferred onto cards and two researchers clustered the cards into groupings. The final stage was to examine the convergence of behavioural descriptions derived from all three studies.

Results

Study 1: Critical incident focus groups with GPs

A total of 140 behavioural descriptions were elicited from the three focus groups in Study 1, which were subsequently clustered into 11 categories by the panel. Any behavioural description that appeared in any category 60% or more was deemed to be representative of that category. Subsequently, the categories were labelled with a heading to represent a common meaning for the cluster of behaviours (Table 1). Descriptions of these categories were sent to all the GPs who participated in the focus groups to provide cross-validation. Twenty-five GPs (71%) replied, and all stated that the descriptions were both an accurate and comprehensive account of their job role.

Table 1. A competency model for GPs with example behavioural descriptions from three independent studies.

Competency	Definition	Study 1: Example descriptors for GP groups	Study 2: Behavioural observations of GPs	Study 3: Example descriptors from the patient group
Empathy and sensitivity	Patient is treated with sensitivity and personal understanding, asks patient about feelings. GP is empathetic, in control but not dominating, and creates atmosphere of trust and confidence. Focuses on the positive rather than negative, works to involve the patient, shows interest in the individual, gives reassurance, and checks patient needs are satisfied.	<ul style="list-style-type: none"> generates an atmosphere where the patient feels safe patient taken seriously, treated confidentially appear interested in your patients picks up on patient's emotions and feelings shows empathy 	<ul style="list-style-type: none"> encourages patient, says 'hang on in there' use of 'I understand what you're saying' gives reassurances (nodding) focuses on the positive 	<ul style="list-style-type: none"> shows empathy is sensitive to feelings treats individuals as people checks my needs are satisfied caring attitude
Communication skills	Active listening to patients, understands, and interprets body language. Able to use different questioning styles and probes for information to lead to root cause. Matches patient language, uses analogy to explain, engages in social conversation, confident style. Clarity in both verbal and written communication.	<ul style="list-style-type: none"> actively listening is not patronising confident in approach ability to form relationships with people 	<ul style="list-style-type: none"> uses analogy to explain problem re-states information for clarity open body language and direct eye contact matches patient's language 	<ul style="list-style-type: none"> allows me time to talk engages in social conversation listening skills uses names
Clinical knowledge and expertise	Able to apply and trust one's judgement (and others') in diagnosing problems. Fully investigates problem before prescribing, able to anticipate rather than just react, and able to maintain knowledge of current practice. Doesn't allow patient to develop a dependency.	<ul style="list-style-type: none"> trust in your clinical judgement clinical competence anticipatory care guard against dependency have courage to make decisions updating clinical skills 	<ul style="list-style-type: none"> medical expertise (e.g. examination) gives clear decision and diagnosis prescribes and checks medication explanation of facts and systems 	<ul style="list-style-type: none"> gets to the root of the problem has clinical expertise
Conceptual thinking and problem-solving skills	Thinking beyond the obvious, surface information, and getting to root cause. Use of lateral thinking, is open to new ways of thinking, and can judge what is important information from a mass of information.	<ul style="list-style-type: none"> pick up on subtle changes pick up on minimal cues be alert to symptoms identify hidden agendas identify key points 	<ul style="list-style-type: none"> uses probing questions to establish causes uses evaluative questioning and asks for feedback 	<ul style="list-style-type: none"> is open to new ways follows up on the problem investigates problem before diagnosing doesn't assume
Personal attributes	Desirable traits include flexibility (actions and thoughts), unselfish, patient, decisive, innovative, self-motivated, has warmth in dealing with others, passionate about the job and with a sense of idealism, has a sense of humour.	<ul style="list-style-type: none"> warmth motivation flexible in actions and thoughts innovative passionate about the job 	<ul style="list-style-type: none"> welcoming uses humour decisive 	<ul style="list-style-type: none"> patient dedicated sympathetic sense of humour thorough passionate
Personal organisation and administration skills	Able to organise a mass of information in a structured and planned manner, prioritise conflicting demands, and to delegate when necessary. Uses IT systems and has strong financial awareness.	<ul style="list-style-type: none"> effective time management able to prioritise able to organise self thought, discussion, then action 	<ul style="list-style-type: none"> organised good time manager business-like approach conscientious 	

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Table 1 (continued). A competency model for GPs with example behavioural descriptions from three independent studies.

Competency	Definition	Study 1: Example descriptors for GP groups	Study 2: Behavioural observations of GPs	Study 3: Example descriptors from the patient group
Professional integrity	Is open and honest with patients, demonstrates courage in one's convictions, acts upon them and takes responsibility for one's actions. Demonstrates enthusiasm for job, appreciates the value of the contribution of others. Demonstrates respect and care for those whom society does not like. Puts patient needs before own.	<ul style="list-style-type: none"> enthusiastic about the job takes responsibility for actions, doesn't pass the buck has courage in convictions equality and respect for those with whom society doesn't like to deal provision of care to patient and family strength of pastoral role and responsibility to society 		<ul style="list-style-type: none"> honest able to deal with all types of people aware of social problems aware of the consequences for the patient shows respect
Coping with pressure	Aware of own limitations and not keeping emotions 'bottled-up'. Shares the load with others, remains calm under pressure, able to 'switch-off' outside work. Demonstrates humility, able to apologise and to control one's anger.	<ul style="list-style-type: none"> self-protection — recognise stress, share load, withdraw knowing own limitations and not 'bottling things up' has interests outside of work and able to 'switch-off' self-awareness 		<ul style="list-style-type: none"> unhurried calm under pressure doesn't get angry accommodates conflicting needs
Managing others and team involvement	Demonstrates a collaborative style, is a skilled negotiator, builds bridges between people, and is able to motivate others. A team player who contributes to and facilitates decision-making, works with colleagues in partnership. Develops trust among partners and provides social support. Views self as part of larger organisation, able to compromise and use resources efficiently.	<ul style="list-style-type: none"> all pull our weight, sense of fairness sense of ownership and belonging cooperation with partners builds bridges between people participative decision-making give and take, negotiates and knows when to compromise 		
Legal, ethical and political awareness	Aware of legal/ethical implications of actions, treats patients in terms of appropriate clinical route rather than bowing to market pressures. Awareness of protecting self legally at all times, demonstrates lobbying skills both at local and national level. Aware of hidden agendas in governmental policy making.	<ul style="list-style-type: none"> awareness of litigation and defensive medicine knowledge of ethical principles see hidden agendas in local and national government political skills — lobbying locally and nationally always protects self legally 		
Learning and personal development	Able to deal with changes in GP role, especially managerial and financial skills. Demonstrates ability to constantly update clinical skills and knowledge and computing/IT awareness.	<ul style="list-style-type: none"> able to learn from experience acknowledges limitations regularly updates clinical and other job-related skills identify what you don't know review and update systems cope with continual shift of goal posts 		

For the validation questionnaire, of the 300 GPs invited to participate, 78 responded, giving a response rate of 26% (mean age = 40 years, ranging from 28 to 61 years; 36 female, 42 male). The results indicated that the questionnaire had good reliability (average $\alpha = 0.68$) and that all behavioural descriptions were rated as either important or very important. Therefore, the authors concluded that the competency model had good internal validity.

Study 2: Behavioural observation and coding of GP-patient consultations

A total of 43 behavioural descriptions were generated from the observations that comprised the final behavioural checklist, which demonstrated good inter-rater reliability (Kappa = 0.68). Descriptions included, 'uses analogy to explain symptoms to the patient', 'uses open questions', and 'restates information for understanding'. (The complete checklist is available from the authors on request.)

In observing the GP consultations, the average duration of a consultation was eight minutes and eight seconds (ranging from two minutes and 32 seconds to 21 minutes and 30 seconds). Subsequently, the two researchers clustered similar behavioural descriptions into meaningful groups and derived five distinct groupings. Researchers then compared these with the competencies derived from Study 1. Results suggested that the five groupings of behaviours in Study 2 replicated five of the competencies derived in Study 1:

1. empathy and sensitivity,
2. communication skills,
3. clinical knowledge and expertise,
4. conceptual thinking and problem-solving, and
5. personal attributes.

Study 3: Critical incident interviews with patients

A total of 65 incidents were elicited from all participants. The behaviours leading to effective or ineffective performance were also recorded, and the researcher then content-analysed the interview transcripts to produce a list of 50 behavioural descriptions associated with GP performance; e.g. 'provides explanation at patient's level', 'demonstrated listening skills', 'empathy and understanding', and 'is calm under pressure' (see Table 1 for further examples).

There was a high level (82%) of agreement between the researchers, and the results suggested eight categories of behavioural descriptions. These eight categories from the patient interviews were then compared with the results from Study 1 and 2. Five of the competencies derived in both Study 1 and Study 2 had been replicated in Study 3 (empathy and sensitivity, communication skills, clinical knowledge and expertise, conceptual thinking and problem-solving, and personal attributes [Table 1]). A further three categories from the patient interviews replicated three competency categories from Study 1 (personal organisation and administration skills, professional integrity, and coping with pressure [Table 1]).

In summary, the results suggested a model of 11 competencies for the role of GP. Table 1 illustrates the competency definitions and corresponding example behavioural descriptions elicited from each of the three independent studies. As can be seen, there was triangulation for five of the competencies across all three studies, with a further three competencies derived in both Study 2 and Study 3. The remaining three competencies were found only in Study 1. These were more specific to the GP role (e.g. legal issues), which were not elicited by patients or recorded in behavioural observations.

Discussion

The final competency model demonstrates that the following five competencies were elicited from all participants in all conditions (GPs, patients, and GP-patient consultations):

1. empathy and sensitivity,
2. communication skills,
3. clinical knowledge and expertise,
4. conceptual thinking and problem-solving, and
5. personal attributes.

A further three competencies were elicited by both the GPs and patients:

6. personal organisation and administrative skills,
7. professional integrity, and
8. coping with pressure.

The remaining three competencies were elicited solely by the GPs:

9. managing others and team involvement,
10. legal, ethical, and political awareness, and
11. learning and personal development.

These results could be expected as some competencies are only identifiable by the job holders and are not directly observed either by the patients or during the GP-patient consultation process. By triangulating results, and using GPs and patients as both sources of information and validity checks, this competency model marks a major improvement on previous research. As would be expected, there is some overlap with previous findings, but it is argued that this competency model is a more comprehensive framework with which to understand the behaviours associated with GP performance.^{18,19} In reference to previous literature, the model can be used as an organising framework that encompasses previous studies regarding GP competencies; for example, the recognition that communication and empathy were derived from all job incumbents, which implies that these are important aspects of the job role. The results in this study suggest that effective communication is crucial to the medical job role in general and for general practice in particular.^{22,23} This finding also concurs with Diamond (1995)¹⁹ however, this may not be currently reflected in medical training with estimates that approximately 75% of medical schools in the United Kingdom (UK) devote less than 5% of their training to interpersonal skills.

The behavioural descriptions of the competency model could then be used to directly inform choice of self-selection, recruitment selection, and training applications.

Self-selection

The model can be used to guide career choice and self-selection by detailing 'what it takes' to be a successful GP. Potential applicants can be given a detailed description of the behaviours and personal attributes that are crucial to the job role and, in doing so, can shape expectations of what will be required of them in the job.^{24,25} One possible outcome is that applicants are likely to develop a realistic perception of the job role. This may potentially reduce the number of false-positives, thereby reducing attrition rates, as candidates would have a more realistic insight of what the job role entailed before enlisting.

Selection and assessment methods

Using the results, it would be possible to develop more accurate and job-related selection methods, thereby increasing the likelihood of selecting the right person for the job. Given the importance of communication skills, empathy, team involvement, and

other personal attributes, a variety of tools could be specifically designed to directly assess these skills. Such tools may have use in both formative and summative assessment in the job. By training assessors to observe behaviour within a work sample test, for example, behaviours could be assessed on reliable, objective scales. Such tests may give applicants further information for use in self-selection. The model can be used to guide choice of psychometric tests specifically designed to assess problem-solving ability, which have been demonstrated to have good predictive validity^{11,26} over and above academic qualifications. Use of such techniques could provide improved reliability and validity, thus preventing costly mistakes in selection.

Training and development

The model can be used to identify future development needs for applicants because it is assumed that candidates will not be competent in all areas, particularly for legal and ethical awareness, managing others, and professional integrity. The model and the behavioural checklist (Study 3) could be used to guide more accurate assessments of performance during training. Such assessments may inform development of specific training activities; e.g. learning strategies for closing a patient consultation, time management, IT and financial skills. Furthermore, the competency model offers the opportunity to pursue more *quantitative* research.¹⁰ Specifically, the 11 competencies could be used to examine the training needs of GPs in different geographical regions and different levels of experience.

In summary, the competency model provides the basic framework to guide a series of personnel management activities. However, it is important to highlight some limitations to the research conducted. Participant samples were drawn from only one region of the UK. Further validation evidence could be sought to encompass a larger and broader pool of participants.

This research should be aimed at identifying the relative importance of the different competencies that, in turn, can inform selection and training strategies. It is also important to highlight that the model is not a static document, since the nature of any job role changes over time given environmental changes.²⁷ Future research should involve re-assessment of the model over time to account for such changes and the impact on the job role. Further work needs also to include a thorough training needs analysis for current GPs to guide the design of career development activities.

In conclusion, the results presented in this paper serve as a starting point for addressing some of the current concerns over the recruitment and retention of GPs.

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