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Medical Student's Participation for Developing Professional Identity

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Abstract

Background: Participation is a learning process essential for developing professional identity. However, how a medical student participates during his/her learning in medical school has not much been explored.
Objective: This study aimed to explore the forms of participation conducted by medical students.
Methods: This was a qualitative research by conducting semi-structured in-depth interviews to 17 preclinical and clinical medical students. The questions in the interview guide were based on three forms of participation: engagement, imagination and alignment. Determinant and emergent coding was performed to analyze the results of the interview.
Results: Getting to know, interacting, practising, reflecting, and convincing were 5 forms of participation. Practice especially clinically patient contact was the main form which could develop the professional identity of medical students. Participation reinforces motivation, confidence, and identity.
Conclusion: Participation as a medical student's learning was not only in forms of practice their knowledge to the patient, but also in forms of all activities that contribute to the community and gave meaning to themselves as part of a medical profession community. Faculty need to provide a learning environment that can give broaden opportunities for students to participate in order to develop professional identity.

Practice points

- Participation is not limited to the activities in the curriculum. Engaging in social and community based activities in student organizations could be a valuable experience in identity formation.
- Besides students should be more active, supervisors, doctors and nurses present in the clinical environment should be more open and create a comfortable interaction for students.

Keywords: participation, professional identity, engagement, imagination and alignment

Article

Introduction

When medical students begin studying in the faculty of medicine, they become new comers in a scope of medical profession community. They are still not familiar with and try to get to know, to develop sense of belonging, and to become part of the community. They negotiate and develop their identity. The identity is not just a label, but a connectedness of a member in the community and how they perform the role as a part of the community (Wenger, 2000). For medical students, professional identity is an internal condition that is acquired and established during medical education (Bleakley, Bligh, & Browne, 2011). This has implications for educational institutions in providing learning environments that support professional identity development (Hafferty, 2009; Monrouxe, 2010).

Participation as a source of identity is a social experience that indicates the contribution as a member of a community. Participation is a complex process that combines the activities of practice, talk, think, feel and possess. The process involves an individual as a whole in his/her physical, mind, emotions and social relations. There is action and connection in order to establish an identity as members of the community (Wenger, 1998).

How the identity can develop, it will affect how they run the medical profession in the future (Forsythe, 2005). Therefore, a medical student needs to participate during his/her learning in medical school. There are 3 types of participation as modes of belonging or modes of identification, i.e. engagement, imagination and alignment (Wenger, 1998; Wenger, 2009). Engagement is the closest relate to practice. Engagement is an action taken alone or together, along with a discussion or produced an artifact (Wenger, 2000). Students need to engage in activities which gives direct experience, whether this experience is one of competence or incompetence. Imagination is how students orient themselves in medical profession. Students need to interprete their experience of participation in social communities. Imagination is to build a view of the self, about the community, and about the outside world to be able to orient them, reflect on the situation and explore the possibilities. Alignment is the process of selecting and forming a commitment. Participation is done in accordance with the concept or principle held by the community, and can assure that the local activity is also in accordance with other processes that can be accepted globally. Students need to make sure that their activities are align with medical profession.

Tim Dornan, Boshuiszen, King, & Scherpbier (2007) mentions the forms of medical student's participation in the clinical phase of medical education. There has been no research that has explored the forms of participation for preclinical and clinical students based on the three forms of participation according to Wenger (1998), i.e. engagement, imagination and alignment.

Methods

This study was part of a phenomenological study that aimed to explore the meaning of learning experiences during medical education period. The study was conducted at the Faculty of Medicine, Universitas Gadjah Mada. This research had received permission from the faculty and had received ethical clearance from the ethics committee of the Faculty.

The data were collected by conducting semi-structure in-depth interviews to 17 students consisting of 9 preclinical students in year 1, 2, 3 and 8 clinic students in year1 and 2 of the clinical rotation. The sampling was done by considering the proportion of variation in gender, GPA, and activeness in organizations.

Table 1.
Research participants

Education level	Sex	GPA	Organization
9 pre-clinical students:	5 male	2 high	2 active
3 students of 1st year		3 low	2 active
3 students of 2nd year			1 passive
3 students of 3rd year	4 female	2 high	1 active
			1 passive
		2 low	1 active
			1 passive
8 clinical students:	4 male	2 high	2 passive
4 students of 4th year		2 low	2 active
4 students of 5th year	4 female	2 high	1 active
			1 passive
		2 low	1 active
			1 passive

Medical education is normally done in 3.5 years of pre-clinical phase and 1.5 years of clinical phase. In the curriculum for undergraduate education, students receive problem-based learning that includes tutorials, lab practicum, clinical skills learning in the skills lab, expert lectures and field trips to the clinics, family doctor practices, and other health care centers. In clinical phase, students undergo clinical rotations in clinical departments, public health department, and social internship program. In social internship program, students work together with students from other faculties placed in a community to identify problems and create solutions for the community.

In the Faculty of Medicine of Gadjah Mada University, there are student organizations active in local, national, and international level. These organizations are a forum for student activities outside the formal activities of the medical education. There are 10 students who were active in student organization. The activeness of the organizations is the involvement of the subject to be the core committee (chairman, treasurer, secretary, section or department heads) of various student organizations, i.e BEM (Student Executive Council), TBMM (Student Medical Assistance Team), CIMSA (Center for Indonesian Medical Student Activities), and AMSA (Asian Medical Student Association). The selection of the four organizations was because they had activities related to the medicine. This could be a space for participation. Through these organizations, students interacted with peer students, lecturers, students of other medical school in the national and international level.

The interviews were conducted by the first researcher for 1-1.5 hours by first asking the informed consent to the research subjects. The interview questions were aimed at exploring activities that fostered the identity. These activities could be done by the students inside and outside the formal curriculum of medical education. The participation could be done in three forms of modes of belonging, included engagement, imagination and alignment (Wenger, 1998). Thus, the main questions that were given to students included: What experience makes a student feel to be a doctor? What activities are make students feel closer to the medical profession community? (Engagement) What activities are provide an overview of the medical profession? (Imagination) What makes students confident in their ability? (Alignment).

Open coding was done to the transcript of the interview. Coding was done by the researcher and one independent coder to improve the trustworthiness of the analysis. Previously, the perception of the coders for coding ways was equated. Each coder independently analyzed the results of the interview. Both coders then met to assess the results of coding and made a deal on the different codes. In addition to multicoder, member checking was performed to increase trustworthiness by providing the results of the original transcript, coding, and researcher's general interpretation of the results of interviews to students via email. The students had given approval directly or via email. The results of subsequent codes were grouped in categories.

Results

A. Forms of participation

In this study, the interview guide to explore the participation of students was based on the concept of modes of belonging. However, the codes were not categorized into three concepts. This was because an event or student's activity could be overlap between engagement, imagination and or alignment. For example, assisting doctors to perform clinical action was an engagement, but it also provided insight to students about clinical practice, among others, about the situation when the act was done, tension, visible cooperation between doctors and nurses, etc. Wenger (2000) also explained that the three concepts cannot stand alone. In this study, student activities identified from the interviews were grouped into five categories, namely getting to know, interacting, practising, reflecting, and convincing.

Table 2.
Forms of participation dominantly in pre-clinical and clinical

Participation type	Activity*	
	Pre-clinic	Clinic
Getting to know	Observe various health care centers (health centers, hospitals, private clinics); See a movie, read comics or novels about medicine, books about the story of the doctor's experience, historical figures of medicine, health magazines; Update knowledge of medical practice and health management system.	Observe the practice in clinical departments
Interacting	Interact with the social community; peer; faculty.	Interact with patients, nurses, resident, clinical supervisors
Practising	Clinical practice Involved in health services in the social community Educating social community Teaching Involved in discussion Involved in health organization Make class handouts, book	Patient management Case report and discussion, morning report
Reflecting	Reflect learning experience Reflect on the connectedness and ability to be a doctor	Reflect patient's case Reflect on the self-ability and contribution as a doctor
Convincing	Doing exam Seeking external feedback (peer, faculty) Self-assessment	Doing exam Seeking feedback from clinical supervisor, nurses, patient, peer Self-assessment

Getting to know

'Getting to know' is an activity that aims to gain insights or an overview of the doctor profession. This activity becomes the basis of students' imagination. With these insights, students can orient themselves with the medical profession. Source of imagination and insight can be derived from activities within and outside the curriculum. Overviews of how physicians work, perform daily activities, and negotiate with multi-identity status in the social and personal lives are often obtained from outside the formal learning.

"The doctor’s (a book title). Then I read, the beginning of entering this campus. So I get a picture the fun and sad moments to be a doctor. What difficulty to face the patient, be angried by patient's family, having tried the best but why the communicaton with patient’s family is still missed, so it is not the good relationship, Then there are bad assumptions to the doctor profession. Then I read it,ooh just like that, so I imagine as what and not just see a doctor from good aspects but there are other aspects. "6-PLIPT-3 [6762: 7304]

In gaining insight, students got enough an overview of how to the doctors and health care centers worked from observation activities facilitated by the curriculum. However, the curriculum had not facilitated students to get an overview of the real practice from media such as books, novels, or history or movies about medicine. In fact, from the media, students could get to know the various characters of a doctor, conflict, an overview of real practice in the community, difficulties in remote areas, or other health problems. It did not rule out the possibility for students to get a role model that they might not encounter in real life, but from historical figures or in a book.

Interacting

Interacting is an activity to talk to each other, sharing, or engaged with the students as candidates of doctors with patients, public, doctors, lecturer, clinical supervisors, nurses, or with peer students. The interaction in this case is not necessarily directly related to clinical practice, for example, just talking.

"It helps because if we want anything it is easier, because we're also not alone there. If in the peripheral especially, we should know the nurse. We're maniac of competence so in what we want to do, like infusion or anything just say and the, the nurse later gives us. If we know each other in one stage, it makes us comfortable; after the rotation is over if we meet we still say hello… so good. "5-APIPT-4 [41533: 41890]

Interaction aims to build closeness and trust. It facilitates the students to get the opportunity of practicing participation. For example, a student who actively introduces him/herself and interacts with nurses will have more opportunities to practice clinical skills to patients. In terms of interaction with the patient, the duration and intensity to meet patients more in the wards than in the clinic make students feel patients put more trust on him.

In this study, barriers in the interaction were that not all lecturers, doctors or nurses would initiate interaction with students. Students should be more active. However, not all students were active and wanted to start an interaction. This was caused by fear of disturbing, or depending on the character of students. Lecturers, doctors, nurses are expected to be more open and willing to invite students to interact.

Practising

Practising is a student’s activity to practice their knowledge and clinical skills. Practicing can also mean as an activity to demonstrate student’s competence as a doctor to others. Practices of clinical skills which related to patient management is a main form of engagement for students. It’s very important in developing identity as a doctor.

"if I might peform physical examination, meaning that if I might examine the patient, I already feel like a doctor. Usually, for example, as in the policlinic I already feel like a doctor as well. Because if in Banyumas, I am allowed, if new patients might be examined by me from start to finish. Until later about what the medicine would be given, then later it would be approved by the resident, rechecked by the resident. So as we can check from beginning to end, and then until what the treatment plan should be made, so we feel that we are already given the opportunity to be a doctor. "5-APIPT-4 [23715: 24264]

In this study, the barriers of clinical practice could be from from clinical supervisors, curriculum and rules that were applied in each section, the chance of participation, patient, or the students themselves. Supervisor including lecturers, nurses, and residents were involved in the service. Character, workload, clarity of roles, and models of supervising determined to open opportunities for participation and the willingness of students to take the initiative to be involved. Basically students wanted to feel involved and become part of the patient care team, so that the purpose of the assignment and the role of students should be clear. Students needed to be sure that the task or practice that they had done actually contributed to patient care. The number and types of cases in accordance with the competence of a general doctor should be sufficient. Procedure of rules applied in the clinic and workload of students also needed to be considered so as not to impede their participation in clinical practice. Besides being determined by the number of patients and types of cases, the opportunity to participate was determined by the number of students, residents, and other health students involved in the practice. Patient's comfort, patient's openness to get examined even though by students, and the levels of knowledge of the patient were the consideration of the students to perform the examination. Furthermore, students should have the adaptability to face the clinical rotation. They should active to initiate interaction with the supervisor and to request the learning from lecturer, nurses or residents.

Opportunity for clinical practice to patients was very expected not only by the students in clinical levels, but also by the students in pre-clinic. In the pre-clinical level, clinical practices were perceived by student in clinical skills laboratory and visits to the clinic or community which facilitated by formal curriculum. Another chance to participate was engaged in social activities such as health services to remote communities or in the affected areas. These activities were outside the formal curriculum. These were usually held by faculty, initiatives of student organizations, and/or non-governmental health organizations. Students involved in the organization had more opportunity to participate. Social activities could make students feel contribute to helping others, that they had given the benefits to others. It is important to sharpen the sense of humanity as the professionalism value underlying the doctor profession.

Forms of activities included in practicing were not only related to clinical practics. Activities such as discussions, teaching friends, being engaged in community outreach, or becoming speaker of health training were also included in the category of practicing as students demonstrated competence and understanding of medical science to others.

Reflecting

Reflection is a student activity to give meaning to every learning experience. Reflection were conducted for understanding the knowledge and understanding the self against the medical profession community. Reflection activities will provide new understanding or confirm knowledge that is obtained. Reflection also generates an understanding of the self, whether the experience has contributed to his/her profession community and identity as a prospective doctor.

"make, make me. So like for example, to the community we should act like what then how to communicate with the public. This has been taught in this medical education. I also do not know if from another faculty but in my opinion here it is very nice. My parent said that now you are as a doctor that you are clever to communicate. So smart in behaving and talking. I also feels proud to be a doctor." 11-APIPR-5 [43501: 44006]

Convincing

Convincing is an activity that aims to make sure that our activities were align with medical profession. Its also increase self-confidence towards competence as a doctor. The confidence is gained from the feedback and appreciation received. Feedback can be derived from the surrounding environment, friends, lecturer, nurses, residents, the patient, or even from themselves through self-assessment. Self-assessment is very important in assessing the self- ability especially when the feedback from outside is not obtained yet.

“Yes ... and we ourselves also feel it, don’t we? Yes I can or I cannot, I know or I do not know, and look at the book again for the things that I should know and be able to know which way, or usually also... when physical examination ... then we say ... the diseases are A or B based on the examination... .. and in fact, there are abcdef diseases that we could not detect since the begining. "13 -PLIPT-5 [37382:37887]

B. Effects of participation

Participation reinforces motivation, confidence and professional identity as a doctor. In participation, students also reflect and assess the self-ability. When students find a weakness in his/herself, it is a motivation to relearn things that are not yet mastered.

“Ooh in the fact what I have learned so far is not enough. But it is already there, there already are provisions of the knowledge to become a doctor. So from there I am really sure ooo .. all this time I've learned a great but still less. The proof I want to face patient like that. And also the second, I am confident to communicate with the patient, how i face patient’s wishes, what patients want to know. I really get it during the field work.” 6-PLIPT-3 [21420: 21925]

In this study, students indicated that they were very proud when their competence was recognized by the surrounding environment. Clinical improvement of patient, acknowledgement and trust from the patient convinced the students of their ability. Theese developing their identity as a doctor. From the quotation below, it appears that not only from the patient, but the recognition of the competence and trust from faculty, nurses, and friends also make students more confident with their identity as a doctor.

“Eemm.. which makes me feel so like a doctor when together with supervisor and nurse at the same time, I must make, make the diagnosis by myself, then provide therapy alone and I would carry out any examination. That is, like doctor Bas do. So if doctor Bas for example, he is there, he allows you to do what you want, doing anamnesis or diagnosis then report it to him what you want, report to him. So we are really tested.” 11-APIPR-5 [36507: 37026]

Discussion

Five forms of participation above are in accordance with the definition of participation by Wenger (1998). Participation is an act, talk and even thoughts or feelings that occur alone nor in the joint activity. Even is seen individually, when the activities has a social meaning to the community, it could be a participation. These five activities are interrelated and could be a cycle. In entering the community, a person needs to know the broad picture of the community; the next interaction will strengthen the known things and open the opportunity to get a role or practice. Reflection than is substantial for giving meaning to the experience of practice. External nor internal feedback will convince the competence. Then we can start to get to know another picture, role and opportunity. Along with the success of carrying out roles, confidence, identity, and motivation to participate will rise more. Students will be legitimized by the clinical environment to perform a core role in accordance with the legitimate peripheral participation (Lave & Wenger, 1991).

Practising is a core engagement that fosters identity as members of the community. Practice will be meaningful when followed by reflection and feedback assuring of success in carrying out the role. Reflecting and convincing are activities that are very useful in orienting the self situations with the situation of the community. Students shall know how an experience forms meaning for themselves and the community. Meaning is an important concept in social theory of learning (Wenger, 1998). This new understanding will be combined or compared with the initial understanding of the self and the environment so that students are ready with more interactions and practices.

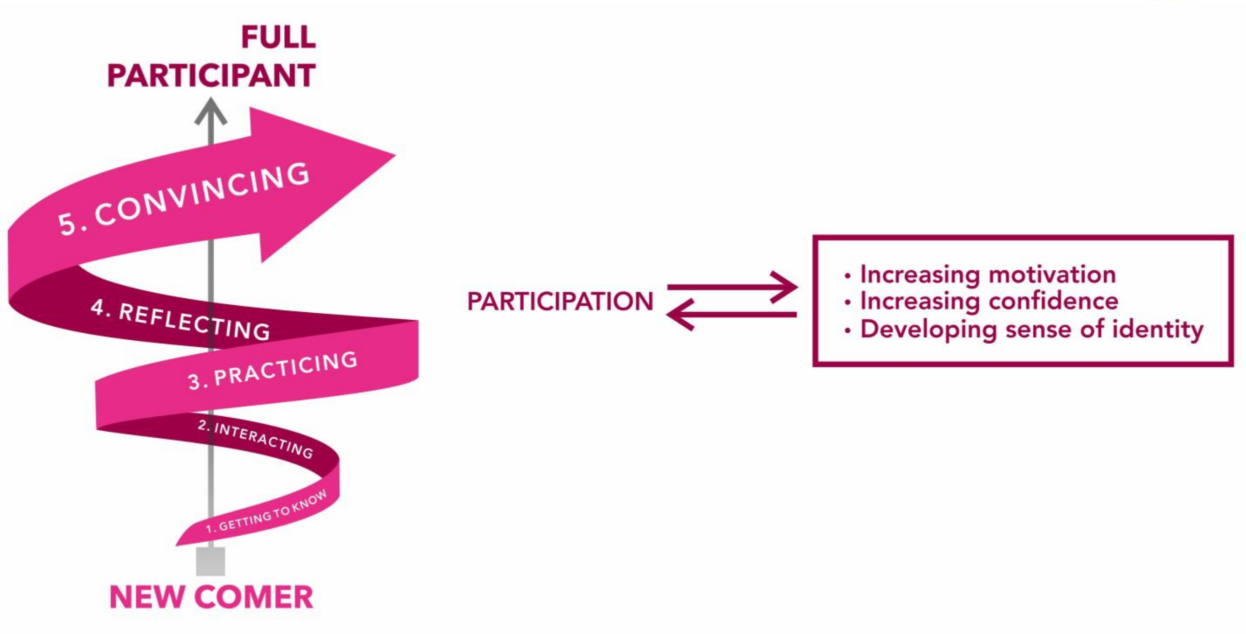

Figure 1. The participation of students as a learning process in medical profession community. The 5 forms of participation is interrelated and could be a cycle. Along with increased motivation, confidence and sense of identity from good participation earlier, students will gain legitimation for further participation.

Faculty needs to provide opportunities for students to participate from undergraduate education. Experience in the clinic and the community at the beginning of medical education has been known to help students to socialize with the profession, in addition to making the learning feel more real and relevant. The initial clinical experience increases confidence, motivates and develops a professional identity (Dornan et al., 2006; Littlewood, Ypinazar, Margolis, Scherpbier, & Spencer, 2005). At this time the medical education curriculum has had a program ‘early patient contact’ with the various philosophies and goals (Hopayian, Howe, & Dagley, 2007). Different forms of clinical experience will provide different benefits. The combination of experience forms helps students gain comfortable in a team and an understanding of the practice and the doctor's life, career orientation and of course clinical skills (Wenrich, Jackson, Wolfhagen, Ramsey, & Scherpbier, 2013).

Although the formal curriculum provides clinical experience to patient and community, voluntary social activities outside the curriculum seem to be very memorable espescially for pre-clinic students. Feelings to have contributed or gave benefits like a doctor which arised from social activities could be a consideration in formulating a learning activity for pre-clinical students. Student(s) need a space to be able to demonstrate his competence and gain recognition of his ability from practical communities involved (Wenger, 1998).

Discussion, teaching or creating artifacts are activities that are not directly related to the patient, but these activities contribute to the community. In the discussion, students can also capture the mindset, competence, also the doctor’s attitudes involved in the discussion. Students not only learn to collaborate knowledge but also learn to talk like a doctor. Language is an important part of the practice (Morris, 2012; Wenger, 1998).

The results of this study were actually in line with studies on workplace learning in medical education earlier. However, this study focused on the participation in developing professional identity. Dornan (2007) suggested participation as a student's involvement in the form of student activities as a passive observer, active observer, actor in training, and actor in performance. Here, participation is associated with the involvement of students in medical action. If it is returned to the definition according to Wenger (1998), participation is a social experience of the membership in the community and the involvement in community activities. Thus, the actual participation can mean more extensive than only related to medical measures as proposed by Dornan (2007).

Table 3.
Comparison of this study with previous research

	Dornan (2007)	This research
Research context	Only in clinical stage	Pre-clinical and clinical
Views on participation	Participation was associated with clinical skills practice activities	Participation can be any activity that makes students feel engaged in the task of the doctor, get an overview of the medical profession, and make themselves and their environment confidence in his ability as a doctor.
Views on interaction	Interaction is an influential factor in participation	Indeed, interaction affects the participation, but the interaction itself is a form of participation. Students with more interaction will get more opportunities for other participation. Interaction will also give broaden opportunity to show their identity.

Teunissen, (2008) indicate that tudents learn in workplace learning have physio-cognitive systems that participate and interact in an eco-social system. There are individuals' attributes, experience and thinking that cannot be separated from their environment in giving meaning to their daily activities. Students need a development space to learn and develop professional identity. The context of learning, personal and professional interactions, feeling of self-confidence, emotions such as want to be appreciated are forming the space (Van der Zwet, Zwietering, Teunissen, Van der Vleuten, & Scherpbier, 2011).

This study, not only focused in the clinical, but also in the pre-clinical stage. Pre-clinic students also needed a learning space that supported the participation and fostered sense of becoming a doctor. The sense of identity helped improve their motivation for learning to be a doctor. The activities that made students see, do, and feel the real conditions were related to the role of doctors not only to the clinical student, but also to pre-clinical students.

In designing learning activities aiming at the formation of professional identity, it should be noted that the participation of medical students is not only related to clinical practice and experience in patient contact. Of course, the patient contact is the important core experience for doctors, but students also need to know and feel comfortable as a part of the profession community. They need to recognize existing daily conflicts and problems of a doctor in running the profession. This is where the importance of interaction with clinicians, colleagues, nurses or other health professionals takes place. Students need to receive recognition of their competence not only from the patient as a party that is served by the doctor profession, but also from the profession community. At the pre-clinic education, programs should not only focus on early clinical patient contact, but also in contact with the doctor profession itself and other health professions.

This study also highlite the importance of interacting. Initiative to interact is very important. Students feel more comfortable interacting if there is openness and initiation of lecturers, doctors or nurses in the environment. Good interaction is expected to facilitate the students to practice. Engaging in students organizations could give broaden chance for medical students to interact with peer, faculty or social community. Students could improve their ability to communicate and interact. Therefor the existence of student organizations also needs to be supported by the faculty. With the involvement of students in the organization, this opens the opportunity of interaction among students, between students and lecturers, or students with social community. In addition, student organizations could be a forum of student activities for participating in the medical world.

This study only retrieved data from a type of source, i.e., students. However, data taken from 17 beginning until the final clinical students were rich in information, making the process of analysis and synthesis of the results not easy. Retrieval of data from a doctor who has been working can provide insights about participation that needs to be done during the education that will be very useful in the work world later.

Conclusion

Practising especially contact with patients is a main form of participation for students in developing professional identity. However, not only in contact with the patient, the practices that demonstrate the self-competences as a doctor in front of the profession community are also very important. For getting a broad chance of practice, students need to understand the environment and interact in it. Reflection and assessment of the practice performed will increase the self-confidence and trust from the environment on the ability to perform the role. Participation will reinforce motivation, self-confidence and sense of identity that will improve the quality and quantity of further participation.

Declaration of interest

Beyond the authors' personal involvements in medical education, they have no conflicts of interest to declare. The authors alone are responsible for the content and writing of the paper.

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