

Residents' perceptions of the ideal clinical teacher—A qualitative study

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Abstract

Objective: The object of this study was to establish what residents in 1994 and 2003 characterised as an ideal clinical teacher and whether differences existed between residents' views in 1994 and 2003.

Study design: Setting: postgraduate medical education in the Netherlands. Subjects: 207 obstetric-gynaecologic residents. Intervention: open-ended questionnaire. Analysis: qualitative data analysis with two coding dictionaries based on current literature. Differences between 1994 and 2003 were estimated using the Chi-square test.

Results: Residents preferred the 'person' role both in 1994 (42%) and in 2003 (48%). The 'physician' role was significantly more important in 1994 than in 2003; the 'supervisor' role was significantly more important in 2003 than in 1994 ($p < 0.05$). Seventy percent of the comments related to 'direct interaction' (i.e., between residents and clinical teachers), 30% to 'indirect interaction' (i.e., clinical teachers' behaviour affecting residents indirectly).

Conclusion: The data showed that almost half of residents' comments described 'person' role characteristics. There was a significant shift in the role ranked second, from the physician role in 1994 to the supervisor role in 2003. The findings highlighted that teachers, in order to be perceived as ideal, should adapt their behaviour to residents' learning needs.

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1. Introduction

Residency typically involves apprenticeships in university and non-university based hospitals where a resident delivers patient care under progressively diminishing supervision of a clinical teacher [1]. The relationship between residents and faculty members is of great importance for the clinical learning environment. According to Paice "...the quality of that relationship can make the

difference between a post that is rewarding and one that is demoralising" [2].

Most research on the concept of the ideal clinical teacher relates to personal traits he or she should have [3–11]. In these studies students, residents, and sometimes clinical teachers themselves filled out questionnaires or took part in interviews to define the ideal clinical teacher. Some studies were concerned with general practitioners, anaesthetists, or surgeons, and one older study described characteristics of gynaecologists, rated by medical students [3–7,10]. A compelling paper was written by Ullian et al. [9]. They describe four roles based on the literature and on research of residents' perceptions of their clinical teachers. These roles are: "physician" (models knowledge and skills in performing

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medical duties), ‘supervisor’ (provides opportunities for performance, observes, gives feedback), ‘teacher’ (selects, organises and delivers information), and ‘person’ (exhibits certain interpersonal and intrapersonal characteristics)” [9]. A study among medical students on their opinion of clinical teacher characteristics confirms this pattern of roles [8].

In our view, the aforementioned literature on teachers is predominantly written from a cognitivistic perspective [12]. Cognitivism focuses on individuals and their mental activities. Knowledge can be seen as consisting of schemata or symbolic mental constructions [13]. Teachers play a central role by, for instance, organising knowledge. In recent years, however, there has been growing interest in social cultural theories of learning [12,14–16]. Social cultural frameworks emphasize the importance of the social context and relations in which learning takes place [17–19]. Swanwick states “...it takes two to tango”, stressing the importance of reciprocal interaction between learner (i.e., resident) and workplace environment (i.e., residency) [12]. Similarly, people and personalities are constructed in relation to others; as Burr states “...one way of looking at this is to think of personality (...) as existing not within people but between them. Take some of the personality-type words we use to describe people: for example, friendly, caring, shy, self-conscious, charming, bad-tempered, thoughtless (...) words which would completely lose their meaning if the person described lived on a deserted island. The point is we use these words as if they refer to entities within the person they describe but once the person is removed from their relationship with others the words become meaningless” [20]. We hypothesised that whether or not a clinical teacher is perceived as ideal depends on the interaction of a resident with his/her teacher in a certain context.

The clinical learning environment, i.e., the context, has changed over the past 15 years. Shifts in the organisation and delivery of health care make residency an ever-changing endeavour, apart from the challenges posed by evolution of medicine itself. A significant change, for example, is limits on the number of hours residents are allowed to work [21,22]. This leads to additional pressure on quality of patient care and creates fewer possibilities for training [1,12]. Moreover, residents spent fewer hours with clinical teachers. This may have led to changes in residents’ requirements of an ideal clinical teacher.

In this study we asked obstetric-gynaecologic residents in 1994 and 2003 which characteristics they value most in clinical teachers. The first objective of this study is to take the current literature as a point of departure and describe characteristics of clinical teachers favoured by residents. The second objective is to complement this point of view using a socio-cultural approach as described above. Our third objective is to establish whether there are differences in residents’ perceptions of ideal clinical teachers between 1994 and 2003.

2. Material and methods

Multiple quantitative questionnaires measuring clinical teachers’ effectiveness or quality exist. However, to answer our research questions a qualitative research method is most appropriate. This kind of research enables participants to express their personal views without forcing them to choose predefined answers. In 1994 and 2003 we asked all obstetric-gynaecologic residents in the Netherlands to fill out a questionnaire containing three open-ended questions. In this study we report the responses to the first question on the questionnaire: “Which three characteristics should an ideal clinical teacher have?” The other two questions were: “What do you miss in your clinical teachers?” and “What suggestions do you have for improving residency-training?” The second and the third question were aimed at local quality improvement and they did not add to the current research question. Therefore, we did not include the answers to the last two questions in our analysis. The form did not include a section on resident’s year of training or sex.

2.1. Participants

In 1994, 74 obstetric-gynaecologic residents (62% of a total of 120 obstetric-gynaecologic residents in the Netherlands at the time) filled out the questionnaire. In 2003, 133 residents (55% of a total of 240 obstetric-gynaecologic residents) filled it out. In both cases, we sent a questionnaire to the home address of every resident and we requested them to return the filled out form. Since we included every obstetric-gynaecologic resident in the Netherlands, residents with varying experience levels received the questionnaire. All completed forms in 1994 were readable; they contained 248 ‘units of analysis’. A unit of analysis is every word, line or phrase that expresses a single characteristic of a clinical teacher. Out of 133 questionnaires in 2003, 13 were not readable due to photocopying problems, and therefore, excluded from analysis, making a total of 120 questionnaires. These questionnaires contained 316 units of analysis.

2.2. Analysis of qualitative data

According to Miles and Huberman the analysis of qualitative data roughly consists of three concurrent ‘flows of activity’: *data reduction* (i.e., classifying unstructured data into coding categories for retrieval and organising purposes), *data display* (i.e., using matrices, charts, etc., both for data reduction as for explaining and seeing ‘the bigger picture’), and *conclusion drawing and verification* (for instance making conceptual coherence and checking for researcher effect) [23].

As a means of *data reduction* we constructed two coding dictionaries. The first author (KB) created the first coding dictionary using the four roles described in Ullian’s study (‘physician’, ‘supervisor’, ‘teacher’, and ‘person’) [9]. She coded the 564 units of analysis into 64 codes that were each

Table 1
Number of phrases within every role and subcategory

	1994	2003	Type of interaction
Physician	51* (20.5 %)	31* (9.8 %)	
Expert	33	23	Indirect
Role model	5	5	Indirect
Up-to-date	13	3	Indirect
Person	104 (41.9 %)	151 (47.9 %)	
Commitment	23	40	Direct
Supportive	25	26	Direct
Trustworthy	10	35	Direct
Organiser	15	15	Indirect
Dialogue	10	14	Direct
Personality	21	21	Direct
Supervisor	43* (17.3 %)	86* (27.2 %)	
Approachable	17	31	Direct
Stimulates	15	17	Direct
Coaches	11	38	Direct
Teacher	50 (20.1 %)	48 (15.2 %)	
Didacticism	26	15	Direct
Vision on training	7	8	Indirect
Facilitates training	17	25	Indirect

* $p < 0.01$, using the Chi-square test.

placed in one of 18 subcategories within Ullian's four main roles. After revising the coding dictionary by removing code duplicates, the final coding dictionary contained 59 codes within 15 subcategories (for *data display*, see Table 1). We used the Chi-square test to estimate whether significant differences existed for the four roles' frequency between 1994 and 2003. The second coding dictionary covered the content analysis from a socio-cultural point of view. Social interactions play an important role within this epistemology. Thus, we performed a content analysis of the presence of resident–clinical teacher interaction. We divided the content

analysis into two categories: first 'direct interaction' (i.e., between residents and clinical teachers), second 'indirect interaction' (i.e., clinical teachers' behaviour affecting residents indirectly).

The first author (KB) constructed the coding dictionaries. To test the accuracy of both coding dictionaries (*verification testing*) the second author (PT) coded a random sample of 100 responses using the dictionaries. KB and PT compared their codes to check for possible differences. The kappa inter-rater agreement coefficient was 0.81 for the first coding dictionary and 0.82 for the second. Different codes were discussed until they reached consent. Subsequently, KB coded the rest of the responses twice, using both the first and the second coding dictionary.

3. Results

We present our results in accordance with both steps described in Section 2. First we describe the analysis according to Ullian et al.'s categories [9], then we present our content analysis of resident–clinical teacher interaction.

3.1. Ullians' categories

In this section we describe our analysis of the data using the four roles described by Ullian et al. [9] as template. Within these four roles we have recognised 15 subcategories (see Table 1). According to residents, the most important role of a gynaecologist as a clinical teacher was 'person'. In 1994, 41.9% of the residents' answers related to the 'person' role. This was not significantly different from 2003, when 47.9% of the responses related to the 'person' role. In 1994, the 'physician' role was the second most important role for

Table 2
Subcategories with illustrative quotes

<i>Person</i>	
Commitment	"should be committed to and interested in the residents"
Support	"expresses empathy"
Trustworthiness	"is open and honest, does not talk behind people's back"
Organising qualities	"being available rather than attending international conferences"
Open dialogue	"is receptive to criticism and new ideas"
Personality	"charisma!"
<i>Physician</i>	
Expertise	"is knowledgeable and skilful"
Role modelling	"inspires through their interaction with patients"
Being up-to-date	"is aware of the current trends and treatments"
<i>Teacher</i>	
Didactic skills	"knows how to teach"
Vision on training	"has distinctive ideas about the education of doctors in training"
Facilitates training	"prioritises education over production"
<i>Supervisor</i>	
Approachable	"is approachable (both figurative and literally)"
Stimulates	"stimulates development: both in patient care as in research activities"
Coaches	"gives appropriate feedback and does not say: 'you are doing it completely wrong, idiot!'"

obstetric-gynaecologic residents (20.5%), closely followed by the ‘teacher’ role (20.1%), and the ‘supervisor’ role (17.3%). In 2003 the situation was notably different: the second most important role was the ‘supervisor’ (27.2%), followed by the ‘teacher’ role (15.2%), and the ‘physician’ role (9.8%). The number of units relating to the ‘physician’ role differed significantly between 1994 and 2003, as did the number of units concerning the ‘supervisor’ role ($p < 0.01$). Table 2 shows the 15 subcategories with illustrative quotes.

3.2. Resident–clinical teacher interaction

In this section we describe the analysis of our data from a socio-cultural point of view. We recognised two major types of interaction in our data. Seventy percent of the units of analysis related to *direct interaction* (see Table 1). Interestingly, we observed substantial variations between the comments of different residents, although all remarks related to direct interaction. One resident, for example, wanted a clinical teacher who allowed a lot of autonomy, while another wanted more guidance. One resident preferred a personal relationship with a clinical teacher, another favoured a more distant relationship.

Thirty percent of the comments concerned *indirect interaction*. One aspect of indirect interaction was related to organising an inspiring learning environment. For example, residents wanted their clinical teacher involved in their work schedule, in the attitude of other staff members towards teaching, and in prioritising education vs. production. Another vital aspect was the effect of a clinical teacher interacting with his/her patients in an inspiring way.

4. Comment

What characterises an ideal clinical teacher? We used two different approaches for categorising our data. First, we followed Ullians’ categorisation of the ideal clinical teacher [9]. Both in 1994 and in 2003 residents named the ‘person’ role as the most important role of an ideal clinical teacher. In 1994 residents valued the ‘physician’ role significantly more than their colleagues of 2003. Residents of 2003 valued the ‘supervisor’ role significantly more than residents in 1994. The ranking of the ‘teacher’ role did not change.

We also interpreted the data from a socio-cultural point of view. Seventy percent of all comments related to direct resident–clinical teacher interaction. Thirty percent of residents’ comments related to indirect interaction; a clinical teacher could express this through organising skills, for example.

Our study has several strengths. First, we highlighted a different view on the concept of the ideal clinical teacher. Besides the categorisation described by Ullian et al., we introduced an analysis based on socio-cultural theories. The results of both analyses complemented each other: many high-valued ‘person’ characteristics were in addition

necessary traits for teachers’ meaningful interaction with residents and their learning needs. Second, this study is based on qualitative research. This resulted in information-rich data, with refreshing views on the concept of the ideal clinical teacher. Third, we used two datasets over time. The fact, for instance, that the importance of the ‘person’ role was repeated after an interval of 10 years, adds to the stability and validity of our outcomes. Finally, this study focuses specifically on obstetric-gynaecologic residents. To our knowledge no other qualitative study on characteristics of ideal gynaecologists-as-teachers has been published.

Some limitations need to be considered when interpreting this study. First, generalisability might be compromised due to the response rate of around 60%. Second, the study was done in the Netherlands only. However, we included all teaching hospitals in the Netherlands so the responses came from many different departments. A third weakness is the lack of teacher responses. For a complete view of ideal clinical teachers, their opinion should be included. Fourth, since we did not include a section in our questionnaire asking for level of experience or sex, we cannot explain our findings from that point of view. This also weakens the comparability of the two resident cohorts.

Ullian et al. have described four roles based on residents’ perceptions of clinical teachers. In their study the ‘teacher’ role was mentioned most often, in our study, however, the ‘person’ role stood out as most important [8,9]. The other three roles occurred in a changing distribution scheme over time. In 1994 the residents described aspects relating to the ‘physician’ role more frequently than their colleagues in 2003. Remarks relating to the ‘supervisor’ role were mentioned more often in 2003 than in 1994. One possible explanation might be found in changing perspectives towards teaching and learning. There is a shift from teacher-centred to learner-centred education [24]. The ‘physician’ role is associated with a teacher-centred approach: focus is on the (medical) expertise of the clinical teacher as a role model for residents. The ‘supervisor’ role, however, is more associated with a learner-centred approach: the clinical teacher coaches and guides the resident. Another possible explanation for this statistically significant difference is that residents work less due to limits on working hours, but still have to do the same amount of clinical work. This reduces time spent on observing role-models and increases their need for supervisory activities. A recent study underlines residents’ current need for supervision: the odds ratio for resident burn-out increased by 2.1 (95% CI 1.3–2.9) in the group with a greater workload combined with unsupervised practice [25]. Because the results give only limited insight in what caused this change of preference, further research is necessary.

The ‘person’ role, like the other three roles, related strongly to direct interaction, which seemed omnipresent in this context. Literature on supervision [26] and learning in the clinical workplace [12,14,15,18] underlines the importance of interaction. In literature on ideal clinical teachers

attention for the interactive nature of clinical teaching is sparse. The significance of interaction is further stressed by the diverse and sometimes even contradictory responses about valued characteristics residents gave in our study. The differences may be caused by individual differences between residents as well as varieties in residents' years of experience. In any case, an ideal clinical teacher should master a diverse pallet of strategies to guide residents. Personal qualities, a flexible attitude, and organising a stimulating learning environment seem desired traits of the clinical teacher. However, in staff development programs the predominant focus is on teaching and role-modelling skills and less so on the vital interaction between resident and clinical teacher. We argue for more awareness of these important traits.

Clinical teachers need to invest significantly in their own teaching skills. Ericsson describes this investment in expertise development as part of 'deliberate practice theory' [1,27]. Central to this theory is the notion that the acquisition of expertise requires a continuous drive to improve, participation in challenging activities, and receptiveness to immediate and informative feedback [1,27]. Ericsson's theory stresses the vital role of interaction, for the clinical teacher should be receptive to residents' feedback in order to reach a state of proficiency. In sum, interaction with, and personal interest in, residents can lead to more content residents on the one hand, and to more proficient clinical teachers on the other.

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All authors have seen and approved the final version of this paper.

Conflict of interest

None of the authors have any conflict of interest.

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