



Qualities of Resident Teachers Valued by Medical Students

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BACKGROUND AND OBJECTIVES: Medical students often see residents as the most important teachers on the wards. However, there is a relative lack of data on the qualities that medical students value in their resident teachers. We conducted a qualitative study to determine the teaching behaviors that medical students value in their resident teachers.

METHODS: Over a 1-year period, 28 medical students completed 115 open-ended written reflections about their educational experiences with residents at a single, university-affiliated, community-based family medicine residency program in San Jose, CA. Qualitative data were analyzed using the constant comparative method associated with grounded theory. Ten recurring themes were identified after triangulation with published literature.

RESULTS: When given the opportunity to make open-ended written reflections about the teaching abilities of their resident teachers, medical students most often commented on topics relevant to a “safe learning environment.” More than one in four reflections were associated with this theme, and all were characterized as positive, suggesting that the ability to set a safe learning environment is a quality that medical students value in their resident teachers. In contrast, the least frequently occurring theme was “knowledge,” suggesting that residents’ fund of knowledge may not be as important as other qualities in the eyes of medical students.

CONCLUSIONS: Our study adds to a growing body of literature suggesting that, from the medical students’ perspective, a resident’s fund of medical knowledge may not be as important as his/her ability to establish a supportive, safe, and nonthreatening environment to learn and practice medicine.

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Medical students often see residents as the most important teachers on the wards.¹⁻² There is increasing recognition of the critical role residents play as teachers.³⁻⁴ Studies confirm that residents provide up to one-third of medical students’ education during clinical years.⁵⁻⁸ Residents consider teaching medical students as one of their primary responsibilities and

spend approximately one-quarter of their time teaching.⁹⁻¹¹

There is a certain degree of consensus on what characterizes a good clinical teacher: clinical competence, excellent teaching skills, enthusiasm, humanism, and effective role modeling.¹²⁻²⁰ Most of this data, however, was obtained about the teaching behaviors of attending physicians and was collected through surveys

containing pre-determined Likert scale questions. There is a relative lack of data on the qualities that medical students value in their resident teachers, as well as a lack of data based on surveys without pre-determined questions.

A better understanding of what characterizes a good resident teacher is needed. This qualitative study was done to determine the teaching behaviors that medical students value in their resident teachers, using open-ended written reflections.

Methods

Setting and Participants

Between September 2013 and September 2014, a total of 28 medical students completed 115 open-ended written reflections about their educational experiences with individual residents in the San Jose-O’Connor Hospital Family Medicine Residency Program, affiliated with Stanford University School of Medicine. Participants included Stanford third- and fourth-year medical students doing their family medicine clerkships or sub-internships, Stanford first- and second-year medical students attending clinical skills courses

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taught by residents, and fourth-year medical students from other schools doing their sub-internships with the residency. Students were given the opportunity to evaluate every resident they interacted with in clinic, in the hospital, or in the classroom. After a teaching interaction with a resident, medical students were handed a paper evaluation form that included an open-ended essay section to record their reflections on the resident's teaching abilities.

Data Analysis

Medical student reflections were compiled in a database. Qualitative data were analyzed using the constant comparative method associated with grounded theory.²¹ A total of 15 recurring themes was initially

identified, which was then narrowed to 10 themes after triangulation with published literature. Detailed definitions of the 10 themes were developed. Two resident coders (TM, VCT) independently reviewed all of the student reflections and assigned one or more themes to each response. The content units for analysis were words and phrases. Inter-coder reliability was 90% between the two resident coders; following discussion with two faculty coders (GCY, ES), agreement was 100%.

Ethical Approval

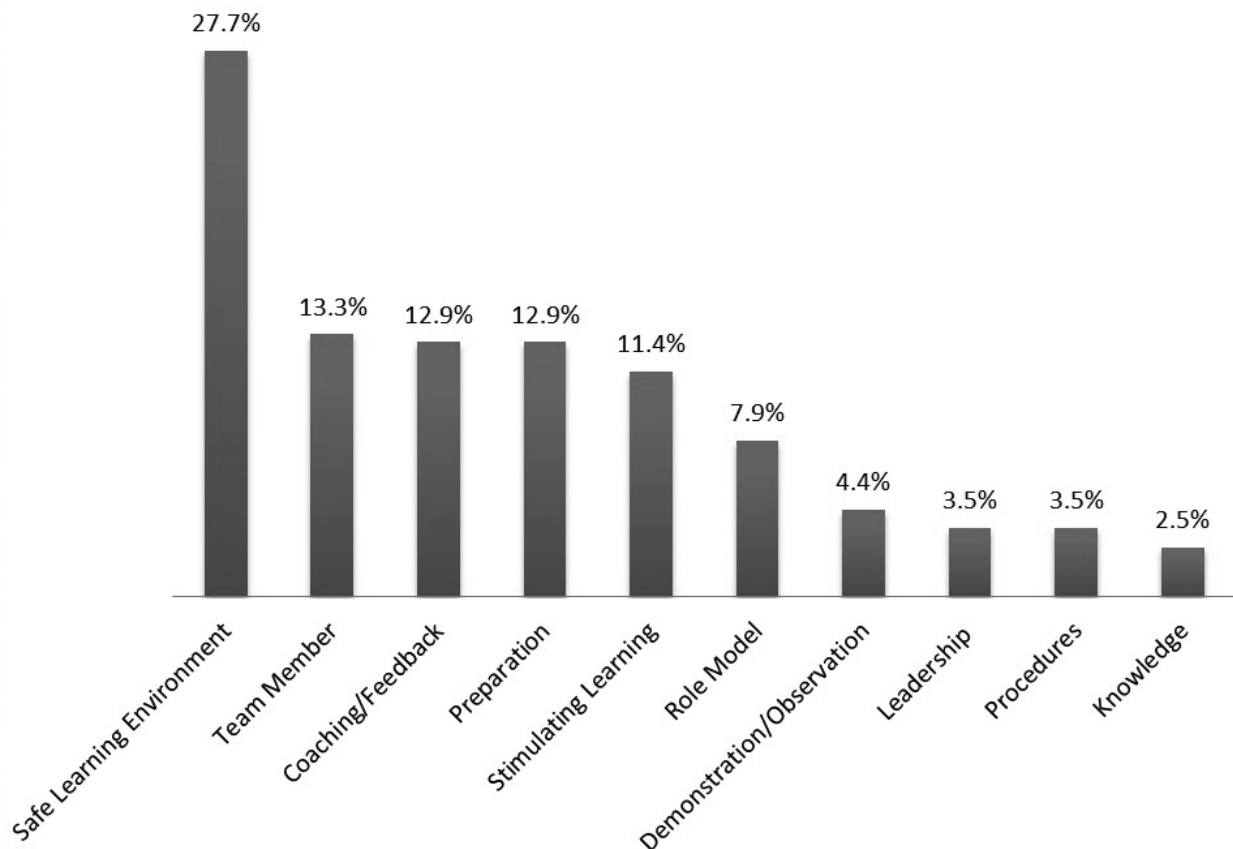
This project was exempted by the Stanford University and O'Connor Hospital Institutional Review Boards.

Results

Ten recurring themes were identified in medical students' open-ended written reflections about their resident teachers (Figure 1). The 10 themes, in order of most frequently occurring to least frequently occurring, were as follows: safe learning environment (27.7%), team member (13.3%), coaching/feedback (12.9%), preparation (12.9%), stimulating learning (11.4%), role model (7.9%), demonstration/observation (4.4%), leadership (3.5%), procedures (3.5%), and knowledge (2.5%). Definition of each theme is listed in Table 1.

Of the total 115 open-ended written reflections, 108 were characterized as positive (meaning the student valued the resident's teaching ability), and seven were characterized as

Figure 1: Themes Identified in Medical Students' Written Reflections About Their Resident Teachers*



* n=115

Table 1: Definitions of Themes and Sample Medical Student Quotations

Themes	Definitions	Sample Medical Student Quotations
Safe Learning Environment	Resident makes it safe for student to admit limitations. Resident is conscientious, approachable, enthusiastic, encouraging, and supportive.	"Was very sweet, kind, and caring. I really enjoyed working with her. She always made sure I was doing okay."
Team Member	Student feels like a trusted team member and that his/her opinion is given weight. Student is given appropriate amount of autonomy based on level of experience.	"Allowed me to manage patients very independently and showed that she trusted my judgment."
Coaching/Feedback	Resident gives useful feedback during or immediately after direct observation of student activities. Resident adjusts teaching to student's level of experience.	"Gave a great mixture of general and specific feedback."
Preparation	Resident allocates patients based on learning potential, takes time to review plans/clinic notes with student, identifies time for teaching and makes it a priority.	"Clearly makes teaching and mentoring a priority."
Stimulating Learning	Resident asks student to provide a rationale for his/her actions. Resident explains rationale for management decisions, asks student questions aimed at increasing understanding, and stimulates student to explore weaknesses and strengths.	"Very kind and supportive. She helped me learn a lot and improve upon my weaknesses."
Role Model	Resident serves as a role model for the kind of doctor the student would like to become.	"Goes above and beyond for her patients and models exceptional patient care."
Demonstration/Observation	Resident consistently demonstrates how to perform clinical skills and creates sufficient opportunities for student to observe.	"She is a careful and thoughtful historian and examiner, and I learned a tremendous amount seeing patients with her."
Leadership	Resident demonstrates strong leadership skills (ie, organizes, orients new team members, prioritizes daily tasks, asks for feedback from students).	"Oriented me to charting and hospital EMR."
Procedures	Resident allows student to participate in procedures, if appropriate.	"You helped guide me through the procedures and I appreciated that you allowed me to do all of them with your assistance."
Knowledge	Resident is knowledgeable and able to answer student's questions.	"She is extremely intelligent and a wonderful clinician."

negative (meaning the student was critical of the resident's teaching ability). Of the negative comments, four were associated with coaching/feedback, two with preparation, and one with stimulating learning.

Discussion

Our study found that, when given the opportunity to make open-ended

written reflections about the teaching abilities of their resident teachers, medical students most often commented on topics relevant to a "safe learning environment." More than one in four reflections were associated with this theme, and all were characterized as positive, suggesting that the ability to set a safe learning environment is a quality

that medical students value in their resident teachers. In contrast, the least frequently occurring theme was "knowledge," suggesting that residents' fund of knowledge may not be as important as other qualities in the eyes of medical students.

Our findings are consistent with the results of other studies. Recent studies have showed that an

attending physician's "kindness" and "teacher-learner relationships" are more important than "medical knowledge" and "clinical competence" from the perspective of residents.^{22,23} A study using medical student focus groups to determine the qualities of excellent resident teachers found that "creating a safe learning environment" accounted for one in five responses.²⁴ That study also concluded that what students learned from residents was least frequently classified as relating to general medical knowledge. One possible explanation for this is that medical students' need for knowledge is being fulfilled by sources other than residents (ie, attending physicians, clerkship didactics, electronic clinical decision support tools). In turn, residents become more important for establishing a supportive and safe learning climate for medical students, as their near-peers,²⁵ to practice and make mistakes in a nonthreatening environment.

Strengths

Most of the previous data on this topic was obtained about attending physicians (not residents) and was collected through surveys containing predetermined Likert scale questions, which may prevent the discovery of qualities important to medical students but not asked. Our study is one of the few studies that used open-ended written reflections to assess the teaching behaviors that medical students value in their resident teachers.

Limitations

There are several limitations to our study. First, it was a small study based at a single residency program and medical school, so the findings may not be generalizable. Second, it provides insight into resident teaching from only one perspective: the learner's. Third, we are assuming that it is valid to correlate the frequency of themes reported by medical students and the relative importance of those themes.

Conclusions

Since residents play such a critically important role in medical student education, a better understanding of what characterizes a good resident teacher is needed. Our study adds to a growing body of literature suggesting that, from the medical students' perspective, a resident's fund of medical knowledge may not be as important as his/her ability to establish a supportive, safe, and nonthreatening environment for medical students to learn and practice medicine.

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